PLANNING & ZONING COMMISSION

ROBERT C. WHEATLEY, CHAIRMAN
BRIAN BUTLER
GREGORY SCOTT COLLINS
J. BRUCE MEARS
HOLLY WINGATE

Sussex County
DELAWARE
sussexcountyde.gov
(302) 855-7878 T
(302) 854-5079 F

JAMIE WHITEHOUSE
DIRECTOR

# Sussex County
# Planning & Zoning Commission

**AGENDA**

**March 19, 2025**

**5:00 PM**

**Call to Order**

**Approval of Agenda**

**Approval of Minutes** – February 5, 2025

**Public Comment**

**Other Business**

**Other Business Memo** - 03/19/25 P&ZC

**Baywood Garden Villas RPC (C/Z 1922) - Phase 1** SC
Final Site Plan & Master Plan

**S-24-81 Yasin & Layla, LLC** BM
Revised Final Site Plan

**Toback Flex Park (C/U 2290)** HW
Request for a 6-Month Time Extension

**S-25-03 Deep Branch Park - City of Milford** BB
Revised Preliminary Site Plan

**Lands of Howe & Bell** SC
Revised Minor Subdivision off of a proposed 30-ft easement

**Lands of Joseph Costa** HW
Minor Subdivision Plan off a proposed 30-ft easement

**Lands of 27361 Martins Farm Road** HW
Minor Subdivision Plan off a proposed 30-ft easement

EQUAL HOUSING OPPORTUNITY

**Lands of Moreland (Lisa Jester)** HW
Minor Subdivision Plan off a proposed 50-ft easement

**Lands of Yoder Properties, LLC** HW
Minor Subdivision Plan off a proposed 30-ft easement

## Old Business

**C/U 2468 Richard H. Bell, III** HW
**An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for a mobilization yard for the park avenue relocation project to include the storage of soil and materials to be located on a certain parcel of land lying and being in Georgetown Hundred, Sussex County, containing 5.96 acres, more or less.** The property is lying on the southeast side of Lewes Georgetown Highway (Rt. 9), approximately 0.23 mile southwest of Park Avenue (S.C.R. 321). 911 Address: 22592 Lewes Georgetown Highway, Georgetown. Tax I.D. No.: 135-15.00-79.03.

**C/Z 2017 Gulfstream Glen Cove** BM
**An Ordinance to amend the Comprehensive Zoning Map of Sussex County from an AR-1 Agricultural Residential District to an MR Medium-Density Residential District for certain parcels of land lying and being in Baltimore Hundred, Sussex County, containing 12.32 acres, more or less.** The properties are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352). 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885, 30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View Tax Parcel No.: 134-12.00-374.01, 374.02, 375.00, & 3445.00 - 3460.00.

**C/U 2462 Gulfstream Glen Cove** BM
**An Ordinance to grant a Conditional Use of land in an MR Medium Density Residential District for multi-family dwellings (50 units) to be located on certain parcels of land lying and being in Baltimore Hundred, Sussex County, containing 12.32 acres, more or less.** The properties are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352). 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885, 30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View Tax Parcel No.: 134-12.00-374.01, 374.02, 375.00, & 3445.00 - 3460.00.

## Public Hearings

**C/Z 2001 Belmead Farm, LLC** SC
**An Ordinance to amend the Comprehensive Zoning Map of Sussex County from an AR-1 Agricultural Residential District to a C-4 Planned Commercial District for certain parcels of land lying and being in Lewes and Rehoboth Hundred, Sussex County, containing 39.22 acres, more or less.** The property is lying on the east side of John J. Williams Highway (Route 24) approximately 0.31 mile southwest of Mulberry Knoll Road (S.C.R. 284). 911 Address: 20033 John J. Williams Highway, Lewes. Tax Parcel Nos.: 334-18.00-40.01 & 40.06

**Ord. 24-04** HW

**An Ordinance to amend the Future Land Use Map of the Comprehensive Plan in relation to Tax Parcel No. 135-11.00-65.00.** The Parcel containing approximately 9.623 acres of land, lying and being within Georgetown Hundred, and located on the northeast side of Gravel Hill Road (Route 30), approximately 0.02 mile east of the intersection of Gravel Hill Road (Route 30) and Lewes Georgetown Highway (Route 9)

**In accordance with 29 Del. C. §10004(e)(2), this Agenda was posted on March, 12, 2025, at 1:30 p.m., and at least seven (7) days in advance of the meeting.**

**This Agenda is subject to change to include the addition or deletion of items, including Executive Sessions, which arise at the time of the Meeting.**

**Agenda items listed may be considered out of sequence.**

-MEETING DETAILS-

The meeting will be streamed live at: https://sussexcountyde.gov/council-chamber-broadcast

The Planning & Zoning Commission meeting materials, including the "packet", are electronically accessible on the County's website at: **https://sussexcountyde.gov/**

If any member of the public would like to submit comments electronically, these may be sent to pandz@sussexcountyde.gov. All comments are encouraged to be submitted by 4:00 P.M on Tuesday, March 18, 2025.

# # # #

JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR OF PLANNING & ZONING
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

# Memorandum

To: Sussex County Planning Commission Members
From: Jamie Whitehouse, AICP, Director, Department of Planning & Zoning; Jenny Norwood, Planning and Zoning Manager; Lauren DeVore, AICP, Planner III; Michael Lowrey, Planner III; Christin Scott, Planner II; Ann Lepore, Planner I & Susan Isaacs, Planner I
CC: Vince Robertson, Assistant County Attorney
Date: March 12, 2025
RE: Other Business for the March 19, 2025, Planning Commission Meeting

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This Memo provides background for the Planning Commission to consider as a part of the Other Business to be reviewed during the Wednesday, March 19, 2025, Meeting of the Planning & Zoning Commission.

**Baywood Garden Villas RPC (C/Z 1922) – Phase 1**

Final Site Plan & Master Plan SC

This is a Final Site Plan for the Baywood Garden Villas RPC, a Residential Planned Community proposed to contain 514 multifamily units housed within 13, four-story buildings to include a clubhouse, indoor pool, outdoor (in-ground pool), pavilion, tot lot, parking and other related improvements. Specifically, this request is for approval of Phase 1 of the Residential Planned Community (RPC), which consists of the following: 9, 4-story, proposed apartment buildings, to include Buildings "E" through "M" with proposed Building "E" (1 building) containing 16,975 square feet of gross floor area and 34 units and Buildings "F" through "M" (8 buildings) containing 20,370 square feet and 40 units each for a total of 179,935 square feet of multifamily uses as 354 apartment units, a 3,4446 square foot clubhouse, a 5,506 square foot indoor pool building and a 3,192 square foot in-ground pool, boardwalks and multiple gazebos. Staff note that the subject property was the subject of a previous Change of Zone Application (Change of Zone No. 1922). At their meeting of Tuesday, December 14, 2021, the Sussex County Council approved a Change of Zone for the parcel through C/Z 1922 from Neighborhood Business (B-1) District, General Commercial (C-1) District and Commercial Residential (CR-1) District to a High-Density Residential, Residential Planned Community (HR-1 RPC) District and the change was adopted through Ordinance No. 2820. Staff also note that the subject property (Tax Parcel ID: 234-23.00-270.00) was also the subject of a previous Future Land Use Map (FLUM) Amendment from the Commercial Area to the Coastal Area in order to permit the High-Density Residential, Residential Planned Community District (HR-RPC) Zoning of the property. Staff further note that there is an existing Wellhead Protection Area on the property, but that this has been reviewed by the Sussex County Engineering Department and determined to comply with the provisions of §89-6 of the Sussex County Source Water Protection Ordinance. The Final Site Plan complies with the Sussex County Zoning and Subdivision Codes and all Conditions of Approval. A Master Plan has also been submitted with the proposal for approval by the Commission. The property is located on the north of Long Neck Road (Route 23), approximately 0.47 miles east of the intersection of Long Neck Road and John J. Williams Highway (Route 24) in Millsboro, Delaware. Tax Parcels: 234-23.00-270.00 & 273.05. Zoning: HR-1 RPC (High-Density Residential, Residential Planned Community District). Staff are in receipt of all agency approvals. Therefore, the Plans are eligible for final approval.

**S-24-81 Yasin & Layla, LLC** BM

Revised Final Site Plan

This is a Revised Final Site Plan for Yasin & Layla, LLC for the construction of a 24,000 square foot building for use as a Recreational Facility and other site improvements. Board of Adjustment Case No. 13037 for a variance of 10 ft. from the 30 ft. required rear yard setback adjacent to a residential district was approved by the Board of Adjustment at their meeting of Monday, March 10, 2025. The parcel is located on the east side of John J. Williams Highway (Rt. 24) at the intersection of John J. Williams Highway (Rt. 24) and Oak Orchard Road (Rt. 5). A parking waiver request letter has been submitted for parking in the front yard setback. The Revised Final Site Plan complies with the Sussex County Zoning Code. Tax Parcel: 234-29.00-263.12. Zoning: Medium Commercial (C-2) District. Staff are in receipt of all agency approvals. Therefore, the Plans are eligible for final approval.

**Toback Flex Park (C/U 2290)** HW

Request for a 6-Month Time Extension

On February 10th, 2025, the Department of Planning and Zoning received a 6-month time extension request for Conditional Use No. 2290 Toback Flex Park. The Conditional Use to allow a contractor flex space within an Agricultural Residential District was approved by the Sussex County Council at their meeting of Tuesday, May 10th, 2022, through Ordinance No. 2849, subject to thirteen (13) Conditions of Approval. The submitted request outlines that an Application to amend Conditional Use 2290 was submitted to the Office of Planning & Zoning on April 2nd, 2024, and is pending a Public Hearing. The property is located on the northwest corner of Lewes Georgetown Highway (Rt. 9) and Prettyman Road (S.C.R. 254). Tax Parcel: 235-30.00-6.21. Zoning: AR-1 (Agricultural Residential District.)

**S-25-03 Deep Branch Park - City of Milford** BB

Revised Preliminary Site Plan

This is a Revised Preliminary Site plan submitted on behalf of the City of Milford for the construction of a public park to include playground area with children's play equipment, a pavilion, six (6) pickleball courts, three (3) basketball courts, and ancillary improvements including a utility structure, parking, paved access, and a paved multiuse trail network within the site connecting to an ingress/egress on South Rehoboth Boulevard (Route 14) in Milford. The Parcel is lying on the south side of South Rehoboth Boulevard (Route 14) approximately (600) feet west of the intersection of Windward Boulevard. Staff note the proposed pickleball courts do not meet Code requirements for (100) foot separation from structures under (§115-192) relating to Parcel #25.00 (≈70-80 feet) and potentially 38.01. Aside from this noted separation distance relating to the pickleball courts, the Revised Preliminary Site Plan complies with the Sussex County Zoning Code. Aside from this noted separation distance relating to the pickleball courts, the Revised Preliminary Site Plan complies with the Sussex County Zoning Code. Tax Parcel: 330-11.00-39.00. Zoning District: AR-1 (Agricultural Residential Zoning District). Staff are awaiting agency approvals. If the Commission desire to act favorably on this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals.

**Lands of Howe & Bell** SC

Revised Minor Subdivision off a 30-ft easement

This is a Revised Minor Subdivision for a Lot Line Adjustment for the reduction of a 50-ft easement to 30 ft. The Minor Subdivision for three (3) lots off a 50-ft. easement was approved by the Sussex County Planning and Zoning Commission at their meeting on Thursday, May 6, 2022, and was

recorded on Plot Book 370 Page 22. The reduction of the easement would increase the lot width on Lots 1 and 2. The Lot Line Adjustment Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 235-22.00-21.06, 21.07, & 21.08 Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals. Should the Commission desire to act favorably on this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals

**Lands of Joseph Costa** HW

Minor Subdivision Plan off a proposed 30-ft easement

This is a Minor Subdivision Plan for the creation of two (2) lots plus the residual lands with access off a proposed 30-ft wide ingress/egress access easement. Proposed Lot 1 will consist of 1.017 acres +/-, proposed Lot 2 will consist of 02.281 acres +/-, and the residual lands will contain 1.00 acre +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located on the south side of Bethesda Road (S.C.R. 326), approximately 0.54 mile +/- south of Avenue of Honor (S.C.R. 86). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 133-11.00-10.01 Zoning: GR (General Residential District). Staff are in receipt of all agency approvals. Therefore, the Plans are eligible for both preliminary and final approval.

**Lands of 27361 Martins Farm Road** HW

Minor Subdivision Plan off a proposed 30-ft easement

This is a Minor Subdivision Plan for the creation of four (4) lots plus the residual lands with access off a proposed 30-ft wide ingress/egress access easement. Proposed Lot 1 will consist of 0.9977-acres +/-, proposed Lot 2 will consist of 0.9977-acres +/-, proposed Lot 3 will consist of 0.9977-acres +/- proposed Lot 4 will consist of 0.9997-acres +/-, and the residual lands will contain 0.9977-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located north of Martins Farm Road (S.C.R. 291), approximately 0.59-miles +/- east of Harbeson Road (Route 5). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 334-9.00-1.06 Zoning: AR-1 (Agricultural Residential District). Staff are in receipt of all agency approvals. Therefore, the Plans are eligible for both preliminary and final approval.

**Lands of Moreland (Lisa Jester)** HW

Minor Subdivision Plan off a proposed 50-ft easement

This is a Minor Subdivision Plan for the creation of five (5) lots plus the residual lands with access off a proposed 50-ft wide ingress/egress access easement. Proposed Lot 5 will consist of 24.446 acres+/- and will have an entrance from Gravel Hill Road (Rt. 30) per CU 2343. Proposed Lot 6 will consist of 0.989-acres +/-, proposed Lot 7 will consist of 0.999-acres +/-, proposed Lot 8 will consist of 0.999-acres +/-proposed Lot 9 will consist of 0.999-acres +/-, and the residual lands will contain 10.136-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located on the west side of Gravel Hill Road (Route 30) approximately 0.24 mile north of the Lewes Georgetown Highway (Route 9). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 135-11.00-48.00. Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals. Should the Commission desire to act favorably on this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals

**Lands of Yoder Properties LLC** HW

Minor Subdivision Plan off a proposed 30-ft easement

This is a Minor Subdivision Plan for the creation of four (4) lots plus the residual lands with access off a proposed 30-ft wide ingress/egress access easement. Proposed Lot 1 will consist of 1.588-acres +/-, proposed Lot 2 will consist of 1.461-acres +/-, proposed Lot 3 will consist of 1.859-acres +/- proposed Lot 4 will consist of 1.299-acres +/-, and the residual lands will contain 2.07-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located southwest of Mount Joy Road (S.C.R. 297), approximately 1,847 feet southeast of Gravel Hill Road (S.C.R. 30). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 234-21.00-29.00 Zoning: GR (General Residential District). Staff are awaiting agency approvals. Should the Commission desire to act favorably on this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals

File #: CZ 1922
202002786
202002789
202002790
$ 500
Sussex County Council

Baywood Villas
202002791
202002792

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

32147 Long Neck Road, Long Neck, DE 19966

**Type of Conditional Use Requested:**

**Tax Map #:** TM 234-23, P 270, 273.01, 273.02, 273.03, & 273.05 **Size of Parcel(s):** 54.38 acres

**Current Zoning:** B-1, C-1, & CR-1 **Proposed Zoning:** HR/RPC **Size of Building:** 514 Multi-Family Units

**Land Use Classification:** Commercial and Coastal Area

**Water Provider:** Tidewater Utilities **Sewer Provider:** Sussex County & Inland Bays Preservation

**Applicant Information**

Applicant Name: Baywood, LLC (Attn Robert Tunnell, III)
Applicant Address: 34026 Anna's Way, Suite 1
City: Long Neck State: DE ZipCode: 19966
Phone #: (302) 945-9300 E-mail: rtunnell@potnets.com

**Owner Information** Applicant is Owner of TM 234-23, P 270 & 273.05

Owner Name: ABC Woodlands, LLC (TM 234-23, P 273.01, 273.02, & 273.03)
Owner Address: PO Box 1389
City: Easton State: MD Zip Code: 21601
Phone #: E-mail:

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Mr. James A Fuqua, Jr, Esq.
Agent/Attorney/Engineer Address: 26 The Circle
City: Georgetown State: DE Zip Code: 19947
Phone #: (302) 856-7777 E-mail: jimf@fywlaw.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

✓ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: _____

***Signature of Owner***

_____ Date: 3/9/20

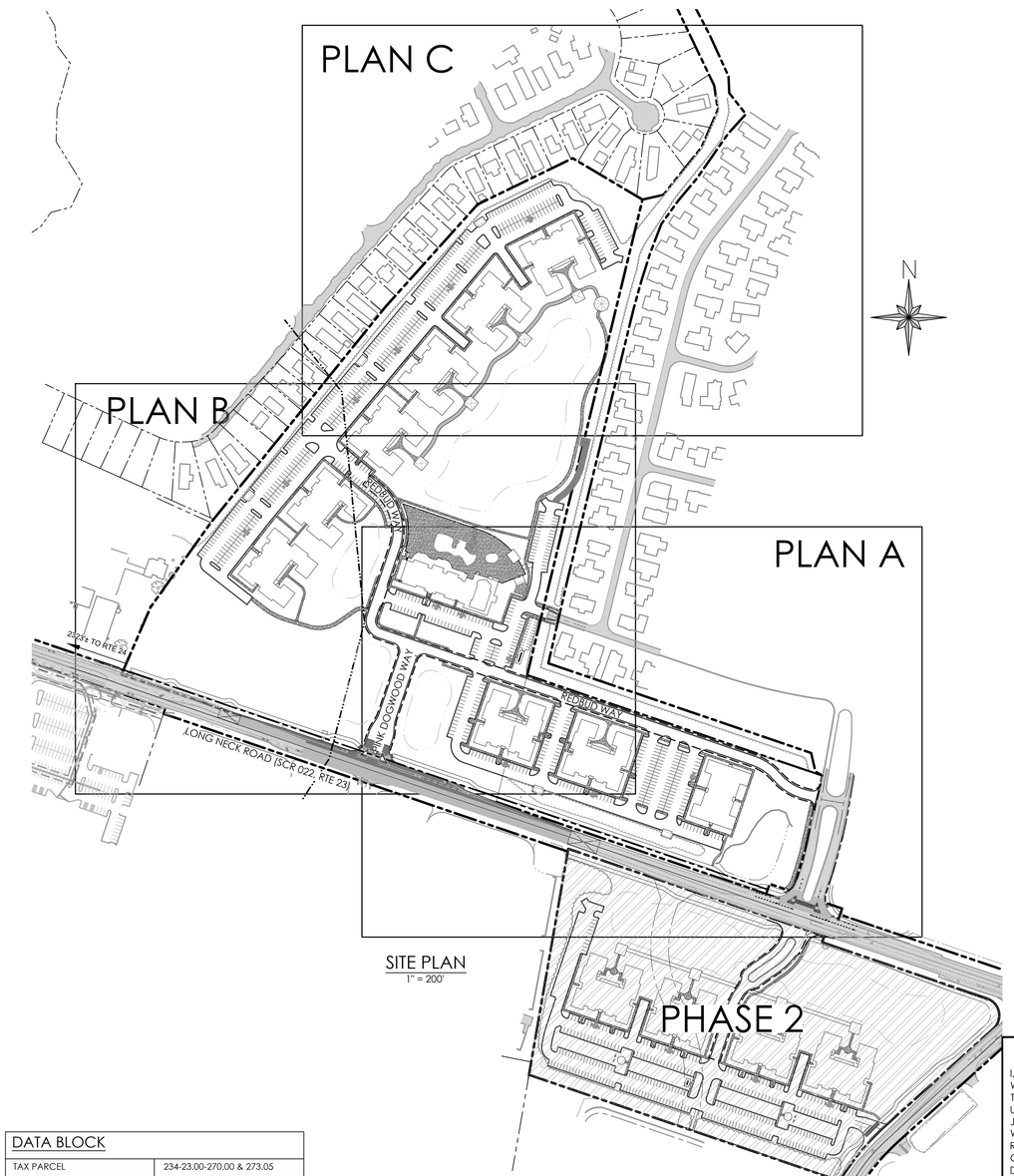
*For office use only:*
Date Submitted: 3/9/2020 Fee: $500.00 Check #: 101284
Staff accepting application: ceh Application & Case #: 2020027860
Location of property: _____

Subdivision: _____
Date of PC Hearing: _____ Recommendation of PC Commission: _____
Date of CC Hearing: _____ Decision of CC: _____

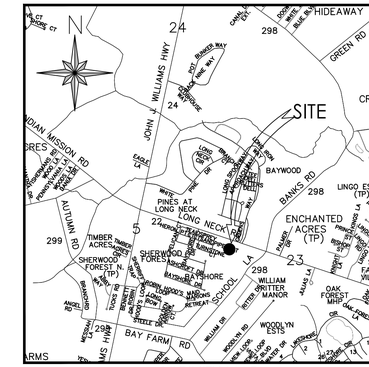
# FINAL SITE PLAN
FOR
# RESIDENTIAL PLANNED COMMUNITY (RPC)
# BAYWOOD GARDEN VILLAS - PHASE 1
## (F.K.A. BAYWOOD GARDENS)
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

## LEGEND

| | EXISTING | PROPOSED |
|---|---|---|
| PROPERTY LINE | | |
| ZONING LINE | | N/A |
| SETBACK LINE | | N/A |
| CONCRETE MONUMENT FOUND | CMF | N/A |
| IRON PIPE FOUND | IPF | N/A |
| IRON ROD CAP FOUND | IRCF | N/A |
| IRON ROD FOUND | IRF | N/A |
| EDGE OF POND | | |
| STORM MANHOLE | D | D |
| CATCH BASIN | | |
| CURB INLET | | |
| STORM PIPE | SD | SD |
| SANITARY MANHOLE | S | S |
| CLEANOUT | N/A | C/O |
| SANITARY PIPE | SS | SS |
| FORCE MAIN PIPE | N/A | FM |
| WATER PIPE | W | W |
| FIRE HYDRANT | | |
| OVERHEAD ELECTRIC | | N/A |
| UTILITY POLE | | N/A |
| DECIDUOUS TREE | | N/A |
| CONIFEROUS TREE | | N/A |
| TREE LINE | | |
| PAVEMENT HATCH | | |
| CONCRETE HATCH | | |
| BUILDING OUTLINE | | |
| SIDEWALK | | |
| SIDEWALK HATCH | | |
| ROAD CENTERLINE | | |
| EDGE OF CONCRETE | | |
| EDGE OF PAVEMENT | | |
| EDGE OF GRAVEL | | N/A |
| PAINT STRIPE | | |
| CURB | | |
| PHASE LIMIT LINE | N/A | |
| DUMPSTER PAD | N/A | D.P. |




SITE PLAN
1" = 200'




VICINITY MAP
SCALE: 1" = 2,000'±

## SITE DATA:

OWNER: TAX MAP: 234-23.00-273.05 & 270.00
BAYWOOD, LLC
34026 ANNA'S WAY
SUITE 1
LONG NECK, DE 19966

APPLICANT/ DEVELOPER: BAYWOOD, LLC
34026 ANNA'S WAY, SUITE 1
LONG NECK, DE 19966
PHONE: 302.945.9300
FAX: 302.945.4032
CONTACT: ROBERT TUNNELL, III

ENGINEER: SOLUTIONS IPEM
303 N. BEDFORD STREET
GEORGETOWN, DE 19947
PHONE: 302.297.9215
CONTACT: JIM ERIKSEN, PE

- TAX MAP:
  234-23.00-270.00 & P/O 273.05
  AREA = 40.79 ± ACRES
  NET DEVELOPMENT AREA = 37.6 ACRES (PHASE 1)
- DEED REFERENCE: 3110/77 & 2244/326
- PLAT REFERENCE: 8/490 & 49/172

## SHEET INDEX


1 COVER SHEET
2 NOTES
3 CONDITIONS OF APPROVAL AND LANDSCAPING NOTES
4 SITE PLAN A
5 SITE PLAN B
6 SITE PLAN C
7 BULK GRADING PLAN


NOTES:
1. ALL ON-SITE DRIVE AISLES AND PARKING AREAS ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER. THE PERPETUAL MAINTENANCE OF THE STREETS SHALL BE BY THE OWNER.

3. SURVEY: THE BOUNDARY AND TOPOGRAPHIC INFORMATION FOR THIS PLAN WAS ADAPTED FROM ELECTRONIC FILES PROVIDED BY DAVIS, BOWEN & FRIEDEL, INC. TITLED "BAYWOOD TOWN CENTER", DATED FEBRUARY 2003. A FIELD SURVEY WAS COMPLETED BY McCRONE INC. IN SEPTEMBER 2005. BASE DATA INCLUDING AERIAL SURVEY PROVIDED BY THE CLIENT.

PHASE 1 - PARKING CALCULATIONS

| | REQUIRED | PROPOSED |
|---|---|---|
| 354 MULTI-FAMILY UNITS | 521 SPACES* | 735 SPACES |

* 354 MULTI-FAMILY UNITS
2 SPACES PER UNIT FOR 1st 50 UNITS = 100 SPACES
15% REDUCTION FOR 51 TO 200 UNITS = (150 x 2 x 85%) = 255 SPACES
20% REDUCTION FOR REMAINDER (104 x 2 x 80%) = 166 SPACES
100 + 255 + 166 = 521 SPACES TOTAL

ADA SPACES REQUIRED = 2% x 735 = 15 SPACES
PROPOSED ADA SPACES = 24 SPACES

ENTIRE RPC PARKING CALCULATIONS

| | REQUIRED | PROPOSED |
|---|---|---|
| 514 MULTI-FAMILY UNITS | 778 SPACES* | 984 SPACES |

*514 MULTI-FAMILY UNITS
2 SPACES PER UNIT FOR 1st 50 UNITS = 100 SPACES
15% REDUCTION FOR 51 TO 200 UNITS = (150 x 2 x 85%) = 255 SPACES
20% REDUCTION FOR REMAINDER (264 x 2 x 80%) = 423 SPACES
100 + 255 + 423 = 778 SPACES TOTAL

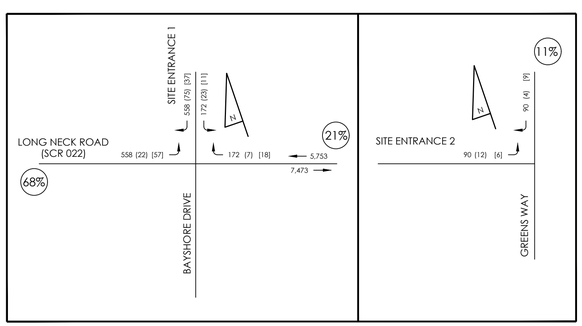
ADA SPACES REQUIRED = 2% x 778 = 16 SPACES
PROPOSED ADA SPACES = 32 SPACES

## ROAD TRAFFIC DATA: LONG NECK ROAD:
FUNCTIONAL CLASSIFICATION - S022 - MAJOR COLLECTOR
POSTED SPEED LIMIT - 40 mph
AADT = 11,402 TRIPS (FROM 2021 DelDOT TRAFFIC SUMMARY)
10 YEAR PROJECTED AADT = 1.16 x 11,402 = 13,226 TRIPS
TRAFFIC PATTERN GROUP - 8 (FROM 2021 DELDOT TRAFFIC SUMMARY)
K-FACTOR = 12.4, D-FACTOR = 56.5, TRUCK % = 5.8 SINGLE UNIT (1.3 COMBO UNIT)

## SITE TRAFFIC DATA
SOURCE: ITE TRIP GENERATION MANUAL 11TH EDITION
354 MULTIFAMILY HOUSING (MID-RISE) [221]
TWO ENTRANCES
ENTRANCE 1 (LONG NECK ROAD) - FULL MOVEMENT
ENTRANCE 2 (GREENS WAY) - FULL MOVEMENT
DESIGN VEHICLES: SU-30, WB-40

354 MULTIFAMILY HOUSING (MID-RISE) UNITS
TOTAL SITE = 1,642 ADT (821 ENTER/821 EXIT), 144 AM PK (33 ENTER/111 EXIT), 138 PM PK (84 ENTER/54 EXIT)

TRIP DISTRIBUTION PER TIS REPORT (JUNE 20, 2019):
68% ENTER/EXIT TO/FROM WEST ON LONG NECK ROAD = 1,116 ADT {558 ENTER/558 EXIT}
78 AM PK (22 ENTER/75 EXIT), 93 PM PK (57 ENTER/37 EXIT)
21% ENTER/EXIT TO/FROM EAST ON LONG NECK ROAD = 345 ADT (172 ENTER/172 EXIT}
30 AM PK (7 ENTER/23 EXIT), 29 PM PK (18 ENTER/11 EXIT)
11% ENTER/EXIT TO/FROM NORTH ON GREENS WAY = 180 ADT {90 ENTER/90 EXIT}
16 AM PK (4 ENTER/12 EXIT), 15 PM PK (9 ENTER/6 EXIT)
PEAK HOUR HV% OF PROPOSED SITE - 5%




TRAFFIC GENERATION DIAGRAMS
ADT [A.M. PEAK HOUR] [P.M. PEAK HOUR]

## DATA BLOCK

| | |
|---|---|
| TAX PARCEL | 234-23.00-270.00 & 273.05 |
| TYPE OF BUSINESS | N/A (RESIDENTIAL SUBDIVISION) |
| GROSS SITE ACREAGE | 40.332 ACRES |
| GROSS LEASABLE FLOOR AREA | 190,255 (RESIDENTIAL) |
| PARKING REQUIRED | 521 |
| PARKING PROVIDED | 735 |
| LOCAL GOVERNMENT AGENCY | SUSSEX COUNTY |

## APPROVED BY:

SECRETARY OF PLANNING COMMISSION DATE

PRESIDENT OF COUNTY COUNCIL DATE

WETLAND STATEMENT

I, Edward M. Launay, PWS, STATES THAT THE BOUNDARIES OF WATERS OF THE UNITED STATES INCLUDING WETLANDS SUBJECT TO THE CORPS OF ENGINEERS REGULATORY PROGRAM DELINEATED UPON THIS PLAN HAVE BEEN DETERMINED USING MY PROFESSIONAL JUDGMENT IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, ATLANTIC GULF COAST REGIONAL SUPPLEMENT, REGULATIONS AND SUPPLEMENTAL GUIDANCE (33 CFR 328.3(a)(8),Waters of the U.S. Definition/CECW-OR, 10-7-1991, Questions and Answers on the 1987 COE Manual/CECW-OR, 9-26-1990, RGL 90-7/CECW-OR, 3-6-1992, Clarification and Interpretation of the 1987 Manual). THIS DELINEATION HAS NOT BEEN CONDUCTED FOR USDA PROGRAM OR AGRICULTURAL PURPOSES.

EDWARD M. LAUNAY, PWS No. 875 DATE
SOCIETY OF WETLANDS SCIENTISTS
CORPS OF ENGINEERS,
CERTIFIED WETLAND DELINEATOR WDCP93MD0510036B

## OWNER'S CERTIFICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN. THAT THE PLAN WAS MADE AT MY DIRECTION AND I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. I FURTHERMORE UNDERSTAND AND ACKNOWLEDGE THAT IT IS THE RIGHT OF THE SUSSEX CONSERVATION DISTRICT AND/OR ITS DELEGATED INSPECTION AGENCIES TO CONDUCT ON-SITE INSPECTIONS.

NAME: ROBERT TUNNELL III DATE

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY SUPERVISION.

JIM ERIKSEN, PE DATE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JAMES R. ERIKSEN LICENSE No. 12453 PROFESSIONAL ENGINEER

Date: 2/20/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/8/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

COVER SHEET
for
BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

Date: 1/25/23
Job Number: G18052
Scale: AS NOTED
Drawn By: ML
Designed By: HHB
Approved By: SWF

Sheet No.: 1

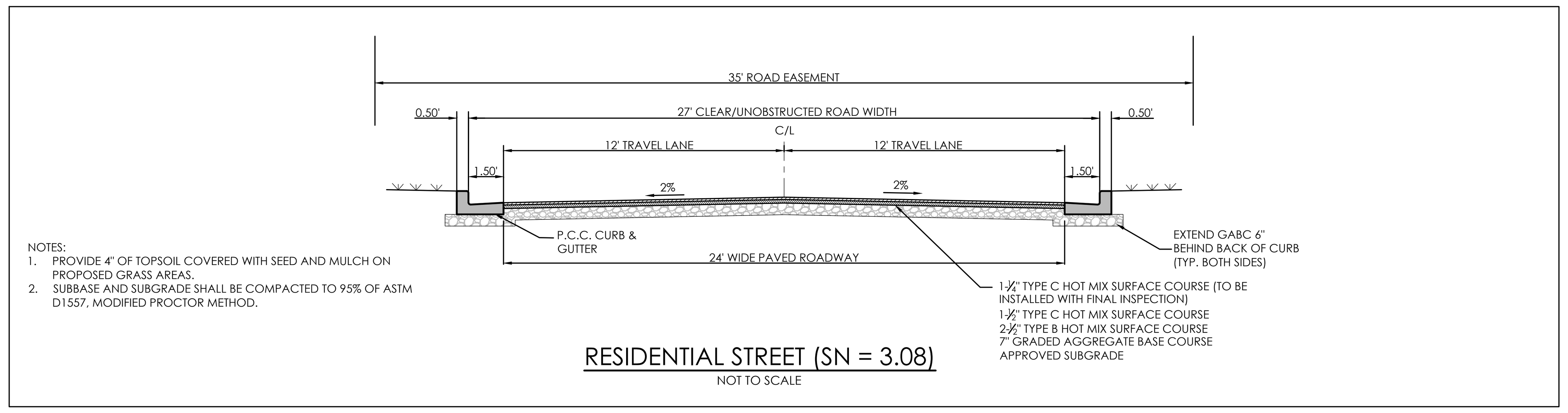
File Name: 18052-record-cover

## DELDOT PHASING NOTES:

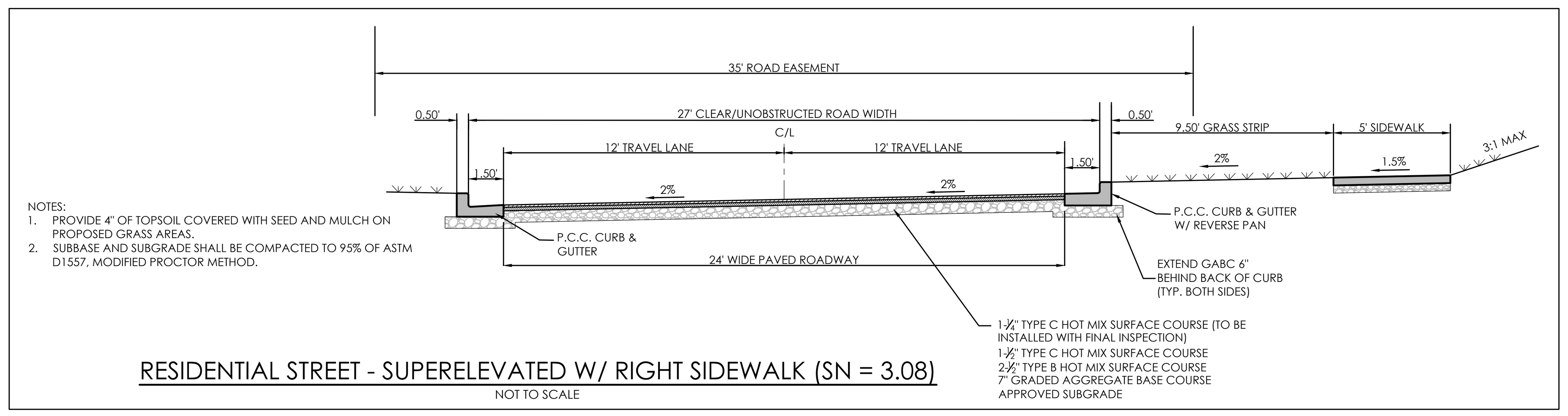
THE CONTRACTOR SHOULD BE AWARE THAT THE RELEASE OF BUILDING PERMITS FOR THIS PROJECT IS BEING PHASED.

THE CONSTRUCTION OF THE FULL MOVEMENT HAMMERHEAD SITE ENTRANCE, PEDESTRIAN LANDINGS, PAVEMENT MODIFICATIONS, DRAINAGE AND UTILITY RELOCATIONS, SIGNAGE, STRIPING, AND ANY ASSOCIATED WORK OR INCIDENTALS NECESSARY FOR THE COMPLETED CONSTRUCTION, AS DEPICTED IN THE DELDOT-APPROVED ENTRANCE PLANS, SHALL BE SUBSTANTIALLY COMPLETE, AS DEFINED PER DELDOT'S STANDARD SPECIFICATIONS, PRIOR TO THE ISSUANCE OF THE 1ST BUILDING PERMIT AND SHALL BE COMPLETED, INCLUDING ACCEPTANCE BY DELDOT, PRIOR TO THE ISSUANCE OF THE 2ND BUILDING PERMIT.

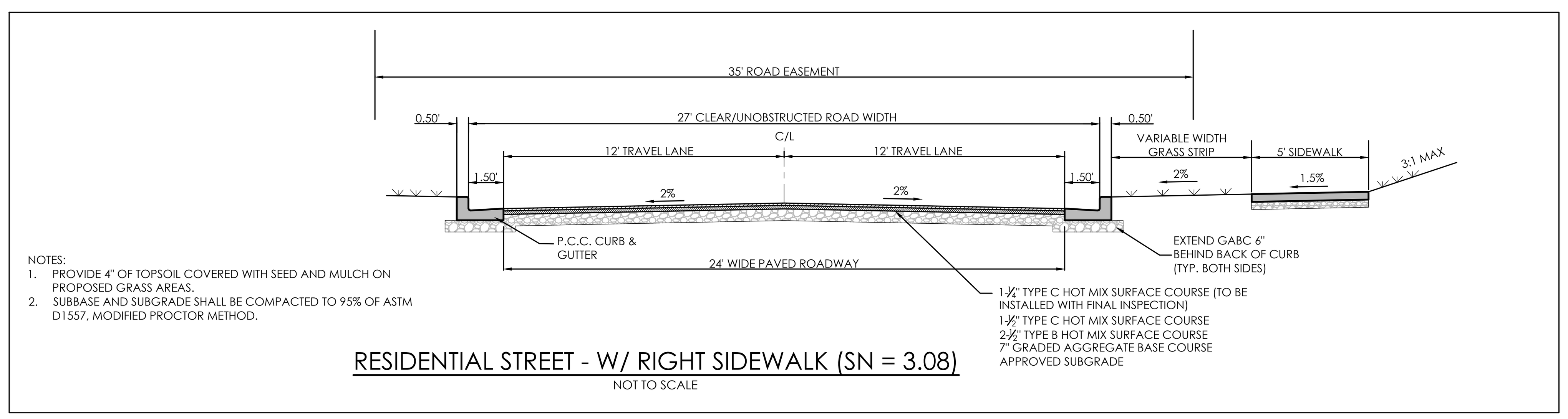
THE CONSTRUCTION OF THE REMAINING FULL MOVEMENT SITE ENTRANCE, ASSOCIATED ROADWAY, AND PEDESTRIAN IMPROVEMENTS, ALONG LONG NECK ROAD (SCR 022), AS DEPICTED IN THE DELDOT-APPROVED ENTRANCE PLANS, SHALL BEGIN PRIOR TO THE ISSUANCE OF THE 2ND BUILDING PERMIT AND SHALL BE COMPLETED, INCLUDING ACCEPTANCE BY DELDOT, PRIOR TO THE ISSUANCE OF THE 4TH BUILDING PERMIT.



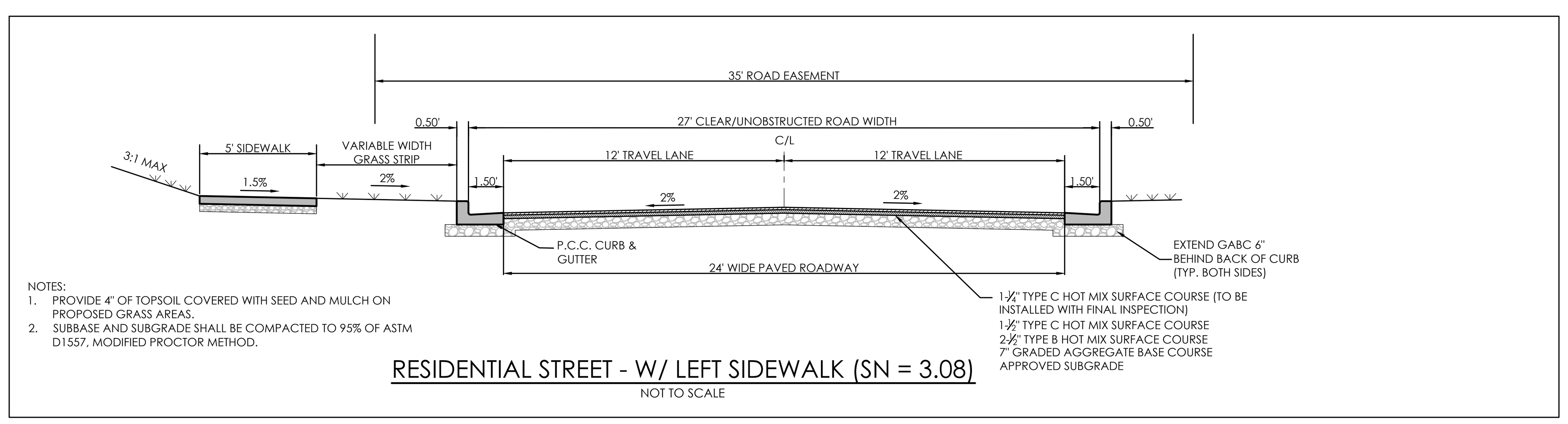

RESIDENTIAL STREET (SN = 3.08)
NOT TO SCALE



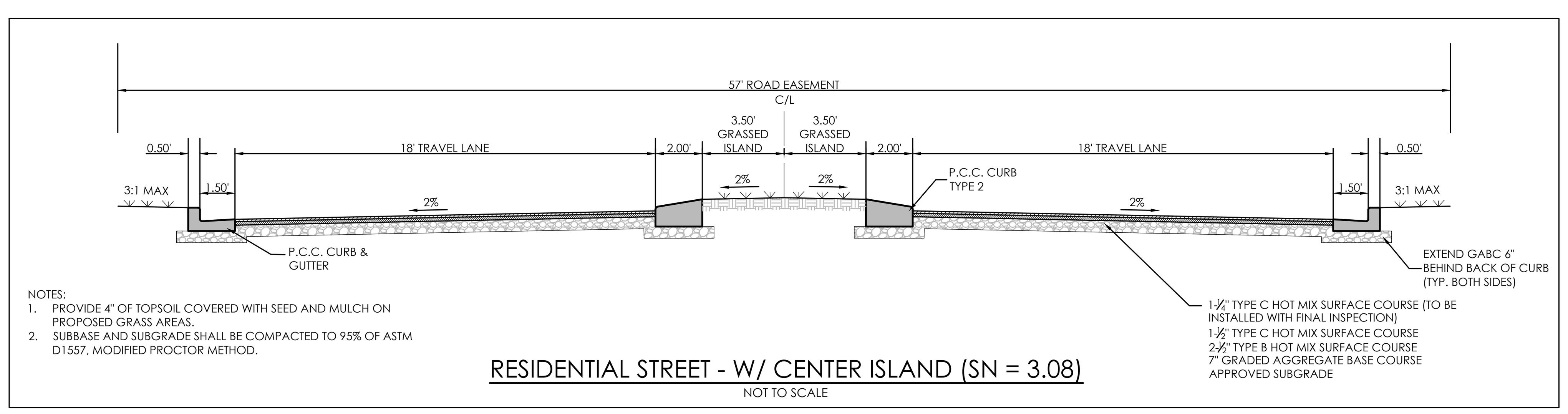

RESIDENTIAL STREET - SUPERELEVATED W/ RIGHT SIDEWALK (SN = 3.08)
NOT TO SCALE




RESIDENTIAL STREET - W/ RIGHT SIDEWALK (SN = 3.08)
NOT TO SCALE




RESIDENTIAL STREET - W/ LEFT SIDEWALK (SN = 3.08)
NOT TO SCALE




RESIDENTIAL STREET - W/ CENTER ISLAND (SN = 3.08)
NOT TO SCALE

## NOTES:

1. ALL ON-SITE STREETS AND PARKING AREAS (INCLUDING PAVEMENT, CURBING AND SIDEWALK) ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER. THE PERPETUAL MAINTENANCE OF THE STREETS AND PARKING SHALL BE BY THE OWNER.

2. STORMWATER MANAGEMENT AND STORM DRAINAGE SHALL BE IN ACCORDANCE WITH THE SUSSEX COUNTY CONSERVATION DISTRICT AND SUSSEX COUNTY ENGINEERING REQUIREMENTS. THE SITE IS TO BE TREATED BY MULTIPLE WET PONDS. MAINTENANCE OF THE ON-SITE STORMWATER MANAGEMENT FACILITIES AND STORM DRAINAGE SYSTEM SHALL BE BY THE OWNER. THE PERPETUAL MAINTENANCE OF THE ABOVE PROACTIVE SHALL BE BY THE OWNER.

3. ALL OPEN SPACE, INCLUDING BUFFERS, FOREST STRIPS AND AMENITIES SHALL BE MAINTAINED BY THE OWNER.

4. FOR ANY NEW DEVELOPMENT LOCATED IN WHOLE OR IN PART WITH 50 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL FOR A RESIDENTIAL TYPE USE SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE LANDS USED PRIMARILY FOR AGRICULTURAL PURPOSES.

5. POTABLE WATER, SANITARY SEWER, STORM DRAINAGE, STREET PAVEMENT SHALL BE CONSTRUCTED BY DEVELOPER. PHASING OF IMPROVEMENTS SHALL BE PER COUNTY AND CONSERVATION DISTRICT REQUIREMENTS.

6. THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL PURPOSES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH USES NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM NORMAL AGRICULTURAL USES AND ACTIVITIES.

7. THE PROPERTY IS NOT LOCATED WITHIN ANY TRANSPORTATION IMPROVEMENT DISTRICTS.

8. ALL SUBDIVISION LOTS SHALL HAVE FIVE FOOT WIDE EASEMENTS ALONG ALL LOT LINES FOR A TOTAL EASEMENT WIDTH OF 10 FEET ALONG A LOT LINE COMMON TO TWO LOTS. EASEMENTS ALONG PERIMETER (RIGHT-OF-WAY AND OPEN SPACE) SHALL BE 10 FEET IN WIDTH.

9. THE PHILADELPHIA DISTRICT CORPS OF ARMY ENGINEERS HAVE JURISDICTION OVER ALL THE NON-TIDAL WETLANDS

10. AN ENTRANCE COMMUNITY SIGN WILL BE PROVIDED. ANY SIGNAGE WILL REQUIRE A SEPARATE PERMIT.

## PHASE 1 AREAS:

GROSS ACREAGE = 40.79 AC.±

DELDOT R.O.W. AREA = 0.62 AC.±

OPEN SPACE AREAS = 23.404 AC.± = 57%
- AMENITY/CLUBHOUSE BUILDING - 0.299 AC.
- AMENITY INDOOR POOL AND BUILDING - 0.168 AC.
- AMENITY GAZEBOS AND STRUCTURES - 0.113 AC.
- COMMUNITY MAIL BOX AREA - 0.011 AC.
- OUTDOOR AMENITY (POOL, POOL DECK, PATIO) - 0.972 AC.
- STORMWATER MANAGEMENT FACILITIES - 5.175 AC.
- PERVIOUS OPEN SPACE (GRASS, WOODS, BUFFERS) - 14.649 AC.
- IMPERVIOUS OPENS SPACE (SIDEWALKS, BOARDWALKS) - 2.017 AC.

3.58 AC.± OF IMPERVIOUS AREA WITHIN OPEN SPACE = 15% (EXCLUDES PONDS)

ROW / IMPERVIOUS AREAS (DRIVE AISLES, ROADS, DUMPSTERS) - 9.432 AC.
APARTMENT BUILDINGS - 4.325 AC.
OTHER IMPERVIOUS (ACCESSWAYS, PUMP STATION) - 0.032 AC.

EXISTING WOODLANDS = 12.79 AC.±
WOODLANDS TO REMAIN = 1.46 AC.±
11 % of EXISTING WOODLANDS TO REMAIN
WOODLANDS TO BE REMOVED = 11.33 AC.±

EXISTING TIDAL AND/OR NON-TIDAL WETLANDS = 0.00 AC.±

## ENTIRE RPC AREAS:

GROSS ACREAGE = 54.27 AC.±

DELDOT R.O.W. AREA = 0.62 AC.±
OPEN SPACE AREA = 33.231 AC.± = 61%

EXISTING WOODLANDS = 28.56 AC.±
WOODLANDS TO REMAIN = 2.67 AC.±
9% of EXISTING WOODLANDS TO REMAIN
WOODLANDS TO BE REMOVED = 25.89 AC.±

EXISTING TIDAL AND/OR NON-TIDAL WETLANDS = 0.00 AC.±

NOTE: PHASE 2 IMPROVEMENT INFORMATION SUBJECT TO CHANGE WITH FINAL APPROVAL PROCESS.

## WELL HEAD PROTECTION AREA

TOTAL AREA WITHIN WELLHEAD PROTECTION AREA = 380,584 SQ.FT.

| SURFACE TYPE | AREA (SQ.FT.) |
|---|---|
| IMPERVIOUS AREAS | 132,989 |
| GREEN SPACE (GRASS & WOODS) | 247,595 |

IMPERVIOUS PERCENTAGE = 34.94%

## SITE DATA (PHASE 1):

- PROPOSED USE:
  354 APARTMENT UNITS (354 UNITS / 40.79 AC = 8.68 UNIT/AC.)
- EXISTING LOTS - 2
- PROPOSED LOTS - 1
- THE PROPERTY WAS SUBJECT OF A PREVIOUS CHANGE OF ZONE APPLICATION (CHANGE OF ZONE NO. 1922). AT THEIR MEETING OF TUESDAY, DECEMBER 14, 2021 THE SUSSEX COUNTY COUNCIL APPROVED A CHANGE OF ZONE FOR THE PARCEL THOUGHT C/Z 1922 FROM NEIGHBORHOOD BUSINESS (B-1) DISTRICT, GENERAL COMMERCIAL (C-1) DISTRICT AND COMMERCIAL RESIDENTIAL (CR-1) DISTRICT TO A HIGH-DENSITY RESIDENTIAL PLANNED COMMUNITY (HR-1 RPC) DISTRICT AND THE CHANGE WAS ADOPTED THROUGH ORDINANCE NO. 2820.
- THE SUBJECT PROPERTY (TAX PARCEL ID: 234-23.00-270.00) WAS ALSO THE SUBJECT OF A PREVIOUS FUTURE LAND USE MAP (FLUM) AMENDMENT FROM COMMERCIAL AREA TO THE COASTAL AREA IN ORDER TO PERMIT HIGH-DENSITY RESIDENTIAL, RESIDENTIAL PLANNED COMMUNITY (HR-RPC) ZONING OF THE PROPERTY.
- BUILDING SETBACKS:
  FRONT: 40', CORNER: 15'
  SIDE: 10'
  REAR 10'
  MAXIMUM BUILDING HEIGHT: 52'
- FLOOD ZONE:
  THE PROPERTY IS LOCATED WITHIN FLOOD ZONE X, (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), PER FIRM MAP NUMBER 10005C0340K & 10005C343K, MAP REVISED MARCH 16, 2015.
- WATER SUPPLY:
  TIDEWATER UTILITY COMPANY
  LONG NECK WATER COMPANY
- SANITARY SEWER:
  INLAND BAYS PRESERVATION COMPANY
- OPEN SPACE = 23.404 AC.± (57%)
- HORIZONTAL DATUM: DELAWARE STATE PLANE COORDINATE SYSTEM (NAD)83
- PROPERTY DOES NOT CONTAIN ANY TIDAL (0.0 AC.) AND/OR NON-TIDAL WETLANDS (0.0 AC.).
- ALL SIGNAGE SHALL BE SUBJECT TO A SEPARATE PERMIT TO BE ISSUED BY THE COUNTY.
- PART OF THE PARCEL 270 IS LOCATED IN A WELLHEAD PROTECTION AREA.
- THE PROJECT IS NOT LOCATED WITHIN THE HENLOPEN TRANSPORTATION IMPROVEMENT DISTRICT (TID)
- NEAREST EXISTING TRANSPORTATION INVESTMENT DISTRICT:
  HENLOPEN - APPROX. 2.00± MILES AWAY
- THE PROJECT IS LOCATED WITHIN AN AREA OF GOOD AND FAIR GROUNDWATER RECHARGE POTENTIAL.

## DELDOT GENERAL NOTES: (REV. 03/21/2019)

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
4. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
5. PRIVATE STREETS CONSTRUCTED WITHIN THIS SUBDIVISION SHALL BE MAINTAINED BY THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH (TITLE 17 §131). DELDOT ASSUMES NO RESPONSIBILITIES FOR THE FUTURE MAINTENANCE OF THESE STREETS.
6. THE SIDEWALK AND SHARED-USE PATH SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS OR BOTH WITHIN THIS SUBDIVISION. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE SIDEWALK AND/OR SHARED-USE PATH.
7. ALL LOTS SHALL HAVE ACCESS FROM THE INTERNAL SUBDIVISION STREET.
8. DRIVEWAYS WILL NOT BE PERMITTED TO BE PLACED AT CATCH BASIN LOCATIONS.
9. TO MINIMIZE RUTTING AND EROSION OF THE ROADSIDE DUE TO ON-STREET PARKING, DRIVEWAY AND BUILDING LAYOUTS MUST BE CONFIGURED TO ALLOW FOR VEHICLES TO BE STORED IN THE DRIVEWAY BEYOND THE RIGHT-OF-WAY, WITHOUT INTERFERING WITH SIDEWALK ACCESS AND CLEARANCE.
10. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS IN ACCORDANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
11. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MARKERS TO PROVIDE A PERMANENT REFERENCE FOR RE-ESTABLISHING THE RIGHT-OF-WAY AND PROPERTY CORNERS ON LOCAL AND HIGHER ORDER FRONTAGE ROADS. RIGHT-OF-WAY MARKERS SHALL BE SET AND/OR PLACED ALONG THE FRONTAGE ROAD RIGHT-OF-WAY AT PROPERTY CORNERS AND AT EACH CHANGE IN RIGHT-OF-WAY ALIGNMENT IN ACCORDANCE WITH SECTION 3.2.4.2 OF THE DEVELOPMENT COORDINATION MANUAL.

## TIS NOTES:

1. The developer shall improve the State-maintained road(s) on which they front (Long Neck Road), within the limits of their frontage, to meet DelDOT's standards for their Functional Classification as found in Section 1.1 of the Development Coordination Manual and elsewhere therein. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. Frontage is defined in Section 1 of the Development Coordination Manual, which states "This length includes the length of roadway perpendicular to lines created by the projection of the outside parcel corners to the roadway." Questions on or appeals of this requirement should be directed to the DelDOT Subdivision Review Coordinator in whose area the development is located.

2. The developer should construct the full-movement Site Access A on Long Neck Road. This proposed site driveway should be constructed directly across from Bayshore Drive. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn-lane lengths and other design details during the site plan review.

3. The developer should maintain the existing Site Access B on Long Neck Road at Greens Way. No improvements are recommended at this site access intersection.

4. The developer should maintain the existing Site Access C on Delaware Route 24 at Greens Way. No improvements are recommended at this site access intersection.

5. The developer shall enter into a traffic signal agreement for the intersection of Delaware Route 24 & Indian Mission Road / Long Neck Road. Or the developer may contribute to the Traffic Signal Revolving Fund (TSRF) in the amount of $10,206. The developer should coordinate with DelDOT's Subdivision Section to execute the traffic signal agreement or the TSRF agreement and pay the TSRF amount.

6. The following bicycle, pedestrian, and transit improvements should be included:
   a. Adjacent to the proposed right-turn lane on westbound Long Neck Road at the proposed site access opposite Bayshore Drive, a minimum of a five-foot bicycle lane should be dedicated and striped with appropriate markings for bicyclists through the turn lane in order to facilitate safe and unimpeded bicycle travel.
   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.
   c. Utility covers should be made flush with the pavement.
   d. If clubhouses or other community facilities are constructed as shown on the site plan, bicycle parking should be provided near building entrances. Where building architecture provides for an awning, other overhang, or indoor parking, the bicycle parking should be covered.
   e. A minimum 15-foot wide easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontage along Long Neck Road.
   f. Within the easement along Long Neck Road, a minimum of a ten-foot wide shared-use path that meets current AASHTO and ADA standards should be constructed along the site frontage. The shared-use path should be constructed from the western edge of the site frontage (approximately 750 feet west of the proposed site access) to the east side of Greens Way, where it should connect to the existing path. Crosswalks will be required across the proposed site access and across Greens Way. The shared-use path should have a minimum of a five-foot buffer from the roadway. At the western end, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at both ends.
   g. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings within the development. Type 3 curb ramps are discouraged.
   h. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. These internal sidewalks should connect to the proposed shared-use path along Long Neck Road, as well as to other surrounding residential developments via internal connections.
   i. Where internal sidewalks are located alongside of parking spaces, a buffer should be added to prevent vehicular overhang onto the sidewalk.
   j. The developer should coordinate with the Delaware Transit Corporation (DTC) regarding the possibility of including a bus stop to be located along the Long Neck Road site frontage.

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Date: 2/20/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/8/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

NOTES
for
BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | AS NOTED |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

Sheet No.: 2

File Name: 18052-record-cover

LANDSCAPE NOTES:
1. MULCH ALL TREE PITS. PLANT BEDS, AND GROUNDCOVER AREAS WITH A MINIMUM 3" DEPTH (AFTER SETTLEMENT) OF SHREDDED HARDWOOD MULCH.

2. THIS DRAWING TO BE USED FOR LANDSCAPE DEVELOPMENT PURPOSES ONLY.

3. ALL PLANT MATERIAL THAT OCCUR IN SLOPED AREAS IN EXCESS OF 3:1 SHALL BE PLACED IN THE FIELD AS DIRECTED BY THE LANDSCAPE ARCHITECT.

4. ALL TREE STAKING, GUYING, AND WRAPPING SHALL BE REMOVED AFTER ONE YEAR.

5. ALL SHRUB, FLOWER, AND GROUNDCOVER BEDS SHALL BE PITCHED OR CROWNED TO ASSURE A MINIMUM SURFACE PITCH OF 3% FOR POSITIVE SURFACE DRAINAGE.

6. ALL PROPOSED LANDSCAPE PLANT MATERIAL TO BE GUARANTEED FOR A PERIOD OF TWELVE MONTHS FROM THE DATE OF ACCEPTANCE, AGAINST DEFECTS INCLUDING DEATH OR UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT FROM THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND LANDSCAPE INSTALLER CONTROL. CONTRACTOR, IF NOT MAINTAINING THE PROPERTY DURING THE GUARANTEE PERIOD, SHALL BE RESPONSIBLE FOR MAKING MONTHLY INSPECTIONS AND ISSUING WRITTEN REPORTS DETAILING ANY MAINTENANCE PRACTICES HE OBSERVES WHICH WOULD IN ANYWAY NEGATE HIS GUARANTEE OBLIGATION.

7. ALL AREAS BEYOND THE LIMIT OF LAWN/GROUNDCOVER THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITION AND/OR TO COMPLY WITH STANDARDS INDICATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.

8. ALL PLANT MATERIAL MUST COMPLY WITH THE RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "STANDARD FOR NURSERY STOCK"

9. PLANT QUANTITIES ARE GIVEN FOR COMPARISON PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING PLANT COUNTS AND SHALL BE RESPONSIBLE FOR PROVIDING ALL PLANT MATERIAL SHOWN ON THE DRAWING. ANY DISCREPANCIES BETWEEN PLANT SCHEDULE QUANTITIES AND PLANS SHALL IMMEDIATELY BE BROUGHT TO THE LANDSCAPE ARCHITECTS ATTENTION PRIOR TO SUBMISSION OF BID. NO SUBSTITUTIONS OF TYPE OF PLANT MATERIAL OR SIZES OF PLANT MATERIAL WILL BE ACCEPTABLE UNLESS NOTED ON PLANS, APPROVED BY THE LANDSCAPE ARCHITECT OR AS APPROVED BY THE BOARD PROFESSIONALS.

10. APPLY ANTI-DESICCANT PRIOR TO THE ONSET OF WINTER AND AGAIN IN MID-WINTER, USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE. IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL-LEAF, SPRAY WITH ANTI-DESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER INSTALLATION.

11. ALL PLANTED TREES, SHRUBS, GROUNDCOVERS AND ANNUAL FLOWERS, SHALL BE MAINTAINED UNTIL FINAL ACCEPTANCE OF THE COMPLETED CONTRACT, OR WHEN INSTALLATION IS ACCEPTED AND MAINTENANCE IS TRANSFERRED TO OWNER. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, CONTROL OF INSECTS, FUNGUS, AND OTHER HORTICULTURAL OPERATIONS NECESSARY FOR THE PROPER GROWTH OF ALL PLANT MATERIAL.

12. PLANT LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND SUBJECT TO FIELD AND UTILITY LOCATIONS.

13. ANY CHANGES TO AN APPROVED LANDSCAPING PLAN MUST BE AUTHORIZED BY THE LANDSCAPE ARCHITECT AND AS APPROVED BY THE BOARD PROFESSIONALS

14. PLANT BACKFILL MIX SHALL CONTAIN THE FOLLOWING:

1 PART AMENDED TOPSOIL (SCREENED) WITH FERTILIZATION AS REQUIRED BELOW:

AMENDED TOPSOIL: SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OF SLAG AND SHALL BE FREE OF STONES, LUMPS, AMENDED TOPSOIL: SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OF SLAG AND SHALL BE FREE OF STONES, LUMPS, SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OF SLAG AND SHALL BE FREE OF STONES, LUMPS, PLANTS OR THEIR ROOTS, STICKS AND EXTRANEOUS MATTER, AND SHALL NOT BE MOVED, PLACED OR USED WHILE IN FROZEN OR MUDDY CONDITION. TOPSOIL SHALL HAVE AN ACIDITY RANGE OF pH 5.0 TO 7.0 AND SHALL CONTAIN NOT LESS THAN 5% ORGANIC MATTER AS DETERMINED BY THE "WALKLEY-BLACK METHOD" (COLORIMETRIC VERSION). SUFFICIENT LIMESTONE SHALL BE ADDED TO TOPSOIL USED TO BRING SOIL TO RANGE OF pH 6.0 TO pH 6.5. THERE SHALL BE A MINIMUM OF 12" OF TOPSOIL (AFTER SETTLEMENT) IN ALL PLANT BEDS, OR GROUND COVER AREAS AND 3" IN ALL FINE LAWN, SEEDED AREAS OR AS CALLED FOR.

FERTILIZATION: 1. FOR TREES, SHRUBS AND ALL GROUND COVER (HERBACEOUS AND CONIFEROUS): "TERRA-SORB" AG FERTILIZATION: "TERRA-SORB" AG AT THE RATE OF 32 OZ PER CUBIC YARD OF SOIL MIX.

2. FOR TREES AND SHRUBS (EXCLUDING CONIFEROUS GROUND COVER): PHC HEALTHY START 3-4-3 ORGANIC FERTILIZER CONDITIONER, SHALL BE APPLIED AT 1/2 LB. PER TRUNK DIAMETER (CAL. INCH) FOR TREES.
FOR SHRUBS USE THE FOLLOWING TABLE:

| PLANT SIZE | RATE CUPS | LBS. | #PLANT BAG PLANT SIZE |
|---|---|---|---|
| 1 GALLON | 1/2 | 1/4 | 100 |
| 5 GALLON | 1 | 1/2 | 50 |
| 15 GALLON | 2 | 1 | 25 |
| 24" BALL/BOX | 3 | 1 1/2 | 16 |
| 36" BALL/BOX | 5 | 2 1/2 | 10 |
| 42" BALL/BOX | 6 | 3 | 8 |
| 54" BALL/BOX | 8 | 4 | 6 |
| 72" BALL/BOX | 10 | 5 | 5 |

FOR HERBACEOUS AND CONIFEROUS GROUND COVER: DRY ROOTS 2 SHALL BE APPLIED AT THE FOLLOWING RATES:
CONIFEROUS GROUND COVER:

| PLANT SIZE | RATE CUPS | LBS. | #PLANT BAG PLANT SIZE |
|---|---|---|---|
| 15-18" B&B | 1 1/2 | 3/4 | 37 |

HERBACEOUS GROUND COVER: 20LBS./1000 SQUARE FEET.

FOR LAWN AND SEEDED AREAS: 10-6-4 50% ORGANIC FERTILIZER AT THE RATE OF 20LBS. PER 1,000 SQUARE FEET (OR AS REQUIRED BY TOPSOIL ANALYSIS REPORT).

## LANDSCAPE BUFFER

NOTES:
1. THE LANDSCAPE AND/OR FOREST BUFFERS SHALL BE INSTALLED WITHIN 18 MONTHS FROM THE DATE SITE WORK IS AUTHORIZED TO COMMENCE, AS DOCUMENTED BY A NOTICE TO PROCEED LETTER FROM THE COMMISSION.

2. THE LAND DEVELOPER SHALL BE RESPONSIBLE FOR THE HEALTH AND SURVIVAL OF THE TREES, INCLUDING REGULAR NECESSARY WATERING FOR A MINIMUM OF 2 YEARS OR UNTIL SUCH LATER DATE AS THE MAINTENANCE RESPONSIBILITIES ARE TRANSFERRED TO A CONDOMINIUM ASSOCIATION; PROVIDED, HOWEVER THAT THE DEVELOPER SHALL REPLACE AND TREES THAT DIE DURING THE MINIMUM 2 YEAR DEVELOPER MAINTENANCE PRIOR TO TRANSFERRING MAINTENANCE RESPONSIBILITIES TO A CONDOMINIUM ASSOCIATION.

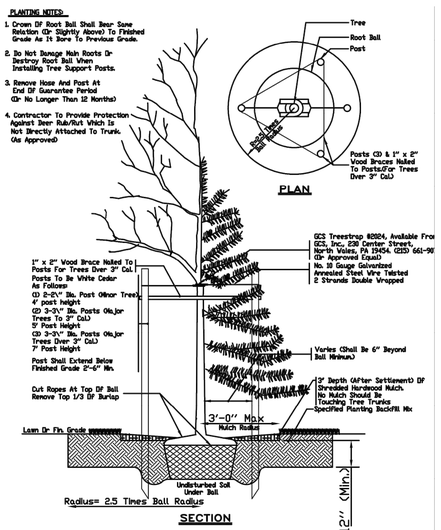
3. ADDITIONAL INFORMATION AS TO HOW THE LANDSCAPE / FORESTED BUFFERS ARE TO BE MAINTAINED IN PERPETUITY, SHALL BE INCLUDED IN THE RESTRICTIVE COVENANTS AND/OR CONDOMINIUM ASSOCIATION DOCUMENTS.

4. PURSUANT WITH SUSSEX COUNTY CODE SECTION 99-5, THE 30' WIDE LANDSCAPE BUFFER SHOWN IN THIS PLAN MUST BE PLANTED WITH A MIX OF 70% DECIDUOUS AND 30% EVERGREEN TREES, THE MAJORITY OF WHICH SHALL BE SUITABLE TREES OF COMMON LOCAL SPECIES. EVERY 100' OF BUFFER SHALL INCLUDE A MINIMUM OF 15 TREES.

5. ALL DECIDUOUS TREES THAT ARE PLANTED TO ESTABLISH THE BUFFER PLANTINGS SHALL HAVE A MINIMUM CALIPER OF 1.5 INCHES AND A MINIMUM HEIGHT OF SIX FEET ABOVE GROUND WHEN PLANTED IN ORDER TO INSURE THAT THE TREES WILL BE CAPABLE OF OBTAINING A MINIMUM HEIGHT OF 10 FEET ABOVE GROUND WITHIN FIVE YEARS OF BEING PLANTED.

6. ALL EVERGREEN TREES THAT ARE PLANTED TO ESTABLISH THE BUFFER PLANTINGS SHALL HAVE A MINIMUM HEIGHT OF FIVE FEET ABOVE GROUND WHEN PLANTED IN ORDER TO INSURE THAT THEY ARE REASONABLY CAPABLE OF ATTAINING A MINIMUM HEIGHT OF 10 FEET ABOVE GROUND WITHIN FIVE YEARS OF BEING PLANTED.

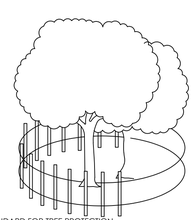
7. THE TREES SHALL BE PLANTED IN A STAGGERED NATURAL MANNER. THE PROCEDURES AND DETAILS FOR PLANTING NEW TREES SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT ON THE PLAN SUBMITTED TO AND APPROVED BY THE COMMISSION AND SHALL INCLUDE THE REQUIREMENT THAT THE BUFFER AREA SHALL HAVE A FINAL GRADE THAT CONTAINS A MINIMUM OF FOUR INCHES OF TOPSOIL AND A SUITABLE GRASS MIX PLANTED AS SACRIFICIAL COVER BETWEEN THE BUFFER TREES FOR SOIL STABILIZATION UNTIL THE NEWLY PLANTED TREES BECOME LARGER. THE PLAN MAY SUBSTITUTE WOODCHIPS FOR PLANTED GRASS BETWEEN THE BUFFER TREES IN RESPECT TO BOTH NEWLY PLANTED AND EXISTING TREES, AS DETERMINED BY THE LANDSCAPE ARCHITECT




"RIVER OAKS SUBDIVISION"

## TREE PLANTING DETAIL

N.T.S.



STANDARD FOR TREE PROTECTION
1. PROTECT FROM MECHANICAL DAMAGE BY FENCING AS IS SHOWN IN DETAIL. FENCING OR OTHER BARRIER TO BE INSTALLED AT DRIP LINE OF THE TREE BRANCHES.
2. BOARDS WILL NOT BE NAILED TO TREES DURING CONSTRUCTION.
3. FEEDER ROOTS SHALL NOT BE CUT IN AN AREA INSIDE DRIP LINE OF TREE BRANCHES.
4. TREE LIMB REMOVAL, WHERE NECESSARY, WILL BE DONE FLUSH TO TRUNK OR MAIN BRANCH.
5. SNOW FENCE TO BE SET AT THE DRIPLINE PRIOR TO CONSTRUCTION.

## TREE PROTECTION DETAIL

N.T.S.

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

December 20, 2021

Mr. Robert Tunnel, III
34026 Anna's Way, Suite 1
Long Neck, DE 19966

By e-mail to: rtunnell@potnets.com

RE: Notice of Decision Letter for Change of Zone (CZ 1922) Lands of Baywood, LLC for an amendment to the Comprehensive Zoning Map of Sussex County from a B-1 (Neighborhood Business District), C-1 (General Commercial District) and CR-1 (Commercial Residential District) to a HR-RPC High Density Residential District – Residential Planned Community.
Tax Parcel: 234-23.00-270.00

Dear Mr. Tunnel,

At their meeting of Tuesday, December 7th, 2021, the Sussex County Council approved the Change of Zone application for an amendment to the Comprehensive Zoning Map for a Change of Zone from B-1, C-1 and CR-1 to High Density Residential, Residential Planned Community (HR-RPC). The Change of Zone shall be substantially underway within three (3) years of the County Council approval otherwise the use shall expire. A Site Plan showing the conditions of approval shall be reviewed and approved by the Planning Commission prior to commencement of the use on the parcel. The following are the conditions:

A. The maximum number of residential units shall be 514.
B. All entrances, intersection, roadway, and multi-modal improvements shall be completed by the developer in accordance with all DelDOT requirements.
C. The project shall be served by central sewer through the Inland Bays Preservation Company and Sussex County. The developer shall comply with all Sussex County Engineering Department requirements including any offsite upgrades necessary to provide service to the project.
D. The project shall be served by central water to provide drinking water and fire protection.
E. Interior street design shall meet or exceed the Sussex County Street design requirements.
F. Construction, material deliveries and site work shall only occur on the property between 7:30 am and 7:00 pm Monday through Friday. No Saturday hours from May 15th to September 15th or any Sunday hour shall be permitted. The Saturday hours, when permitted, shall be limited from 8:00 am to 5:15 pm. A 24 inch by 36 inch "NOTICE" sign confirming these hours shall be prominently displayed at all entrances to the site during construction.
G. Street naming and addressing shall be subject to the review and approval of the County Mapping and Addressing Departments.
H. The stormwater management system shall meet or exceed the requirements of the State and County. It shall be constructed and maintained using best management practices.



I. The Final Site Plan shall contain the approval of the Sussex County Conversation District for the design and location of all stormwater management areas and erosion and sedimentation control facilities.
J. The applicant shall coordinate with the Indian River School District to establish a school bust stop area which shall be shown on the Final Site Plan in required by the District.
K. The central recreational complex, including the community clubhouse, indoor and outdoor swimming pools shall be completed prior to the issuance of the Certificate of Occupancy for the 161st multifamily unit.
L. All lighting on the site shall be shielded and downward screened so that it does not shine on neighboring properties or roadways.
M. Lighted sign shall be permitted at each of the four entrances to the development. Those signs shall not exceed 32 square feet in size per side.
N. As proffered by the applicant, this HR-RPC rezoning was sought for the specific purpose of development of a 514-unit multi0family development depicted on the site plan submitted with this application. In the event the RPC is not developed and is declared null and void pursuant to Section 99-9B or 99-40A of the Sussex County Code, then Sussex County may initiate the rezoning process and schedule public hearings to consider whether to revert this land (currently TMP 234-23.00-270.00, 273.01, 273.02, 270.03 and 270.05) back to the zoning classification of the land in existence immediately prior to this HR-RPC rezoning.
O. The Developer shall coordinate with DelDOT for safe and clearly marked pedestrian crossings at the intersection of Long Neck Road and School Lane for the two section of this development. The Developer shall clearly indicate the means of safe crossing on the Final Site Plan and no apartments shall be constructed on the south side of Long Neck Road until those safety measures are installed.
P. This recommendation is contingent upon an amendment to the Future Land Use Map in the Sussex County Comprehensive Plan revising the designation of a portion of the property from "Commercial Area" to the "Coastal Area" which otherwise surrounds it.
Q. The Final Site Plan shall be subject to the review and approval of the Sussex County Planning and Zoning Commission.

The Preliminary Site Plan shall be prepared by a licensed Delaware Surveyor or Engineer and shall contain the conditions of approval on the plan. The Final Site Plan shall be approved prior to the commencement of the use on the property. The Site Plan shall be reviewed and approved by the Planning Commission. Agency approvals include but are not limited to: the Delaware Department of Transportation (DelDOT), Sussex Conservation District, Sussex County Engineering Department, Sussex County Mapping and Addressing Department, Department of Public Health (Office of Drinking Water) and the Office of the State Fire Marshal.

Please note that the plan shall be recorded in the Sussex County Recorder of Deeds Office within sixty (60) days from the Planning and Zoning Commission's final plan approval. The Final Subdivision Plan shall be valid for a period of five (5) years from the date of approval by the County. Any such Final Site Plan shall be rendered null and void if substantial construction is not actively and continuously underway on the use within five (5) years of the date of approval by the County. "Substantially underway" shall mean that the right-of-way has been cleared, the roadways,



internal streets and/or parking areas have been rough-graded, the drainage system and/or stormwater management facilities have been rough-graded and erosion and sediment control measures are in place and being actively maintained and proceeding to completion.
Please submit a minimum of two (2) full size paper copies and an electronic copy (PDF) of the Preliminary Site Plan to the Planning and Zoning Office a minimum of twenty (20) days prior to a Planning Commission meeting.

An approved copy of the Ordinance granting approval of the Change of Zone will be sent to you from the Clerk of Council.

Please feel free to contact the Planning and Zoning Department with any questions during business hours 8:30 am to 4:30 pm, Monday through Friday, at (302)-855-7878.

Sincerely,

Elliott Young
Planner I

CC: Mr. Lester Shaffer, Sussex County Chief Constable – Constable's Office
Ms. Susan Isaacs, Sussex County Engineering Project Coordinator — Engineering – Public Works
Mr. Andy Wright, Chief of Building Code – Sussex County Building Code
Mr. John Ashman, Director of Utility Planning & Design – Engineering
CZ 1922 Baywood, LLC file

COUNTY ADMINSITRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

## CONDITION "O" NOTE

IMPROVEMENTS FOR PEDESTRIAN CROSSING WILL BE PROVIDED WITH PHASE 2 IMPROVEMENTS. NO APARTMENTS SHALL BE CONSTRUCTED ON THE SOUTH SIDE OF LONG NECK ROAD UNTIL SAFE CROSSING PROVISIONS HAVE BEEN PROVIDED AND ADDRESSED AT THE DIRECTION OF DELDOT.

LANDSCAPE SCHEDULE

| QUANTITY | SYMBOL | BOTANICAL NAME | COMMON NAME | SPECIFICATION | ROOT | COMMENTS |
|---|---|---|---|---|---|---|
| 14 | AR | ACER RUBRUM | RED MAPLE | 1" - 1 1/2" CAL., 6' - 7' HGT. MIN. | B&B | 15' O.C. |
| 5 | IO | ILEX OPACA | AMERICAN HOLLY | 5' - 6' HGT. MIN. | B&B | 10' O.C. |
| 9 | PA | PICEA ABIES | NORWAY SPRUCE | 5' - 6' HGT. MIN. | B&B | 10' O.C. |
| 5 | PV | PINUS VIRGINIANA | VIRGINIA PINE | 5' -'6 HGT. MIN. | B&B | 10' O.C. |
| 16 | QP | QUERCUS PHELLOS | WILLOW OAK | 1" - 1 1/2" CAL., 6' - 7' HGT. MIN. | B&B | 15' O.C. |
| 13 | QR | QUERCUS RUBRA | RED OAK | 1" - 1 1/2" CAL., 6'-7' HGT. MIN. | B&B | 15' O.C. |

SUBSTITUTIONS:

| BOTANICAL NAME | COMMON NAME | SPECIFICATION |
|---|---|---|
| Acer saccharum | SUGAR MAPLE | 1 1/2" CAL., 6' HGT. MIN. |
| Chamaecyparis thyoides | ATLANTIC WHITECEDAR | 5' HGT. MIN. |
| Crataegis viridis 'Winter King' | WINTER KING GREEN HAWTHORN | 1 1/2" CAL., 6' HGT. MIN. |
| Liriodendron tulipifera | TULIP TREE | 1 1/2" CAL., 6' HGT. MIN. |
| Pinus strobus | WHITE PINE | 5' HGT. MIN. |
| Pinus taeda | LOBLOLLY PINE | 5' HGT. MIN. |
| Quercus alba | WHITE OAK | 1 1/2" CAL., 6' HGT. MIN. |
| Quercus coccinea | SCARLET OAK | 1 1/2" CAL., 6' HGT. MIN. |
| Taxodium distichum | BALD CYPRESS | 1 1/2" CAL., 6' HGT. MIN. |
| Magnolia virginiana | SWEETBAY MAGNOLIA | 5' HGT. MIN. |
| Juniperus virginiana | EASTERN RED CEDAR | 5' HGT. MIN. |
| Platanus acerifolia | LONDON PLANE TREE | 1 1/2" CAL., 6' HGT. MIN. |
| Nyssa sylvatica | BLACK GUM | 1 1/2" CAL., 6' HGT. MIN. |
| Salix babylonica | WEEPING WILLOW | 1 1/2" CAL., 6' HGT. MIN. |

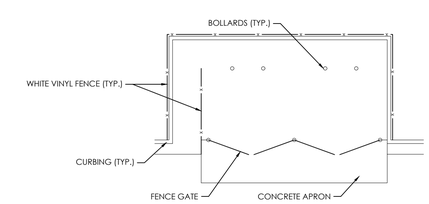
IF SUBSTITUTIONS ARE MADE, ONLY SUBSTITUTE DECIDUOUS FOR DECIDUOUS OR EVERGREEN FOR EVERGREEN TO MAINTAIN REQUIRED MIX.

LANDSCAPE BUFFER
EXISTING FOREST TO REMAIN

LANDSCAPE ARCHITECT'S CERTIFICATION

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY SUPERVISIONS.

ALBERT M. DEMERICH RLA, ASLA NO. S1-394 DATE




## DUMPSTER ENCLOSURE

N.T.S

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Georgetown, DE 19947
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3003 Merrill Mill Road
Salisbury, MD 21804
T. 410.572.8833
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JAMES R. ELLIOTT LICENSE NO. 19804 PROFESSIONAL ENGINEER
Date: 2/20/25

REVISIONS

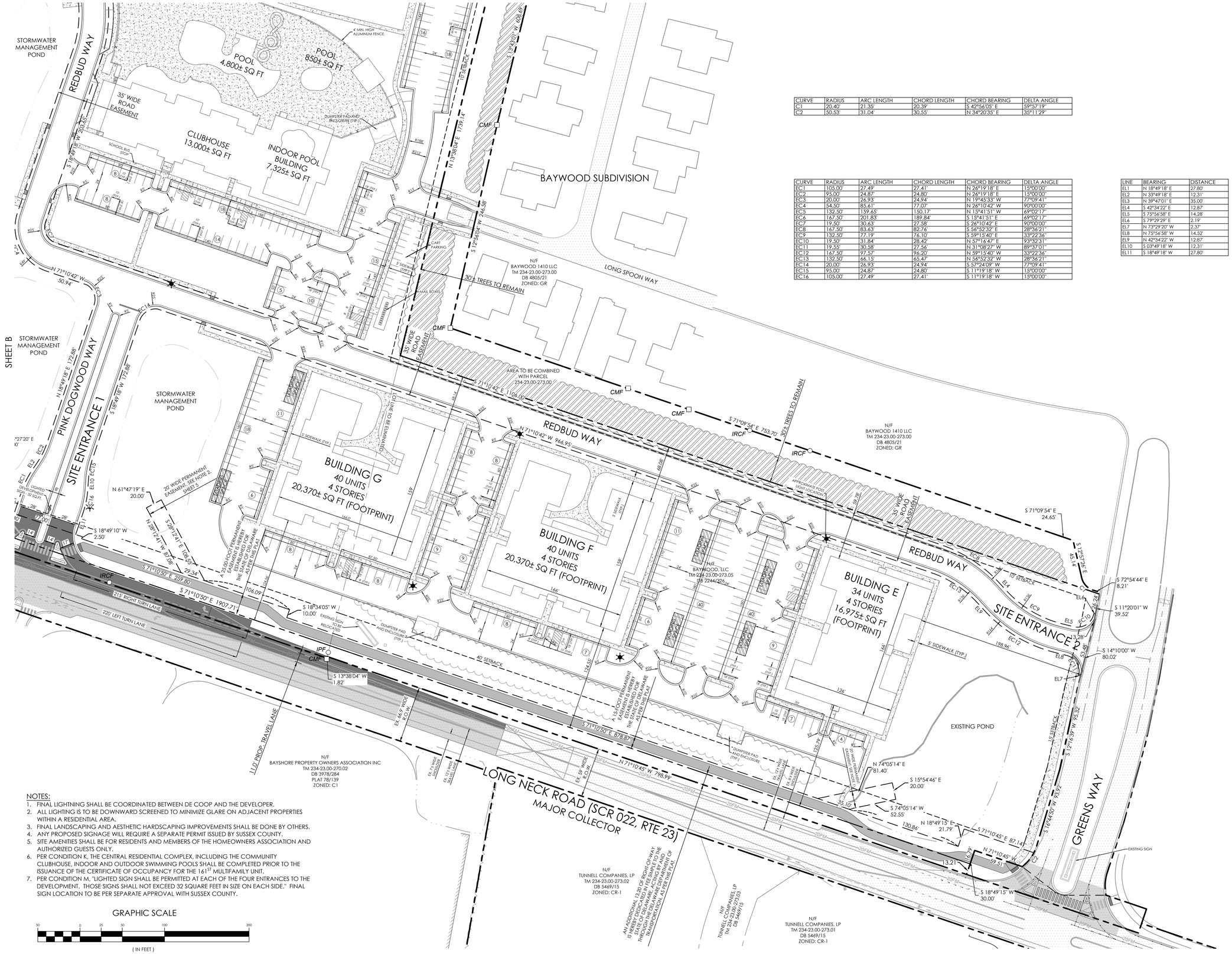
| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

CONDITIONS OF APPROVAL AND LANDSCAPING NOTES
for
BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

Date: 1/25/23
Job Number: G18052
Scale: AS NOTED
Drawn By: ML
Designed By: JPR
Approved By: SWF

Sheet No.: 3

File Name: 18052-record-cover




| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 20.40' | 21.35' | 20.39' | S 42°56'05" E | 59°57'19" |
| C2 | 50.53' | 31.04' | 30.55' | N 34°20'35" E | 35°11'29" |

| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| EC1 | 105.00' | 27.49' | 27.41' | N 26°19'18" E | 15°00'00" |
| EC2 | 95.00' | 24.87' | 24.80' | N 26°19'18" E | 15°00'00" |
| EC3 | 20.00' | 26.93' | 24.94' | N 19°45'33" W | 77°09'41" |
| EC4 | 54.50' | 85.61' | 77.07' | N 26°10'42" W | 90°00'00" |
| EC5 | 132.50' | 159.65' | 150.17' | N 15°41'51" W | 69°02'17" |
| EC6 | 167.50' | 201.83' | 189.84' | S 15°41'51" E | 69°02'17" |
| EC7 | 19.50' | 30.63' | 27.58' | S 26°10'42" E | 90°00'00" |
| EC8 | 167.50' | 83.63' | 82.76' | S 56°52'32" E | 28°36'21" |
| EC9 | 132.50' | 77.19' | 76.10' | S 59°15'40" E | 33°22'36" |
| EC10 | 19.50' | 31.84' | 28.42' | N 57°16'47" E | 93°32'31" |
| EC11 | 19.55' | 30.58' | 27.56' | N 31°08'27" W | 89°37'01" |
| EC12 | 167.50' | 97.57' | 96.20' | N 59°15'40" W | 33°22'36" |
| EC13 | 132.50' | 66.15' | 65.47' | N 56°52'32" W | 28°36'21" |
| EC14 | 20.00' | 26.93' | 24.94' | S 57°24'09" W | 77°09'41" |
| EC15 | 95.00' | 24.87' | 24.80' | S 11°19'18" W | 15°00'00" |
| EC16 | 105.00' | 27.49' | 27.41' | S 11°19'18" W | 15°00'00" |

| LINE | BEARING | DISTANCE |
|---|---|---|
| EL1 | N 18°49'18" E | 27.80' |
| EL2 | N 33°49'18" E | 12.31' |
| EL3 | N 39°47'01" E | 35.00' |
| EL4 | S 42°34'22" E | 12.87' |
| EL5 | S 75°56'58" E | 14.28' |
| EL6 | S 79°29'29" E | 2.19' |
| EL7 | N 73°29'20" W | 2.37' |
| EL8 | N 75°56'58" W | 14.52' |
| EL9 | N 42°34'22" W | 12.87' |
| EL10 | S 03°49'18" W | 12.31' |
| EL11 | S 18°49'18" W | 27.80' |

NOTES:

1. FINAL LIGHTNING SHALL BE COORDINATED BETWEEN DE COOP AND THE DEVELOPER.
2. ALL LIGHTING IS TO BE DOWNWARD SCREENED TO MINIMIZE GLARE ON ADJACENT PROPERTIES WITHIN A RESIDENTIAL AREA.
3. FINAL LANDSCAPING AND AESTHETIC HARDSCAPING IMPROVEMENTS SHALL BE DONE BY OTHERS.
4. ANY PROPOSED SIGNAGE WILL REQUIRE A SEPARATE PERMIT ISSUED BY SUSSEX COUNTY.
5. SITE AMENITIES SHALL BE FOR RESIDENTS AND MEMBERS OF THE HOMEOWNERS ASSOCIATION AND AUTHORIZED GUESTS ONLY.
6. PER CONDITION K, THE CENTRAL RESIDENTIAL COMPLEX, INCLUDING THE COMMUNITY CLUBHOUSE, INDOOR AND OUTDOOR SWIMMING POOLS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE 161ST MULTIFAMILY UNIT.
7. PER CONDITION M, "LIGHTED SIGN SHALL BE PERMITTED AT EACH OF THE FOUR ENTRANCES TO THE DEVELOPMENT. THOSE SIGNS SHALL NOT EXCEED 32 SQUARE FEET IN SIZE ON EACH SIDE." FINAL SIGN LOCATION TO BE PER SEPARATE APPROVAL WITH SUSSEX COUNTY.

DELAWARE STATE GRID NORTH (NAD 83)

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Date: 2/20/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/29/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

RECORD SITE PLAN A
for
# BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 50' |
| Drawn By: | MIL |
| Designed By: | JPR |
| Approved By: | SWF |

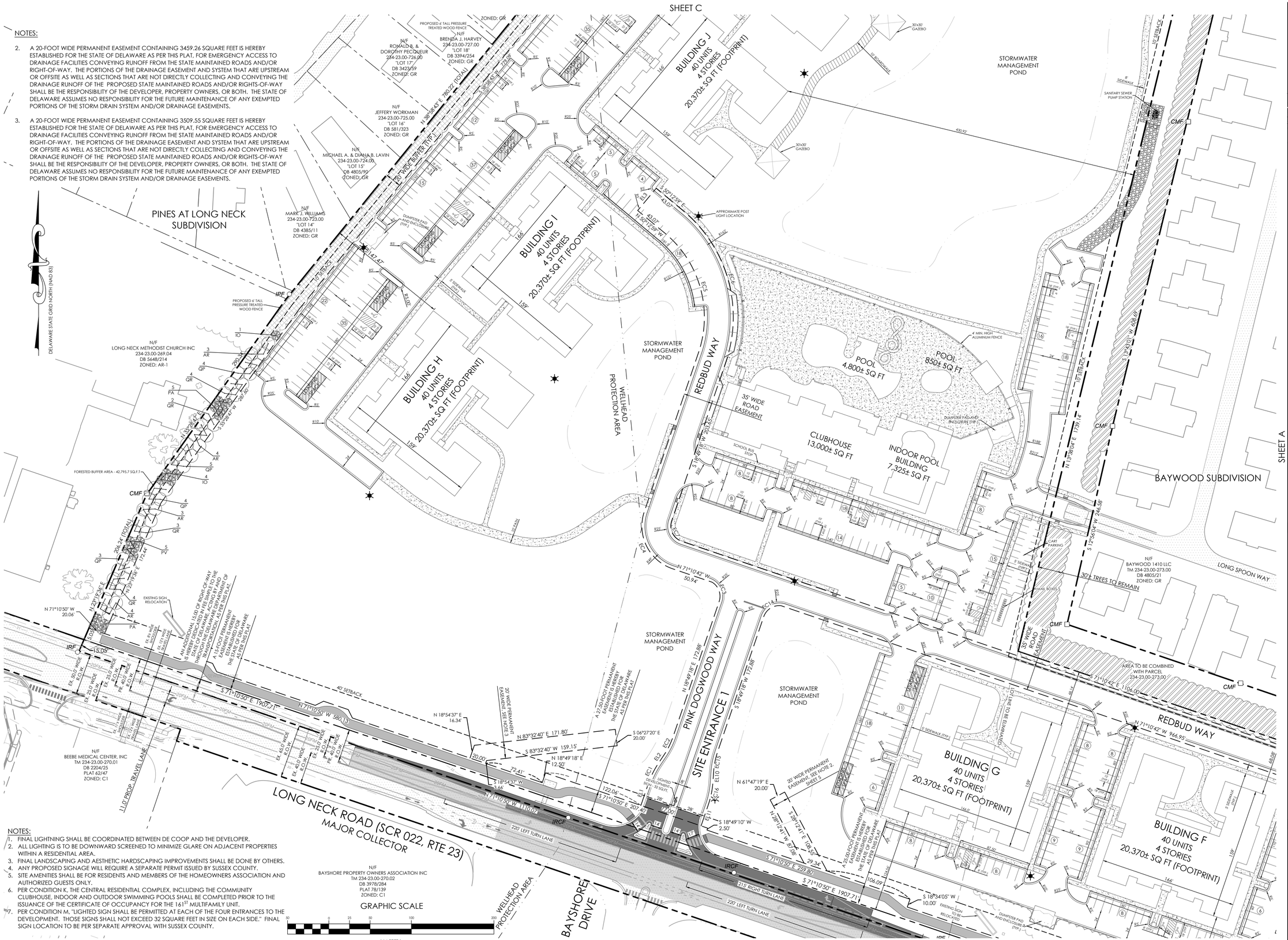
Sheet No.: 4

File Name: 18052-record-site

NOTES:

2. A 20-FOOT WIDE PERMANENT EASEMENT CONTAINING 3459.26 SQUARE FEET IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT, FOR EMERGENCY ACCESS TO DRAINAGE FACILITIES CONVEYING RUNOFF FROM THE STATE MAINTAINED ROADS AND/OR RIGHT-OF-WAY. THE PORTIONS OF THE DRAINAGE EASEMENT AND SYSTEM THAT ARE UPSTREAM OR OFFSITE AS WELL AS SECTIONS THAT ARE NOT DIRECTLY COLLECTING AND CONVEYING THE DRAINAGE RUNOFF OF THE PROPOSED STATE MAINTAINED ROADS AND/OR RIGHTS-OF-WAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, PROPERTY OWNERS, OR BOTH. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF ANY EXEMPTED PORTIONS OF THE STORM DRAIN SYSTEM AND/OR DRAINAGE EASEMENTS.

3. A 20-FOOT WIDE PERMANENT EASEMENT CONTAINING 3509.55 SQUARE FEET IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT, FOR EMERGENCY ACCESS TO DRAINAGE FACILITIES CONVEYING RUNOFF FROM THE STATE MAINTAINED ROADS AND/OR RIGHT-OF-WAY. THE PORTIONS OF THE DRAINAGE EASEMENT AND SYSTEM THAT ARE UPSTREAM OR OFFSITE AS WELL AS SECTIONS THAT ARE NOT DIRECTLY COLLECTING AND CONVEYING THE DRAINAGE RUNOFF OF THE PROPOSED STATE MAINTAINED ROADS AND/OR RIGHTS-OF-WAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, PROPERTY OWNERS, OR BOTH. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF ANY EXEMPTED PORTIONS OF THE STORM DRAIN SYSTEM AND/OR DRAINAGE EASEMENTS.




NOTES:

1. FINAL LIGHTNING SHALL BE COORDINATED BETWEEN DE COOP AND THE DEVELOPER.
2. ALL LIGHTING IS TO BE DOWNWARD SCREENED TO MINIMIZE GLARE ON ADJACENT PROPERTIES WITHIN A RESIDENTIAL AREA.
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4. ANY PROPOSED SIGNAGE WILL REQUIRE A SEPARATE PERMIT ISSUED BY SUSSEX COUNTY.
5. SITE AMENITIES SHALL BE FOR RESIDENTS AND MEMBERS OF THE HOMEOWNERS ASSOCIATION AND AUTHORIZED GUESTS ONLY.
6. PER CONDITION K, THE CENTRAL RESIDENTIAL COMPLEX, INCLUDING THE COMMUNITY CLUBHOUSE, INDOOR AND OUTDOOR SWIMMING POOLS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE 161ST MULTIFAMILY UNIT.
7. PER CONDITION M, "LIGHTED SIGN SHALL BE PERMITTED AT EACH OF THE FOUR ENTRANCES TO THE DEVELOPMENT. THOSE SIGNS SHALL NOT EXCEED 32 SQUARE FEET IN SIZE ON EACH SIDE." FINAL SIGN LOCATION TO BE PER SEPARATE APPROVAL WITH SUSSEX COUNTY.

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Date: 2/20/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

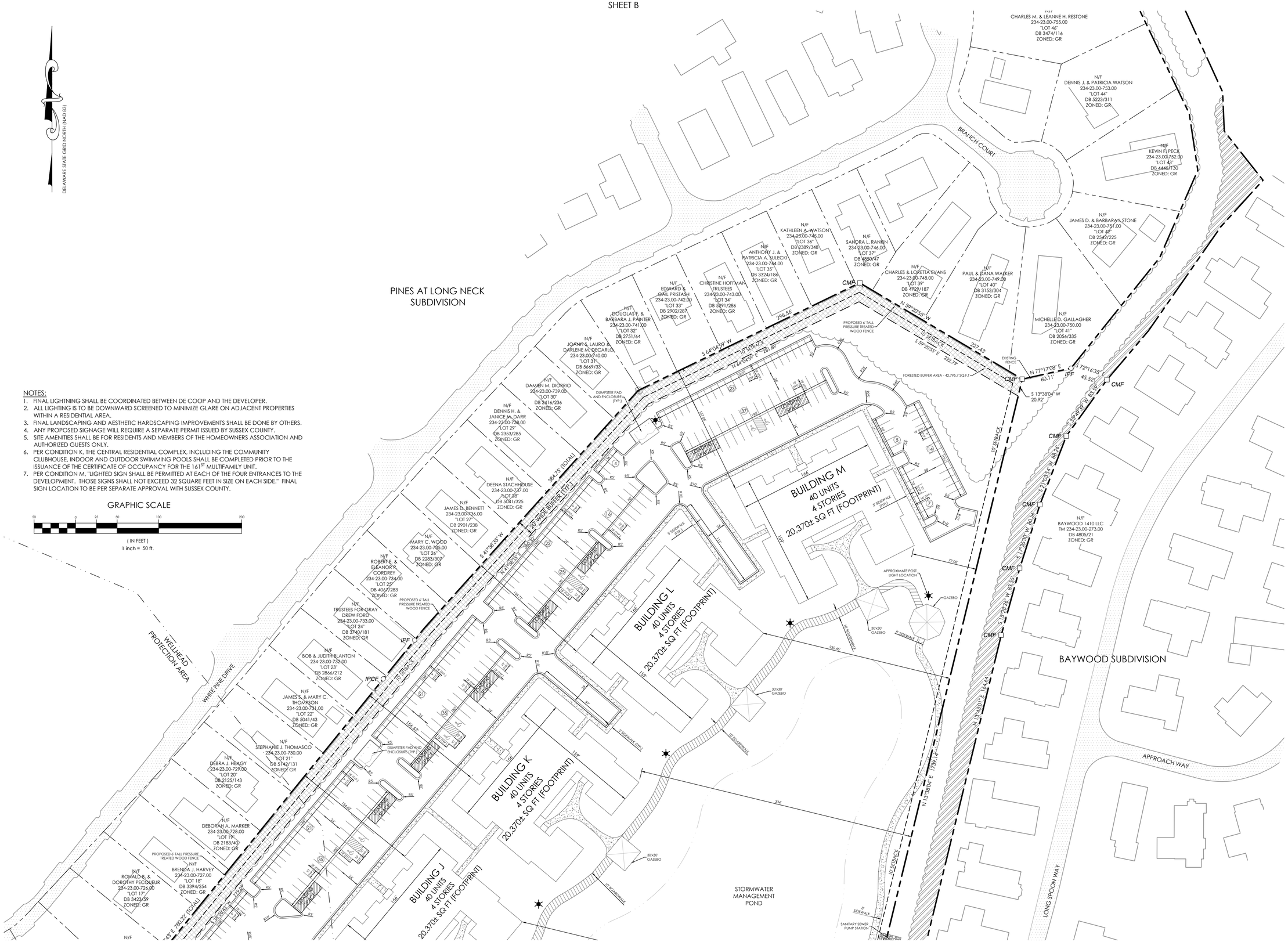
RECORD SITE PLAN B
for
# BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 50' |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

Sheet No.: 5

File Name: 18052-record-site

SHEET B




NOTES:

1. FINAL LIGHTNING SHALL BE COORDINATED BETWEEN DE COOP AND THE DEVELOPER.
2. ALL LIGHTING IS TO BE DOWNWARD SCREENED TO MINIMIZE GLARE ON ADJACENT PROPERTIES WITHIN A RESIDENTIAL AREA.
3. FINAL LANDSCAPING AND AESTHETIC HARDSCAPING IMPROVEMENTS SHALL BE DONE BY OTHERS.
4. ANY PROPOSED SIGNAGE WILL REQUIRE A SEPARATE PERMIT ISSUED BY SUSSEX COUNTY.
5. SITE AMENITIES SHALL BE FOR RESIDENTS AND MEMBERS OF THE HOMEOWNERS ASSOCIATION AND AUTHORIZED GUESTS ONLY.
6. PER CONDITION K, THE CENTRAL RESIDENTIAL COMPLEX, INCLUDING THE COMMUNITY CLUBHOUSE, INDOOR AND OUTDOOR SWIMMING POOLS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE 161ST MULTIFAMILY UNIT.
7. PER CONDITION M, "LIGHTED SIGN SHALL BE PERMITTED AT EACH OF THE FOUR ENTRANCES TO THE DEVELOPMENT. THOSE SIGNS SHALL NOT EXCEED 32 SQUARE FEET IN SIZE ON EACH SIDE." FINAL SIGN LOCATION TO BE PER SEPARATE APPROVAL WITH SUSSEX COUNTY.

GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )
1 inch = 50 ft.

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JAMES R. ELLIGER LICENSE NO. 14448 STATE OF DELAWARE PROFESSIONAL ENGINEER

Date: 2/20/25

REVISIONS

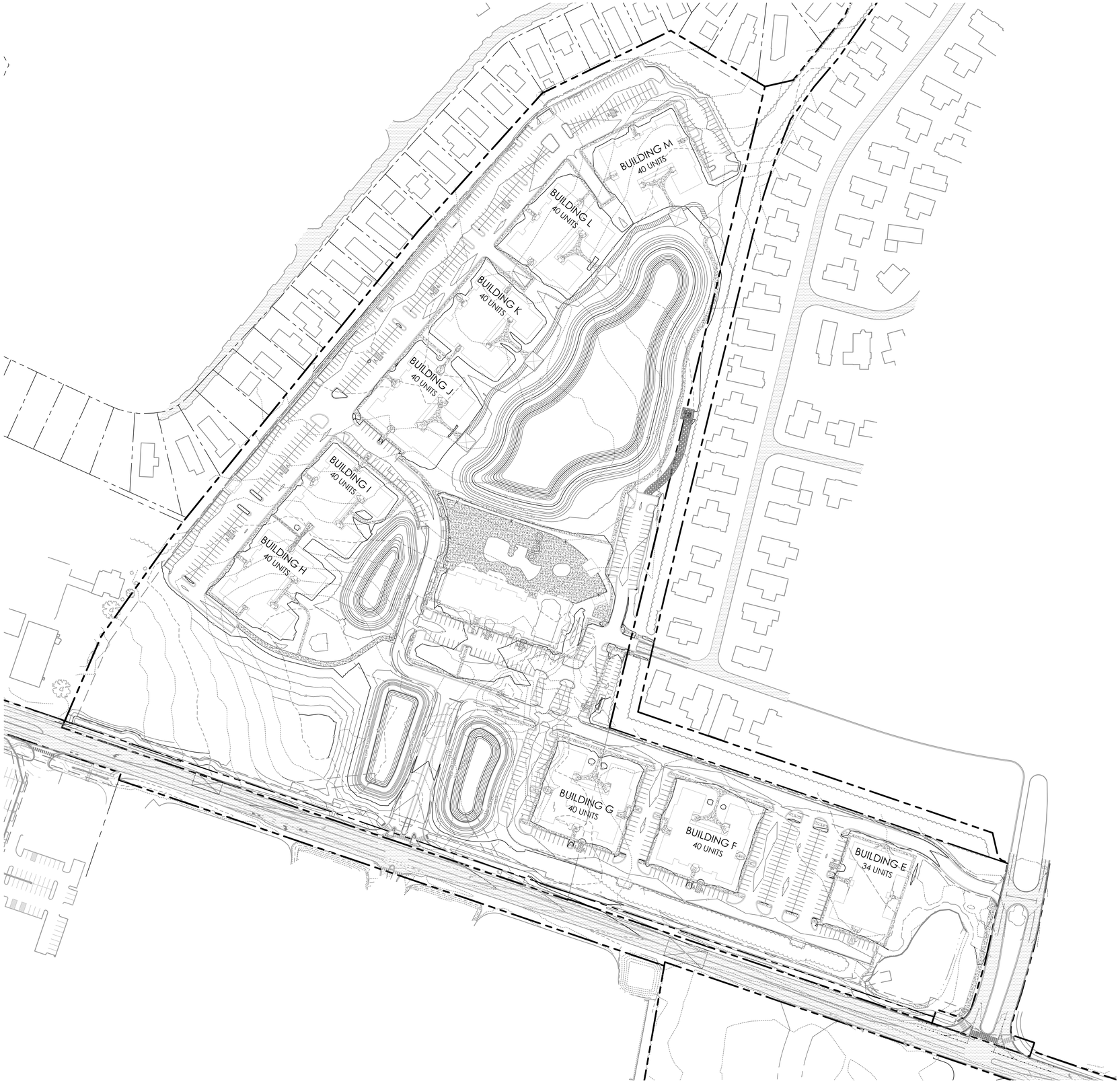
| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

RECORD SITE PLAN C
for
# BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 50' |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

Sheet No.: 6

File Name: 18052-record-site




DELAWARE STATE GRID NORTH (NAD 83)

GRAPHIC SCALE

100 0 50 100 200 400

( IN FEET )
1 inch = 100ft.

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LICENSE
NO. 22453
STATE OF DELAWARE
PROFESSIONAL ENGINEER

Date: 2/20/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 2/19/2025 | REVISED SITE LAYOUT |

BULK GRADING PLAN
for
# BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 100' |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

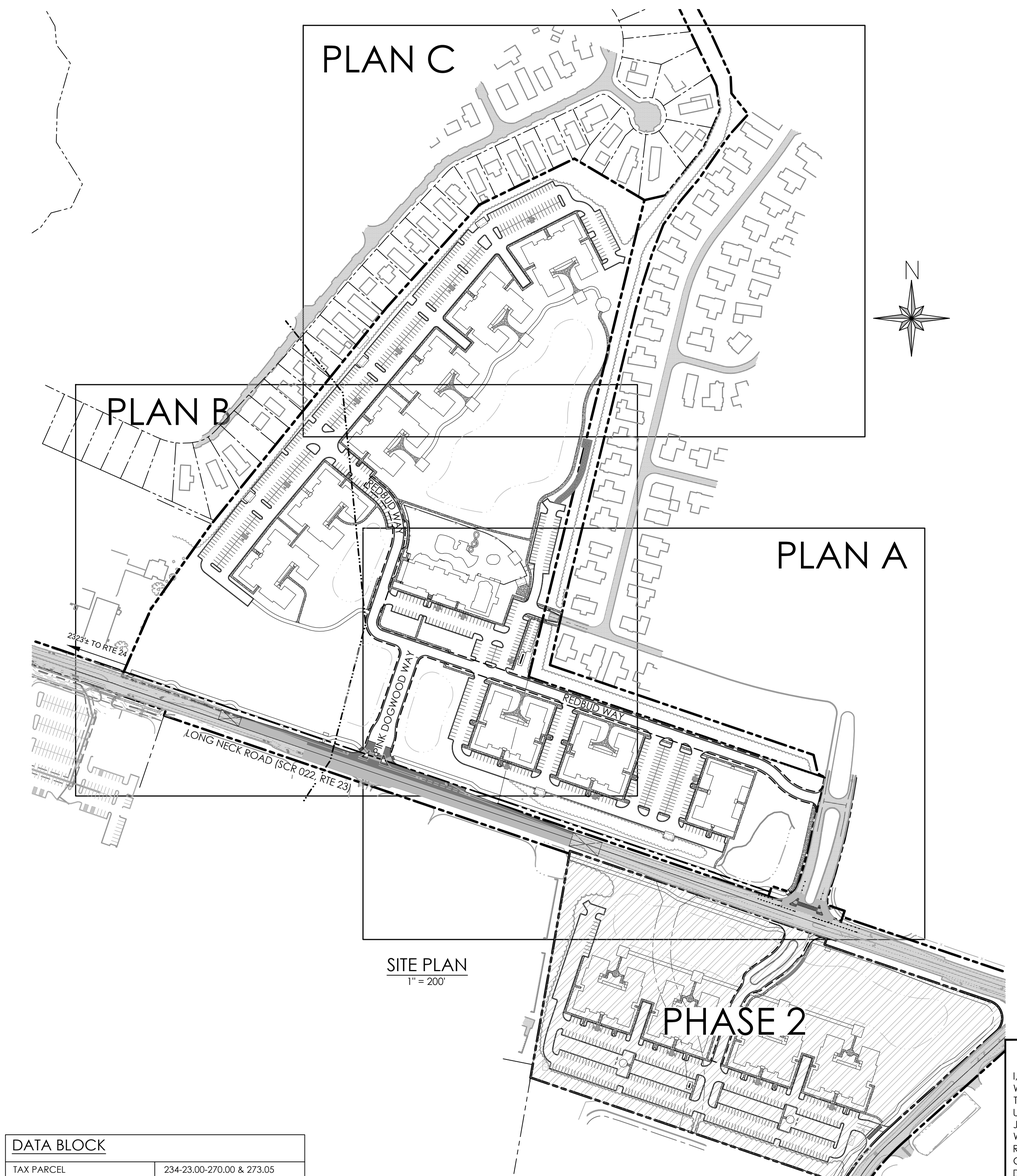
Sheet No.: 7

File Name:
18052-record-bulk-grading

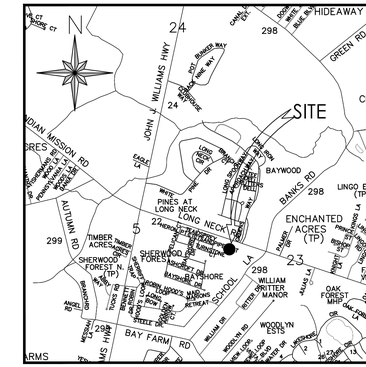
# SITE PLAN
FOR
# RESIDENTIAL PLANNED COMMUNITY (RPC)
# BAYWOOD GARDEN VILLAS - PHASE 1
## (F.K.A. BAYWOOD GARDENS)
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

## LEGEND

| | EXISTING | PROPOSED |
|---|---|---|
| PROPERTY LINE | | |
| ZONING LINE | | N/A |
| SETBACK LINE | | N/A |
| CONCRETE MONUMENT FOUND | CMF | N/A |
| IRON PIPE FOUND | IPF | N/A |
| IRON ROD CAP FOUND | IRCF | N/A |
| IRON ROD FOUND | IRF | N/A |
| EDGE OF POND | | |
| STORM MANHOLE | D | D |
| CATCH BASIN | | |
| CURB INLET | | |
| STORM PIPE | SD | SD |
| SANITARY MANHOLE | S | S |
| CLEANOUT | N/A | C/O |
| SANITARY PIPE | SS | SS |
| FORCE MAIN PIPE | N/A | FM |
| WATER PIPE | W | W |
| FIRE HYDRANT | | |
| OVERHEAD ELECTRIC | | N/A |
| UTILITY POLE | | N/A |
| DECIDUOUS TREE | | N/A |
| CONIFEROUS TREE | | N/A |
| TREE LINE | | |
| PAVEMENT HATCH | | |
| CONCRETE HATCH | | |
| BUILDING OUTLINE | | |
| SIDEWALK | | |
| SIDEWALK HATCH | | |
| ROAD CENTERLINE | | |
| EDGE OF CONCRETE | | |
| EDGE OF PAVEMENT | | |
| EDGE OF GRAVEL | | N/A |
| PAINT STRIPE | | |
| CURB | | |
| PHASE LIMIT LINE | N/A | |
| DUMPSTER PAD | N/A | D.P. |




SITE PLAN
1" = 200'




VICINITY MAP
SCALE: 1" = 2,000'±

## SITE DATA:

OWNER: TAX MAP: 234-23.00-273.05 & 270.00
BAYWOOD, LLC
34026 ANNA'S WAY
SUITE 1
LONG NECK, DE 19966

APPLICANT/ DEVELOPER: BAYWOOD, LLC
34026 ANNA'S WAY, SUITE 1
LONG NECK, DE 19966
PHONE: 302.945.9300
FAX: 302.945.4032
CONTACT: ROBERT TUNNELL, III

ENGINEER: SOLUTIONS IPEM
303 N. BEDFORD STREET
GEORGETOWN, DE 19947
PHONE: 302.297.9215
CONTACT: JIM ERIKSEN, PE

- TAX MAP:
  234-23.00-270.00 & P/O 273.05
  AREA = 40.79 ± ACRES
  NET DEVELOPMENT AREA = 37.6 ACRES (PHASE 1)
- DEED REFERENCE: 3110/77 & 2244/326
- PLAT REFERENCE: 8/490 & 49/172

## SHEET INDEX


1 COVER SHEET
2 NOTES
3 SITE PLAN A
4 SITE PLAN B
5 SITE PLAN C


NOTES:
1. ALL ON-SITE DRIVE AISLES AND PARKING AREAS ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER. THE PERPETUAL MAINTENANCE OF THE STREETS SHALL BE BY THE OWNER.

3. SURVEY: THE BOUNDARY AND TOPOGRAPHIC INFORMATION FOR THIS PLAN WAS ADAPTED FROM ELECTRONIC FILES PROVIDED BY DAVIS, BOWEN & FRIEDEL, INC. TITLED "BAYWOOD TOWN CENTER", DATED FEBRUARY 2003. A FIELD SURVEY WAS COMPLETED BY McCRONE INC. IN SEPTEMBER 2005. BASE DATA INCLUDING AERIAL SURVEY PROVIDED BY THE CLIENT.

PHASE 1 - PARKING CALCULATIONS

| | REQUIRED | PROPOSED |
|---|---|---|
| 354 MULTI-FAMILY UNITS | 521 SPACES* | 735 SPACES |

* 354 MULTI-FAMILY UNITS
2 SPACES PER UNIT FOR 1st 50 UNITS = 100 SPACES
15% REDUCTION FOR 51 TO 200 UNITS = (150 x 2 x 85%) = 255 SPACES
20% REDUCTION FOR REMAINDER (104 x 2 x 80%) = 166 SPACES
100 + 255 + 166 = 521 SPACES TOTAL

ADA SPACES REQUIRED = 2% x 735 = 15 SPACES
PROPOSED ADA SPACES = 24 SPACES

ENTIRE RPC PARKING CALCULATIONS

| | REQUIRED | PROPOSED |
|---|---|---|
| 514 MULTI-FAMILY UNITS | 778 SPACES* | 984 SPACES |

*514 MULTI-FAMILY UNITS
2 SPACES PER UNIT FOR 1st 50 UNITS = 100 SPACES
15% REDUCTION FOR 51 TO 200 UNITS = (150 x 2 x 85%) = 255 SPACES
20% REDUCTION FOR REMAINDER (264 x 2 x 80%) = 423 SPACES
100 + 255 + 423 = 778 SPACES TOTAL

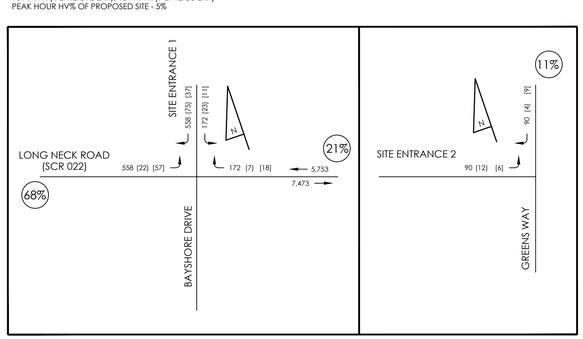
ADA SPACES REQUIRED = 2% x 778 = 16 SPACES
PROPOSED ADA SPACES = 32 SPACES

## ROAD TRAFFIC DATA: LONG NECK ROAD:
FUNCTIONAL CLASSIFICATION - S022 - MAJOR COLLECTOR
POSTED SPEED LIMIT - 40 mph
AADT = 11,402 TRIPS (FROM 2021 DelDOT TRAFFIC SUMMARY)
10 YEAR PROJECTED AADT = 1.16 x 11,402 = 13,226 TRIPS
TRAFFIC PATTERN GROUP - 8 (FROM 2021 DELDOT TRAFFIC SUMMARY)
K-FACTOR = 12.4, D-FACTOR = 56.5, TRUCK % = 5.8 SINGLE UNIT (1.3 COMBO UNIT)

## SITE TRAFFIC DATA
SOURCE: ITE TRIP GENERATION MANUAL 11TH EDITION
354 MULTIFAMILY HOUSING (MID-RISE) [221]
TWO ENTRANCES
ENTRANCE 1 (LONG NECK ROAD) - FULL MOVEMENT
ENTRANCE 2 (GREENS WAY) - FULL MOVEMENT
DESIGN VEHICLES: SU-30, WB-40

354 MULTIFAMILY HOUSING (MID-RISE) UNITS
TOTAL SITE = 1,642 ADT (821 ENTER/821 EXIT), 144 AM PK (33 ENTER/111 EXIT), 138 PM PK (84 ENTER/54 EXIT)

TRIP DISTRIBUTION PER TIS REPORT (JUNE 20, 2019):
68% ENTER/EXIT TO/FROM WEST ON LONG NECK ROAD = 1,116 ADT {558 ENTER/558 EXIT}
78 AM PK (22 ENTER/75 EXIT), 93 PM PK (57 ENTER/37 EXIT)
21% ENTER/EXIT TO/FROM EAST ON LONG NECK ROAD = 345 ADT (172 ENTER/172 EXIT)
30 AM PK (7 ENTER/23 EXIT), 29 PM PK (18 ENTER/11 EXIT)
11% ENTER/EXIT TO/FROM NORTH ON GREENS WAY = 180 ADT {90 ENTER/90 EXIT}
16 AM PK (4 ENTER/12 EXIT), 15 PM PK (9 ENTER/6 EXIT)
PEAK HOUR HV% OF PROPOSED SITE - 5%




TRAFFIC GENERATION DIAGRAMS
ADT [A.M. PEAK HOUR] [P.M. PEAK HOUR]

## DATA BLOCK

| | |
|---|---|
| TAX PARCEL | 234-23.00-270.00 & 273.05 |
| TYPE OF BUSINESS | N/A (RESIDENTIAL SUBDIVISION) |
| GROSS SITE ACREAGE | 40.332 ACRES |
| GROSS LEASABLE FLOOR AREA | 190,255 (RESIDENTIAL) |
| PARKING REQUIRED | 521 |
| PARKING PROVIDED | 735 |
| LOCAL GOVERNMENT AGENCY | SUSSEX COUNTY |

## APPROVED BY:

SECRETARY OF PLANNING COMMISSION DATE

PRESIDENT OF COUNTY COUNCIL DATE

SUSSEX CONSERVATION DISTRICT APPROVAL:

## WETLAND STATEMENT

I, Edward M. Launay, PWS, STATES THAT THE BOUNDARIES OF WATERS OF THE UNITED STATES INCLUDING WETLANDS SUBJECT TO THE CORPS OF ENGINEERS REGULATORY PROGRAM DELINEATED UPON THIS PLAN HAVE BEEN DETERMINED USING MY PROFESSIONAL JUDGMENT IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, ATLANTIC GULF COAST REGIONAL SUPPLEMENT, REGULATIONS AND SUPPLEMENTAL GUIDANCE (33 CFR 328.3(a)(8),Waters of the U.S. Definition/CECW-OR, 10-7-1991, Questions and Answers on the 1987 COE Manual/CECW-OR, 9-26-1990, RGL 90-7/CECW-OR, 3-6-1992, Clarification and Interpretation of the 1987 Manual). THIS DELINEATION HAS NOT BEEN CONDUCTED FOR USDA PROGRAM OR AGRICULTURAL PURPOSES.

EDWARD M. LAUNAY, PWS No. 875 DATE
SOCIETY OF WETLANDS SCIENTISTS
CORPS OF ENGINEERS,
CERTIFIED WETLAND DELINEATOR WDCP93MD0510036B

## OWNER'S CERTIFICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN. THAT THE PLAN WAS MADE AT MY DIRECTION AND I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. I FURTHERMORE UNDERSTAND AND ACKNOWLEDGE THAT IT IS THE RIGHT OF THE SUSSEX CONSERVATION DISTRICT AND/OR ITS DELEGATED INSPECTION AGENCIES TO CONDUCT ON-SITE INSPECTIONS.

NAME: ROBERT TUNNELL III DATE

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY SUPERVISION.

JIM ERIKSEN, PE DATE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Georgetown, DE 19947
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3003 Merritt Mill Road
Salisbury, MD 21804
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Date: 1/22/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 1/22/2025 | REVISED SITE LAYOUT |

COVER SHEET
for
BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | AS NOTED |
| Drawn By: | ML |
| Designed By: | HHB |
| Approved By: | SWF |

Sheet No.: 1

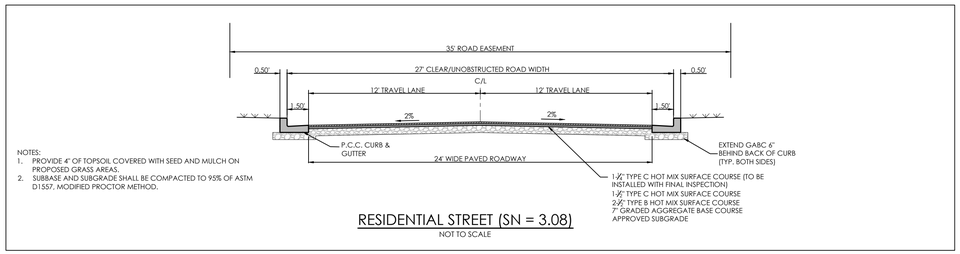
File Name: 18052-record-cover

## DELDOT PHASING NOTES:

THE CONTRACTOR SHOULD BE AWARE THAT THE RELEASE OF BUILDING PERMITS FOR THIS PROJECT IS BEING PHASED.

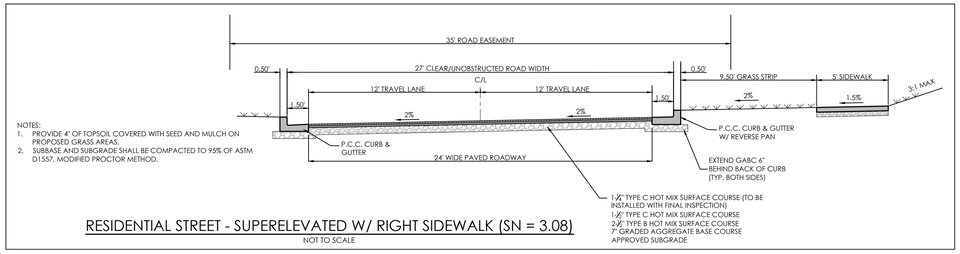
THE CONSTRUCTION OF THE FULL MOVEMENT HAMMERHEAD SITE ENTRANCE, PEDESTRIAN LANDINGS, PAVEMENT MODIFICATIONS, DRAINAGE AND UTILITY RELOCATIONS, SIGNAGE, STRIPING, AND ANY ASSOCIATED WORK OR INCIDENTALS NECESSARY FOR THE COMPLETED CONSTRUCTION, AS DEPICTED IN THE DELDOT-APPROVED ENTRANCE PLANS, SHALL BE SUBSTANTIALLY COMPLETE, AS DEFINED PER DELDOT'S STANDARD SPECIFICATIONS, PRIOR TO THE ISSUANCE OF THE 1ST BUILDING PERMIT AND SHALL BE COMPLETED, INCLUDING ACCEPTANCE BY DELDOT, PRIOR TO THE ISSUANCE OF THE 2ND BUILDING PERMIT.

THE CONSTRUCTION OF THE REMAINING FULL MOVEMENT SITE ENTRANCE, ASSOCIATED ROADWAY, AND PEDESTRIAN IMPROVEMENTS, ALONG LONG NECK ROAD (SCR 022), AS DEPICTED IN THE DELDOT-APPROVED ENTRANCE PLANS, SHALL BEGIN PRIOR TO THE ISSUANCE OF THE 2ND BUILDING PERMIT AND SHALL BE COMPLETED, INCLUDING ACCEPTANCE BY DELDOT, PRIOR TO THE ISSUANCE OF THE 4TH BUILDING PERMIT.



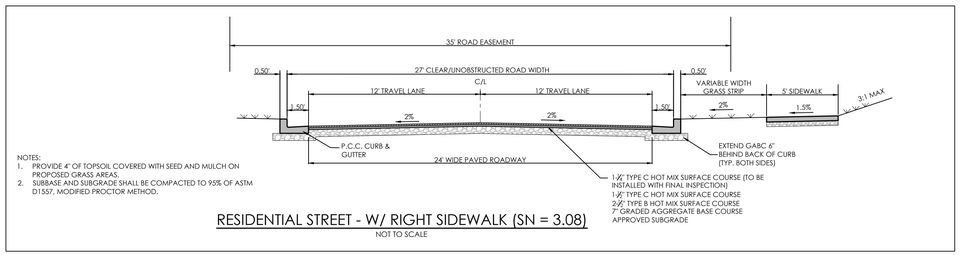

NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET (SN = 3.08)
NOT TO SCALE



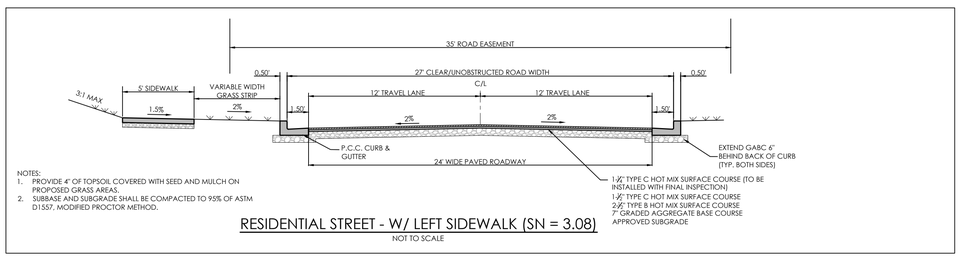

NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET - SUPERELEVATED W/ RIGHT SIDEWALK (SN = 3.08)
NOT TO SCALE



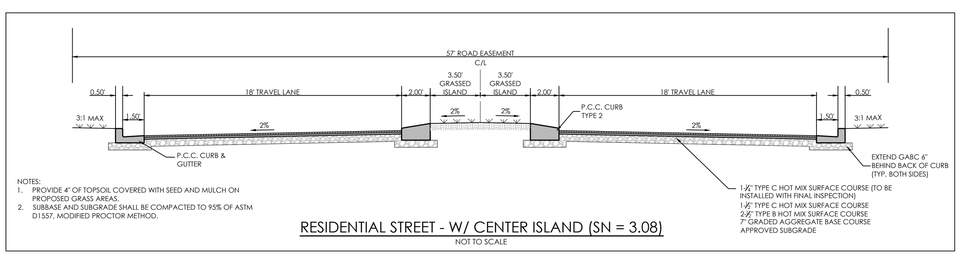

NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET - W/ RIGHT SIDEWALK (SN = 3.08)
NOT TO SCALE




NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET - W/ LEFT SIDEWALK (SN = 3.08)
NOT TO SCALE




NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET - W/ CENTER ISLAND (SN = 3.08)
NOT TO SCALE

## NOTES:

1. ALL ON-SITE STREETS (INCLUDING PAVEMENT, CURBING AND SIDEWALK) ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER. THE PERPETUAL MAINTENANCE OF THE STREETS SHALL BE BY THE OWNER.

2. STORMWATER MANAGEMENT AND STORM DRAINAGE SHALL BE IN ACCORDANCE WITH THE SUSSEX COUNTY CONSERVATION DISTRICT AND SUSSEX COUNTY ENGINEERING REQUIREMENTS. THE SITE IS TO BE TREATED BY MULTIPLE WET PONDS. MAINTENANCE OF THE ON-SITE STORMWATER MANAGEMENT FACILITIES AND STORM DRAINAGE SYSTEM SHALL BE BY THE OWNER. THE PERPETUAL MAINTENANCE OF THE ABOVE PROACTIVE SHALL BE BY THE OWNER.

3. ALL OPEN SPACE, INCLUDING BUFFERS, FOREST STRIPS AND AMENITIES SHALL BE MAINTAINED BY THE OWNER.

4. FOR ANY NEW DEVELOPMENT LOCATED IN WHOLE OR IN PART WITH 50 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL FOR A RESIDENTIAL TYPE USE SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE LANDS USED PRIMARILY FOR AGRICULTURAL PURPOSES.

5. POTABLE WATER, SANITARY SEWER, STORM DRAINAGE, STREET PAVEMENT SHALL BE CONSTRUCTED BY DEVELOPER. PHASING OF IMPROVEMENTS SHALL BE PER COUNTY AND CONSERVATION DISTRICT REQUIREMENTS.

6. THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL PURPOSES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH USES NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM NORMAL AGRICULTURAL USES AND ACTIVITIES.

7. THE PROPERTY IS NOT LOCATED WITHIN ANY TRANSPORTATION IMPROVEMENT DISTRICTS.

8. ALL SUBDIVISION LOTS SHALL HAVE FIVE FOOT WIDE EASEMENTS ALONG ALL LOT LINES FOR A TOTAL EASEMENT WIDTH OF 10 FEET ALONG A LOT LINE COMMON TO TWO LOTS. EASEMENTS ALONG PERIMETER (RIGHT-OF-WAY AND OPEN SPACE) SHALL BE 10 FEET IN WIDTH.

9. THE PHILADELPHIA DISTRICT CORPS OF ARMY ENGINEERS HAVE JURISDICTION OVER ALL THE NON-TIDAL WETLANDS

10. AN ENTRANCE COMMUNITY SIGN WILL BE PROVIDED. ANY SIGNAGE WILL REQUIRE A SEPARATE PERMIT.

## DELDOT GENERAL NOTES: (REV. 03/21/2019)

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.

2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.

3. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.

4. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.

5. PRIVATE STREETS CONSTRUCTED WITHIN THIS SUBDIVISION SHALL BE MAINTAINED BY THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH (TITLE 17 §131). DELDOT ASSUMES NO RESPONSIBILITIES FOR THE FUTURE MAINTENANCE OF THESE STREETS.

6. THE SIDEWALK AND SHARED-USE PATH SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS OR BOTH WITHIN THIS SUBDIVISION. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE SIDEWALK AND/OR SHARED-USE PATH.

7. ALL LOTS SHALL HAVE ACCESS FROM THE INTERNAL SUBDIVISION STREET.

8. DRIVEWAYS WILL NOT BE PERMITTED TO BE PLACED AT CATCH BASIN LOCATIONS.

9. TO MINIMIZE RUTTING AND EROSION OF THE ROADSIDE DUE TO ON-STREET PARKING, DRIVEWAY AND BUILDING LAYOUTS MUST BE CONFIGURED TO ALLOW FOR VEHICLES TO BE STORED IN THE DRIVEWAY BEYOND THE RIGHT-OF-WAY, WITHOUT INTERFERING WITH SIDEWALK ACCESS AND CLEARANCE.

10. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS IN ACCORDANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.

11. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MARKERS TO PROVIDE A PERMANENT REFERENCE FOR RE-ESTABLISHING THE RIGHT-OF-WAY AND PROPERTY CORNERS ON LOCAL AND HIGHER ORDER FRONTAGE ROADS. RIGHT-OF-WAY MARKERS SHALL BE SET AND/OR PLACED ALONG THE FRONTAGE ROAD RIGHT-OF-WAY AT PROPERTY CORNERS AND AT EACH CHANGE IN RIGHT-OF-WAY ALIGNMENT IN ACCORDANCE WITH SECTION 3.2.4.2 OF THE DEVELOPMENT COORDINATION MANUAL.

## PHASE 1 AREAS:

GROSS ACREAGE = 40.79 AC.±

DELDOT R.O.W. AREA = 0.62 AC.±
OPEN SPACE AREA = 35.72 AC.±
= 88%

EXISTING WOODLANDS = 12.79 AC.±
WOODLANDS TO REMAIN = 1.46 AC.±
11 % of EXISTING WOODLANDS TO REMAIN
WOODLANDS TO BE REMOVED = 11.33 AC.±

EXISTING TIDAL AND/OR NON-TIDAL WETLANDS = 0.00 AC.±

15.32 AC.± OF IMPERVIOUS AREA WITHIN OPEN SPACE = 43%
(EXCLUDES PONDS)

## WELL HEAD PROTECTION AREA

TOTAL AREA WITHIN WELLHEAD PROTECTION AREA = 380,584 SQ.FT.

| SURFACE TYPE | AREA (SQ.FT.) |
|---|---|
| IMPERVIOUS AREAS | 132,989 |
| GREEN SPACE (GRASS & WOODS) | 247,595 |

IMPERVIOUS PERCENTAGE = 34.94%

## TIS NOTES:

1. The developer shall improve the State-maintained road(s) on which they front (Long Neck Road), within the limits of their frontage, to meet DelDOT's standards for their Functional Classification as found in Section 1.1 of the Development Coordination Manual and elsewhere therein. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. Frontage is defined in Section 1 of the Development Coordination Manual, which states "This length includes the length of roadway perpendicular to lines created by the projection of the outside parcel corners to the roadway." Questions on or appeals of this requirement should be directed to the DelDOT Subdivision Review Coordinator in whose area the development is located.

2. The developer should construct the full-movement Site Access A on Long Neck Road. This proposed site driveway should be constructed directly across from Bayshore Drive. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn-lane lengths and other design details during the site plan review.

3. The developer should maintain the existing Site Access B on Long Neck Road at Greens Way. No improvements are recommended at this site access intersection.

4. The developer should maintain the existing Site Access C on Delaware Route 24 at Greens Way. No improvements are recommended at this site access intersection.

5. The developer shall enter into a traffic signal agreement for the intersection of Delaware Route 24 & Indian Mission Road / Long Neck Road. Or the developer may contribute to the Traffic Signal Revolving Fund (TSRF) in the amount of $10,206. The developer should coordinate with DelDOT's Subdivision Section to execute the traffic signal agreement or the TSRF agreement and pay the TSRF amount.

6. The following bicycle, pedestrian, and transit improvements should be included:
   a. Adjacent to the proposed right-turn lane on westbound Long Neck Road at the proposed site access opposite Bayshore Drive, a minimum of a five-foot bicycle lane should be dedicated and striped with appropriate markings for bicyclists through the turn lane in order to facilitate safe and unimpeded bicycle travel.
   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.
   c. Utility covers should be made flush with the pavement.
   d. If clubhouses or other community facilities are constructed as shown on the site plan, bicycle parking should be provided near building entrances. Where building architecture provides for an awning, other overhang, or indoor parking, the bicycle parking should be covered.
   e. A minimum 15-foot wide easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontage along Long Neck Road.
   f. Within the easement along Long Neck Road, a minimum of a ten-foot wide shared-use path that meets current AASHTO and ADA standards should be constructed along the site frontage. The shared-use path should be constructed from the western edge of the site frontage (approximately 750 feet west of the proposed site access) to the east side of Greens Way, where it should connect to the existing path. Crosswalks will be required across the proposed site access and across Greens Way. The shared-use path should have a minimum of a five-foot buffer from the roadway. At the western end, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at both ends.
   g. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings within the development. Type 3 curb ramps are discouraged.
   h. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. These internal sidewalks should connect to the proposed shared-use path along Long Neck Road, as well as to other surrounding residential developments via internal connections.
   i. Where internal sidewalks are located alongside of parking spaces, a buffer should be added to prevent vehicular overhang onto the sidewalk.
   j. The developer should coordinate with the Delaware Transit Corporation (DTC) regarding the possibility of including a bus stop to be located along the Long Neck Road site frontage.

## SITE DATA (PHASE 1):

- PROPOSED USE:
  354 APARTMENT UNITS (354 UNITS / 40.79 AC = 8.68 UNIT/AC.)
- EXISTING LOTS - 2
- PROPOSED LOTS - 1
- THE PROPERTY WAS SUBJECT OF A PREVIOUS CHANGE OF ZONE APPLICATION (CHANGE OF ZONE NO. 1922). AT THEIR MEETING OF TUESDAY, DECEMBER 14, 2021 THE SUSSEX COUNTY COUNCIL APPROVED A CHANGE OF ZONE FOR THE PARCEL THOUGHT C/Z 1922 FROM NEIGHBORHOOD BUSINESS (B-1) DISTRICT, GENERAL COMMERCIAL (C-1) DISTRICT AND COMMERCIAL RESIDENTIAL (CR-1) DISTRICT TO A HIGH-DENSITY RESIDENTIAL PLANNED COMMUNITY (HR-1 RPC) DISTRICT AND THE CHANGE WAS ADOPTED THROUGH ORDINANCE NO. 2820.
- THE SUBJECT PROPERTY (TAX PARCEL ID: 234-23.00-270.00) WAS ALSO THE SUBJECT OF A PREVIOUS FUTURE LAND USE MAP (FLUM) AMENDMENT FROM COMMERCIAL AREA TO THE COASTAL AREA IN ORDER TO PERMIT HIGH-DENSITY RESIDENTIAL, RESIDENTIAL PLANNED COMMUNITY (HR-RPC) ZONING OF THE PROPERTY.
- BUILDING SETBACKS:
  FRONT: 40', CORNER: 15'
  SIDE: 10'
  REAR 10'
  MAXIMUM BUILDING HEIGHT: 52'
- FLOOD ZONE:
  THE PROPERTY IS LOCATED WITHIN FLOOD ZONE X, (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN). PER FIRM MAP NUMBER 10005C0340K & 10005C343K, MAP REVISED MARCH 16, 2015.
- WATER SUPPLY:
  TIDEWATER UTILITY COMPANY
  LONG NECK WATER COMPANY
- SANITARY SEWER:
  INLAND BAYS PRESERVATION COMPANY
- OPEN SPACE = 35.72 AC.± ( %)
- HORIZONTAL DATUM: DELAWARE STATE PLANE COORDINATE SYSTEM (NAD)83
- PROPERTY DOES NOT CONTAIN ANY TIDAL (0.0 AC.) AND/OR NON-TIDAL WETLANDS (0.0 AC.).
- ALL SIGNAGE SHALL BE SUBJECT TO A SEPARATE PERMIT TO BE ISSUED BY THE COUNTY.
- PART OF THE PARCEL 270 IS LOCATED IN A WELLHEAD PROTECTION AREA.
- THE PROJECT IS NOT LOCATED WITHIN THE HENLOPEN TRANSPORTATION IMPROVEMENT DISTRICT (TID)
- NEAREST EXISTING TRANSPORTATION INVESTMENT DISTRICT:
  HENLOPEN - APPROX. 2.00± MILES AWAY
- THE PROJECT IS LOCATED WITHIN AN AREA OF GOOD AND FAIR GROUNDWATER RECHARGE POTENTIAL.

solutions
303 North Bedford Street
Georgetown, DE 19947
T. 302.297.9215

3003 Merritt Mill Road
Salisbury, MD 21804
T. 410.572.8833

www.solutionsipem.com Copyright © 2023

Date: 1/22/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/8/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 1/22/2025 | REVISED SITE LAYOUT |

NOTES
for
BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | AS NOTED |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

Sheet No.: 2

File Name: 18052-record-cover

LANDSCAPE NOTES:
1. MULCH ALL TREE PITS. PLANT BEDS, AND GROUNDCOVER AREAS WITH A MINIMUM 3" DEPTH (AFTER SETTLEMENT) OF SHREDDED HARDWOOD MULCH.

2. THIS DRAWING TO BE USED FOR LANDSCAPE DEVELOPMENT PURPOSES ONLY.

3. ALL PLANT MATERIAL THAT OCCUR IN SLOPED AREAS IN EXCESS OF 3:1 SHALL BE PLACED IN THE FIELD AS DIRECTED BY THE LANDSCAPE ARCHITECT.

4. ALL TREE STAKING, GUYING, AND WRAPPING SHALL BE REMOVED AFTER ONE YEAR.

5. ALL SHRUB, FLOWER, AND GROUNDCOVER BEDS SHALL BE PITCHED OR CROWNED TO ASSURE A MINIMUM SURFACE PITCH OF 3% FOR POSITIVE SURFACE DRAINAGE.

6. ALL PROPOSED LANDSCAPE PLANT MATERIAL TO BE GUARANTEED FOR A PERIOD OF TWELVE MONTHS FROM THE DATE OF ACCEPTANCE, AGAINST DEFECTS INCLUDING DEATH OR UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT FROM THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND LANDSCAPE INSTALLER CONTROL. CONTRACTOR, IF NOT MAINTAINING THE PROPERTY DURING THE GUARANTEE PERIOD, SHALL BE RESPONSIBLE FOR MAKING MONTHLY INSPECTIONS AND ISSUING WRITTEN REPORTS DETAILING ANY MAINTENANCE PRACTICES HE OBSERVES WHICH WOULD IN ANYWAY NEGATE HIS GUARANTEE OBLIGATION.

7. ALL AREAS BEYOND THE LIMIT OF LAWN/GROUNDCOVER THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITION AND/OR TO COMPLY WITH STANDARDS INDICATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.

8. ALL PLANT MATERIAL MUST COMPLY WITH THE RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "STANDARD FOR NURSERY STOCK"

9. PLANT QUANTITIES ARE GIVEN FOR COMPARISON PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING PLANT COUNTS AND SHALL BE RESPONSIBLE FOR PROVIDING ALL PLANT MATERIAL SHOWN ON THE DRAWING. ANY DISCREPANCIES BETWEEN PLANT SCHEDULE QUANTITIES AND PLANS SHALL IMMEDIATELY BE BROUGHT TO THE LANDSCAPE ARCHITECTS ATTENTION PRIOR TO SUBMISSION OF BID. NO SUBSTITUTIONS OF TYPE OF PLANT MATERIAL OR SIZES OF PLANT MATERIAL WILL BE ACCEPTABLE UNLESS NOTED ON PLANS, APPROVED BY THE LANDSCAPE ARCHITECT OR AS APPROVED BY THE BOARD PROFESSIONALS.

10. APPLY ANTI-DESICCANT PRIOR TO THE ONSET OF WINTER AND AGAIN IN MID-WINTER, USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE. IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL-LEAF, SPRAY WITH ANTI-DESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER INSTALLATION.

11. ALL PLANTED TREES, SHRUBS, GROUNDCOVERS AND ANNUAL FLOWERS, SHALL BE MAINTAINED UNTIL FINAL ACCEPTANCE OF THE COMPLETED CONTRACT, OR WHEN INSTALLATION IS ACCEPTED AND MAINTENANCE IS TRANSFERRED TO OWNER. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, CONTROL OF INSECTS, FUNGUS, AND OTHER HORTICULTURAL OPERATIONS NECESSARY FOR THE PROPER GROWTH OF ALL PLANT MATERIAL.

12. PLANT LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND SUBJECT TO FIELD AND UTILITY LOCATIONS.

13. ANY CHANGES TO AN APPROVED LANDSCAPING PLAN MUST BE AUTHORIZED BY THE LANDSCAPE ARCHITECT AND AS APPROVED BY THE BOARD PROFESSIONALS

14. PLANT BACKFILL MIX SHALL CONTAIN THE FOLLOWING:

1 PART AMENDED TOPSOIL (SCREENED) WITH FERTILIZATION AS REQUIRED BELOW:

AMENDED TOPSOIL: SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OF SLAG AND SHALL BE FREE OF STONES, LUMPS, AMENDED TOPSOIL: SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OF SLAG AND SHALL BE FREE OF STONES, LUMPS, SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OF SLAG AND SHALL BE FREE OF STONES, LUMPS, PLANTS OR THEIR ROOTS, STICKS AND EXTRANEOUS MATTER, AND SHALL NOT BE MOVED, PLACED OR USED WHILE IN FROZEN OR MUDDY CONDITION. TOPSOIL SHALL HAVE AN ACIDITY RANGE OF pH 5.0 TO 7.0 AND SHALL CONTAIN NOT LESS THAN 5% ORGANIC MATTER AS DETERMINED BY THE "WALKLEY-BLACK METHOD" (COLORIMETRIC VERSION). SUFFICIENT LIMESTONE SHALL BE ADDED TO TOPSOIL USED TO BRING SOIL TO RANGE OF pH 6.0 TO pH 6.5. THERE SHALL BE A MINIMUM OF 12" OF TOPSOIL (AFTER SETTLEMENT) IN ALL PLANT BEDS, OR GROUND COVER AREAS AND 3" IN ALL FINE LAWN, SEEDED AREAS OR AS CALLED FOR.

FERTILIZATION: 1. FOR TREES, SHRUBS AND ALL GROUND COVER (HERBACEOUS AND CONIFEROUS): "TERRA-SORB" AG FERTILIZATION: "TERRA-SORB" AG AT THE RATE OF 32 OZ PER CUBIC YARD OF SOIL MIX.

2. FOR TREES AND SHRUBS (EXCLUDING CONIFEROUS GROUND COVER): PHC HEALTHY START 3-4-3 ORGANIC FERTILIZER CONDITIONER, SHALL BE APPLIED AT 1/2 LB. PER TRUNK DIAMETER (CAL. INCH) FOR TREES.
FOR SHRUBS USE THE FOLLOWING TABLE:

| PLANT SIZE | RATE CUPS | LBS. | #PLANT BAG PLANT SIZE |
|---|---|---|---|
| 1 GALLON | 1/2 | 1/4 | 100 |
| 5 GALLON | 1 | 1/2 | 50 |
| 15 GALLON | 2 | 1 | 25 |
| 24" BALL/BOX | 3 | 1 1/2 | 16 |
| 36" BALL/BOX | 5 | 2 1/2 | 10 |
| 42" BALL/BOX | 6 | 3 | 8 |
| 54" BALL/BOX | 8 | 4 | 6 |
| 72" BALL/BOX | 10 | 5 | 5 |

FOR HERBACEOUS AND CONIFEROUS GROUND COVER: DRY ROOTS 2 SHALL BE APPLIED AT THE FOLLOWING RATES:
CONIFEROUS GROUND COVER:

| PLANT SIZE | RATE CUPS | LBS. | #PLANT BAG PLANT SIZE |
|---|---|---|---|
| 15-18" B&B | 1 1/2 | 3/4 | 37 |

HERBACEOUS GROUND COVER: 20LBS./1000 SQUARE FEET.

FOR LAWN AND SEEDED AREAS: 10-6-4 50% ORGANIC FERTILIZER AT THE RATE OF 20LBS. PER 1,000 SQUARE FEET (OR AS REQUIRED BY TOPSOIL ANALYSIS REPORT).

## LANDSCAPE BUFFER

NOTES:
1. THE LANDSCAPE AND/OR FOREST BUFFERS SHALL BE INSTALLED WITHIN 18 MONTHS FROM THE DATE SITE WORK IS AUTHORIZED TO COMMENCE, AS DOCUMENTED BY A NOTICE TO PROCEED LETTER FROM THE COMMISSION.

2. THE LAND DEVELOPER SHALL BE RESPONSIBLE FOR THE HEALTH AND SURVIVAL OF THE TREES, INCLUDING REGULAR NECESSARY WATERING FOR A MINIMUM OF 2 YEARS OR UNTIL SUCH LATER DATE AS THE MAINTENANCE RESPONSIBILITIES ARE TRANSFERRED TO A CONDOMINIUM ASSOCIATION; PROVIDED, HOWEVER THAT THE DEVELOPER SHALL REPLACE AND TREES THAT DIE DURING THE MINIMUM 2 YEAR DEVELOPER MAINTENANCE PRIOR TO TRANSFERRING MAINTENANCE RESPONSIBILITIES TO A CONDOMINIUM ASSOCIATION.

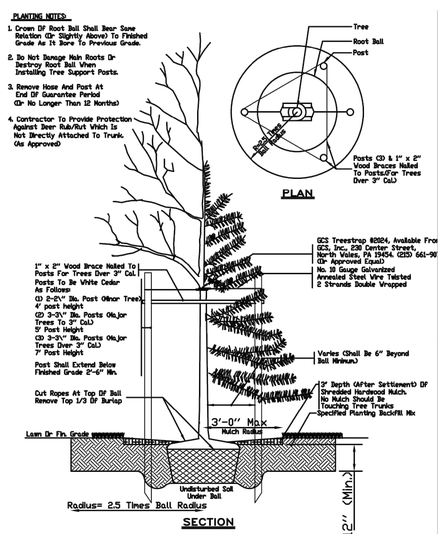
3. ADDITIONAL INFORMATION AS TO HOW THE LANDSCAPE / FORESTED BUFFERS ARE TO BE MAINTAINED IN PERPETUITY, SHALL BE INCLUDED IN THE RESTRICTIVE COVENANTS AND/OR CONDOMINIUM ASSOCIATION DOCUMENTS.

4. PURSUANT WITH SUSSEX COUNTY CODE SECTION 99-5, THE 30' WIDE LANDSCAPE BUFFER SHOWN IN THIS PLAN MUST BE PLANTED WITH A MIX OF 70% DECIDUOUS AND 30% EVERGREEN TREES, THE MAJORITY OF WHICH SHALL BE SUITABLE TREES OF COMMON LOCAL SPECIES. EVERY 100' OF BUFFER SHALL INCLUDE A MINIMUM OF 15 TREES.

5. ALL DECIDUOUS TREES THAT ARE PLANTED TO ESTABLISH THE BUFFER PLANTINGS SHALL HAVE A MINIMUM CALIPER OF 1.5 INCHES AND A MINIMUM HEIGHT OF SIX FEET ABOVE GROUND WHEN PLANTED IN ORDER TO INSURE THAT THE TREES WILL BE CAPABLE OF OBTAINING A MINIMUM HEIGHT OF 10 FEET ABOVE GROUND WITHIN FIVE YEARS OF BEING PLANTED.

6. ALL EVERGREEN TREES THAT ARE PLANTED TO ESTABLISH THE BUFFER PLANTINGS SHALL HAVE A MINIMUM HEIGHT OF FIVE FEET ABOVE GROUND WHEN PLANTED IN ORDER TO INSURE THAT THEY ARE REASONABLY CAPABLE OF ATTAINING A MINIMUM HEIGHT OF 10 FEET ABOVE GROUND WITHIN FIVE YEARS OF BEING PLANTED.

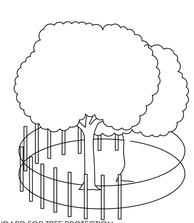
7. THE TREES SHALL BE PLANTED IN A STAGGERED NATURAL MANNER. THE PROCEDURES AND DETAILS FOR PLANTING NEW TREES SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT ON THE PLAN SUBMITTED TO AND APPROVED BY THE COMMISSION AND SHALL INCLUDE THE REQUIREMENT THAT THE BUFFER AREA SHALL HAVE A FINAL GRADE THAT CONTAINS A MINIMUM OF FOUR INCHES OF TOPSOIL AND A SUITABLE GRASS MIX PLANTED AS SACRIFICIAL COVER BETWEEN THE BUFFER TREES FOR SOIL STABILIZATION UNTIL THE NEWLY PLANTED TREES BECOME LARGER. THE PLAN MAY SUBSTITUTE WOODCHIPS FOR PLANTED GRASS BETWEEN THE BUFFER TREES IN RESPECT TO BOTH NEWLY PLANTED AND EXISTING TREES, AS DETERMINED BY THE LANDSCAPE ARCHITECT




"RIVER OAKS SUBDIVISION"

## TREE PLANTING DETAIL

N.T.S.



STANDARD FOR TREE PROTECTION
1. PROTECT FROM MECHANICAL DAMAGE BY FENCING AS IS SHOWN IN DETAIL. FENCING OR OTHER BARRIER TO BE INSTALLED AT DRIP LINE OF THE TREE BRANCHES.
2. BOARDS WILL NOT BE NAILED TO TREES DURING CONSTRUCTION.
3. FEEDER ROOTS SHALL NOT BE CUT IN AN AREA INSIDE DRIP LINE OF TREE BRANCHES.
4. TREE LIMB REMOVAL, WHERE NECESSARY, WILL BE DONE FLUSH TO TRUNK OR MAIN BRANCH.
5. SNOW FENCE TO BE SET AT THE DRIPLINE PRIOR TO CONSTRUCTION.

## TREE PROTECTION DETAIL

N.T.S.

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

December 20, 2021

Mr. Robert Tunnel, III
34026 Anna's Way, Suite 1
Long Neck, DE 19966

By e-mail to: rtunnell@potnets.com

RE: Notice of Decision Letter for Change of Zone (CZ 1922) Lands of Baywood, LLC for an amendment to the Comprehensive Zoning Map of Sussex County from a B-1 (Neighborhood Business District), C-1 (General Commercial District) and CR-1 (Commercial Residential District) to a HR-RPC High Density Residential District – Residential Planned Community.
Tax Parcel: 234-23.00-270.00

Dear Mr. Tunnel,

At their meeting of Tuesday, December 7th, 2021, the Sussex County Council approved the Change of Zone application for an amendment to the Comprehensive Zoning Map for a Change of Zone from B-1, C-1 and CR-1 to High Density Residential, Residential Planned Community (HR-RPC). The Change of Zone shall be substantially underway within three (3) years of the County Council approval otherwise the use shall expire. A Site Plan showing the conditions of approval shall be reviewed and approved by the Planning Commission prior to commencement of the use on the parcel. The following are the conditions:

A. The maximum number of residential units shall be 514.
B. All entrances, intersection, roadway, and multi-modal improvements shall be completed by the developer in accordance with all DelDOT requirements.
C. The project shall be served by central sewer through the Inland Bays Preservation Company and Sussex County. The developer shall comply with all Sussex County Engineering Department requirements including any offsite upgrades necessary to provide service to the project.
D. The project shall be served by central water to provide drinking water and fire protection.
E. Interior street design shall meet or exceed the Sussex County Street design requirements.
F. Construction, material deliveries and site work shall only occur on the property between 7:30 am and 7:00 pm Monday through Friday. No Saturday hours from May 15th to September 15th or any Sunday hour shall be permitted. The Saturday hours, when permitted, shall be limited from 8:00 am to 5:15 pm. A 24 inch by 36 inch "NOTICE" sign confirming these hours shall be prominently displayed at all entrances to the site during construction.
G. Street naming and addressing shall be subject to the review and approval of the County Mapping and Addressing Departments.
H. The stormwater management system shall meet or exceed the requirements of the State and County. It shall be constructed and maintained using best management practices.



I. The Final Site Plan shall contain the approval of the Sussex County Conversation District for the design and location of all stormwater management areas and erosion and sedimentation control facilities.
J. The applicant shall coordinate with the Indian River School District to establish a school bust stop area which shall be shown on the Final Site Plan in required by the District.
K. The central recreational complex, including the community clubhouse, indoor and outdoor swimming pools shall be completed prior to the issuance of the Certificate of Occupancy for the 161st multifamily unit.
L. All lighting on the site shall be shielded and downward screened so that it does not shine on neighboring properties or roadways.
M. Lighted sign shall be permitted at each of the four entrances to the development. Those signs shall not exceed 32 square feet in size per side.
N. As proffered by the applicant, this HR-RPC rezoning was sought for the specific purpose of development of a 514-unit multi0family development depicted on the site plan submitted with this application. In the event the RPC is not developed and is declared null and void pursuant to Section 99-9B or 99-40A of the Sussex County Code, then Sussex County may initiate the rezoning process and schedule public hearings to consider whether to revert this land (currently TMP 234-23.00-270.00, 273.01, 273.02, 270.03 and 270.05) back to the zoning classification of the land in existence immediately prior to this HR-RPC rezoning.
O. The Developer shall coordinate with DelDOT for safe and clearly marked pedestrian crossings at the intersection of Long Neck Road and School Lane for the two section of this development. The Developer shall clearly indicate the means of safe crossing on the Final Site Plan and no apartments shall be constructed on the south side of Long Neck Road until those safety measures are installed.
P. This recommendation is contingent upon an amendment to the Future Land Use Map in the Sussex County Comprehensive Plan revising the designation of a portion of the property from "Commercial Area" to the "Coastal Area" which otherwise surrounds it.
Q. The Final Site Plan shall be subject to the review and approval of the Sussex County Planning and Zoning Commission.

The Preliminary Site Plan shall be prepared by a licensed Delaware Surveyor or Engineer and shall contain the conditions of approval on the plan. The Final Site Plan shall be approved prior to the commencement of the use on the property. The Site Plan shall be reviewed and approved by the Planning Commission. Agency approvals include but are not limited to: the Delaware Department of Transportation (DelDOT), Sussex Conservation District, Sussex County Engineering Department, Sussex County Mapping and Addressing Department, Department of Public Health (Office of Drinking Water) and the Office of the State Fire Marshal.

Please note that the plan shall be recorded in the Sussex County Recorder of Deeds Office within sixty (60) days from the Planning and Zoning Commission's final plan approval. The Final Subdivision Plan shall be valid for a period of five (5) years from the date of approval by the County. Any such Final Site Plan shall be rendered null and void if substantial construction is not actively and continuously underway on the use within five (5) years of the date of approval by the County. "Substantially underway" shall mean that the right-of-way has been cleared, the roadways,



internal streets and/or parking areas have been rough-graded, the drainage system and/or stormwater management facilities have been rough-graded and erosion and sediment control measures are in place and being actively maintained and proceeding to completion.
Please submit a minimum of two (2) full size paper copies and an electronic copy (PDF) of the Preliminary Site Plan to the Planning and Zoning Office a minimum of twenty (20) days prior to a Planning Commission meeting.

An approved copy of the Ordinance granting approval of the Change of Zone will be sent to you from the Clerk of Council.

Please feel free to contact the Planning and Zoning Department with any questions during business hours 8:30 am to 4:30 pm, Monday through Friday, at (302)-855-7878.

Sincerely,

Elliott Young
Planner I

CC: Mr. Lester Shaffer, Sussex County Chief Constable – Constable's Office
Ms. Susan Isaacs, Sussex County Engineering Project Coordinator — Engineering – Public Works
Mr. Andy Wright, Chief of Building Code – Sussex County Building Code
Mr. John Ashman, Director of Utility Planning & Design – Engineering
CZ 1922 Baywood, LLC file

COUNTY ADMINSITRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

## CONDITION "O" NOTE

IMPROVEMENTS FOR PEDESTRIAN CROSSING WILL BE PROVIDED WITH PHASE 1 IMPROVEMENTS. NO APARTMENTS SHALL BE CONSTRUCTED ON THE SOUTH SIDE OF LONG NECK ROAD UNTIL SAFE CROSSING PROVISIONS HAVE BEEN PROVIDED AND ADDRESSED AT THE DIRECTION OF DELDOT.

LANDSCAPE SCHEDULE

| QUANTITY | SYMBOL | BOTANICAL NAME | COMMON NAME | SPECIFICATION | ROOT | COMMENTS |
|---|---|---|---|---|---|---|
| 14 | AR | ACER RUBRUM | RED MAPLE | 1" - 1 1/2" CAL., 6' - 7' HGT. MIN. | B&B | 15' O.C. |
| 5 | IO | ILEX OPACA | AMERICAN HOLLY | 5' - 6' HGT. MIN. | B&B | 10' O.C. |
| 9 | PA | PICEA ABIES | NORWAY SPRUCE | 5' - 6' HGT. MIN. | B&B | 10' O.C. |
| 5 | PV | PINUS VIRGINIANA | VIRGINIA PINE | 5' -'6 HGT. MIN. | B&B | 10' O.C. |
| 16 | QP | QUERCUS PHELLOS | WILLOW OAK | 1" - 1 1/2" CAL., 6' - 7' HGT. MIN. | B&B | 15' O.C. |
| 13 | QR | QUERCUS RUBRA | RED OAK | 1" - 1 1/2" CAL., 6'-7' HGT. MIN. | B&B | 15' O.C. |

SUBSTITUTIONS:

| BOTANICAL NAME | COMMON NAME | SPECIFICATION |
|---|---|---|
| Acer saccharum | SUGAR MAPLE | 1 1/2" CAL., 6' HGT. MIN. |
| Chamaecyparis thyoides | ATLANTIC WHITECEDAR | 5' HGT. MIN. |
| Crataegis viridis 'Winter King' | WINTER KING GREEN HAWTHORN | 1 1/2" CAL., 6' HGT. MIN. |
| Liriodendron tulipifera | TULIP TREE | 1 1/2" CAL., 6' HGT. MIN. |
| Pinus strobus | WHITE PINE | 5' HGT. MIN. |
| Pinus taeda | LOBLOLLY PINE | 5' HGT. MIN. |
| Quercus alba | WHITE OAK | 1 1/2" CAL., 6' HGT. MIN. |
| Quercus coccinea | SCARLET OAK | 1 1/2" CAL., 6' HGT. MIN. |
| Taxodium distichum | BALD CYPRESS | 1 1/2" CAL., 6' HGT. MIN. |
| Magnolia virginiana | SWEETBAY MAGNOLIA | 5' HGT. MIN. |
| Juniperus virginiana | EASTERN RED CEDAR | 5' HGT. MIN. |
| Platanus acerifolia | LONDON PLANE TREE | 1 1/2" CAL., 6' HGT. MIN. |
| Nyssa sylvatica | BLACK GUM | 1 1/2" CAL., 6' HGT. MIN. |
| Salix babylonica | WEEPING WILLOW | 1 1/2" CAL., 6' HGT. MIN. |

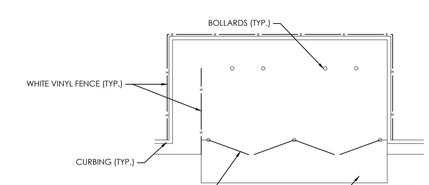
IF SUBSTITUTIONS ARE MADE, ONLY SUBSTITUTE DECIDUOUS FOR DECIDUOUS OR EVERGREEN FOR EVERGREEN TO MAINTAIN REQUIRED MIX.

LANDSCAPE BUFFER
EXISTING FOREST TO REMAIN

LANDSCAPE ARCHITECT'S CERTIFICATION

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY SUPERVISIONS.

ALBERT M. DEMERICH RLA, ASLA NO. S1-394 DATE




## DUMPSTER ENCLOSURE

N.T.S



solutions

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Date: 1/22/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 1/22/2025 | REVISED SITE LAYOUT |

NOTES

for

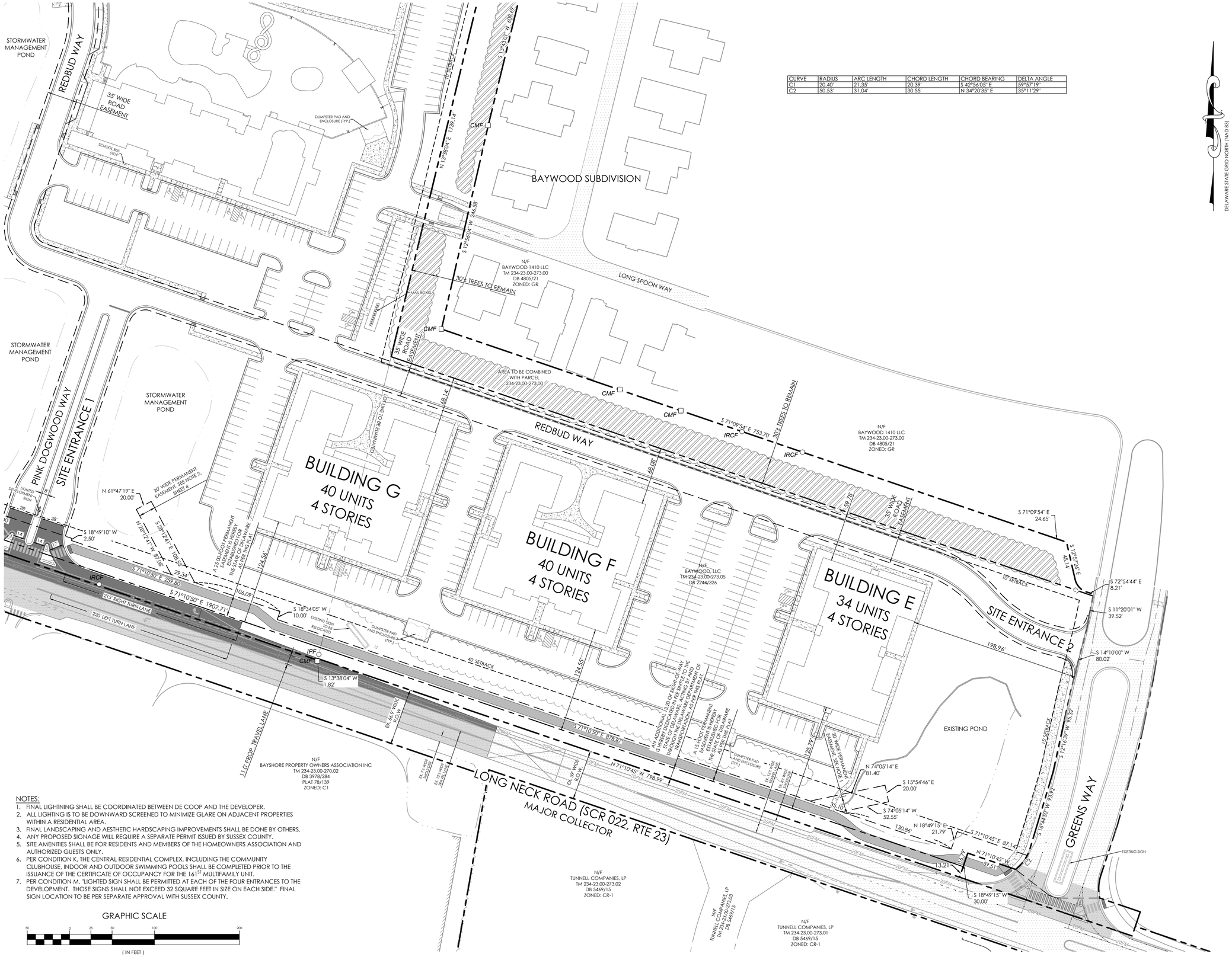
# BAYWOOD GARDEN VILLAS

INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

Date: 1/25/23
Job Number: G18052
Scale: AS NOTED
Drawn By: ML
Designed By: JPR
Approved By: SWF

Sheet No.: 2

File Name: 18052-record-cover




| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 20.40' | 21.35' | 20.39' | S 42°56'05" E | 59°57'19" |
| C2 | 50.53' | 31.04' | 30.55' | N 34°20'35" E | 35°11'29" |

NOTES:

1. FINAL LIGHTNING SHALL BE COORDINATED BETWEEN DE COOP AND THE DEVELOPER.
2. ALL LIGHTING IS TO BE DOWNWARD SCREENED TO MINIMIZE GLARE ON ADJACENT PROPERTIES WITHIN A RESIDENTIAL AREA.
3. FINAL LANDSCAPING AND AESTHETIC HARDSCAPING IMPROVEMENTS SHALL BE DONE BY OTHERS.
4. ANY PROPOSED SIGNAGE WILL REQUIRE A SEPARATE PERMIT ISSUED BY SUSSEX COUNTY.
5. SITE AMENITIES SHALL BE FOR RESIDENTS AND MEMBERS OF THE HOMEOWNERS ASSOCIATION AND AUTHORIZED GUESTS ONLY.
6. PER CONDITION K, THE CENTRAL RESIDENTIAL COMPLEX, INCLUDING THE COMMUNITY CLUBHOUSE, INDOOR AND OUTDOOR SWIMMING POOLS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE 161ST MULTIFAMILY UNIT.
7. PER CONDITION M, "LIGHTED SIGN SHALL BE PERMITTED AT EACH OF THE FOUR ENTRANCES TO THE DEVELOPMENT. THOSE SIGNS SHALL NOT EXCEED 32 SQUARE FEET IN SIZE ON EACH SIDE." FINAL SIGN LOCATION TO BE PER SEPARATE APPROVAL WITH SUSSEX COUNTY.

GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )
1 inch = 50 ft.

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Date: 1/22/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/29/2023 | ADDED TIS NOTES |
| 3 | 1/22/2025 | REVISED SITE LAYOUT |

RECORD SITE PLAN A
for
# BAYWOOD GARDEN VILLAS
INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 50' |
| Drawn By: | MIL |
| Designed By: | JPR |
| Approved By: | SWF |

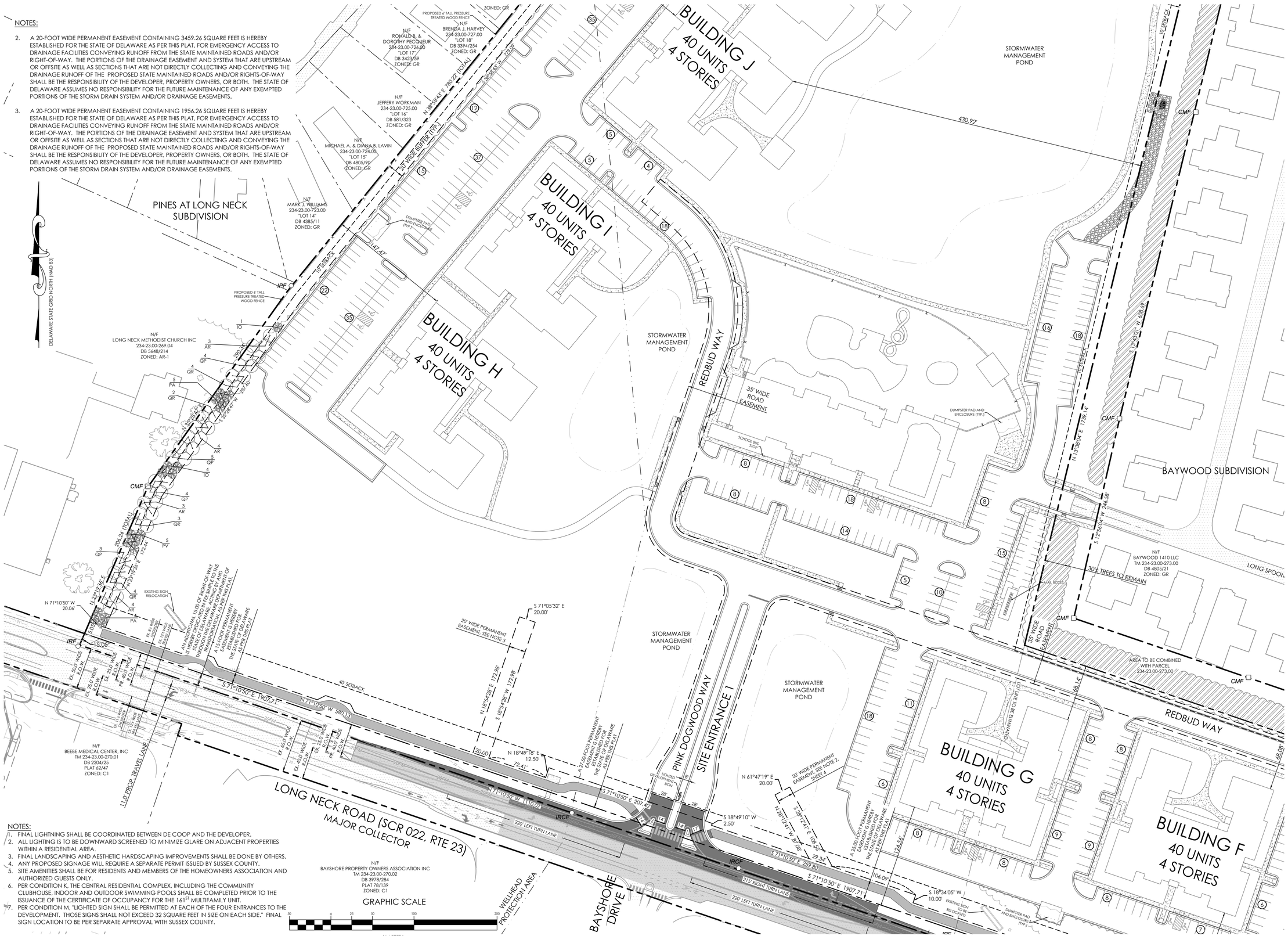
Sheet No.: 3

File Name: 18052-record-site

NOTES:

2. A 20-FOOT WIDE PERMANENT EASEMENT CONTAINING 3459.26 SQUARE FEET IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT, FOR EMERGENCY ACCESS TO DRAINAGE FACILITIES CONVEYING RUNOFF FROM THE STATE MAINTAINED ROADS AND/OR RIGHT-OF-WAY. THE PORTIONS OF THE DRAINAGE EASEMENT AND SYSTEM THAT ARE UPSTREAM OR OFFSITE AS WELL AS SECTIONS THAT ARE NOT DIRECTLY COLLECTING AND CONVEYING THE DRAINAGE RUNOFF OF THE PROPOSED STATE MAINTAINED ROADS AND/OR RIGHTS-OF-WAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, PROPERTY OWNERS, OR BOTH. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF ANY EXEMPTED PORTIONS OF THE STORM DRAIN SYSTEM AND/OR DRAINAGE EASEMENTS.

3. A 20-FOOT WIDE PERMANENT EASEMENT CONTAINING 1956.26 SQUARE FEET IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT, FOR EMERGENCY ACCESS TO DRAINAGE FACILITIES CONVEYING RUNOFF FROM THE STATE MAINTAINED ROADS AND/OR RIGHT-OF-WAY. THE PORTIONS OF THE DRAINAGE EASEMENT AND SYSTEM THAT ARE UPSTREAM OR OFFSITE AS WELL AS SECTIONS THAT ARE NOT DIRECTLY COLLECTING AND CONVEYING THE DRAINAGE RUNOFF OF THE PROPOSED STATE MAINTAINED ROADS AND/OR RIGHTS-OF-WAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, PROPERTY OWNERS, OR BOTH. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF ANY EXEMPTED PORTIONS OF THE STORM DRAIN SYSTEM AND/OR DRAINAGE EASEMENTS.




NOTES:

1. FINAL LIGHTNING SHALL BE COORDINATED BETWEEN DE COOP AND THE DEVELOPER.
2. ALL LIGHTING IS TO BE DOWNWARD SCREENED TO MINIMIZE GLARE ON ADJACENT PROPERTIES WITHIN A RESIDENTIAL AREA.
3. FINAL LANDSCAPING AND AESTHETIC HARDSCAPING IMPROVEMENTS SHALL BE DONE BY OTHERS.
4. ANY PROPOSED SIGNAGE WILL REQUIRE A SEPARATE PERMIT ISSUED BY SUSSEX COUNTY.
5. SITE AMENITIES SHALL BE FOR RESIDENTS AND MEMBERS OF THE HOMEOWNERS ASSOCIATION AND AUTHORIZED GUESTS ONLY.
6. PER CONDITION K, THE CENTRAL RESIDENTIAL COMPLEX, INCLUDING THE COMMUNITY CLUBHOUSE, INDOOR AND OUTDOOR SWIMMING POOLS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE 161ST MULTIFAMILY UNIT.
7. PER CONDITION M, "LIGHTED SIGN SHALL BE PERMITTED AT EACH OF THE FOUR ENTRANCES TO THE DEVELOPMENT. THOSE SIGNS SHALL NOT EXCEED 32 SQUARE FEET IN SIZE ON EACH SIDE." FINAL SIGN LOCATION TO BE PER SEPARATE APPROVAL WITH SUSSEX COUNTY.

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Date: 1/22/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 1/22/2025 | REVISED SITE LAYOUT |

RECORD SITE PLAN B

for

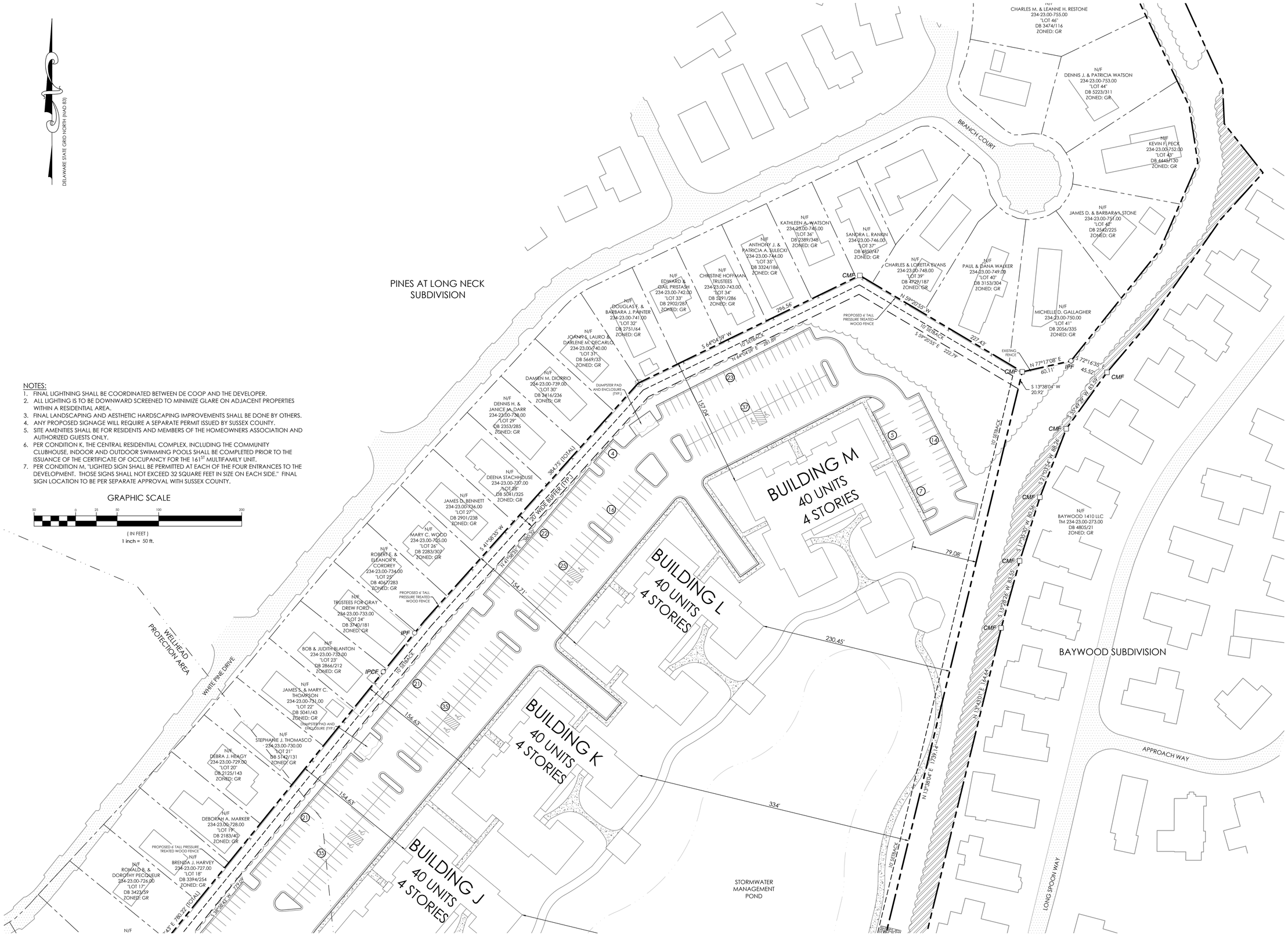
# BAYWOOD GARDEN VILLAS

INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 50' |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

Sheet No.: 4

File Name: 18052-record-site




NOTES:

1. FINAL LIGHTNING SHALL BE COORDINATED BETWEEN DE COOP AND THE DEVELOPER.
2. ALL LIGHTING IS TO BE DOWNWARD SCREENED TO MINIMIZE GLARE ON ADJACENT PROPERTIES WITHIN A RESIDENTIAL AREA.
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GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )
1 inch = 50 ft.

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Date: 1/22/25

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9/18/2023 | ADDRESSED DELDOT COMMENTS |
| 2 | 9/28/2023 | ADDED TIS NOTES |
| 3 | 1/22/2025 | REVISED SITE LAYOUT |

RECORD SITE PLAN C

for

# BAYWOOD GARDEN VILLAS

INDIAN RIVER HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| Date: | 1/25/23 |
| Job Number: | G18052 |
| Scale: | 1" = 50' |
| Drawn By: | ML |
| Designed By: | JPR |
| Approved By: | SWF |

Sheet No.: 5

File Name: 18052-record-site

## WELL HEAD PROTECTION AREA

TOTAL AREA WITHIN WELLHEAD PROTECTION AREA = 380,584 SQ.FT.

| SURFACE TYPE | AREA (SQ.FT.) |
|---|---|
| IMPERVIOUS AREAS | 132,989 |
| GREEN SPACE (GRASS & WOODS) | 247,595 |

IMPERVIOUS PERCENTAGE = 34.94%

IMPERVIOUS AREAS
PARKING, DRIVE ISLES, WET POND, SIDEWALK, ETC.

GREEEN SPACE

GRAPHIC SCALE

100 0 50 100 200 400

( IN FEET )
1 inch = 100ft.

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| NO. | DATE | REVISIONS DESCRIPTION |
|---|---|---|

WELLHEAD PROTECTION AREA
for
# BAYWOOD GARDEN VILLAS
SUSSEX COUNTY, DELAWARE
Prepared for: Baywood, LLC

| | |
|---|---|
| Date: | 3/6/23 |
| Job Number: | G18052 |
| Scale: | AS NOTED |
| Drawn By: | JPR |
| Designed By: | JPR |
| Approved By: | JP |

Sheet No.: 1

File Name: WellheadProtectionArea-2025

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 04, 2023

Mr. Jamie Whitehouse, Director
Sussex County Planning  Zoning Commission
Sussex County Administration Building
P.O. Box 417
Georgetown, Delaware 19947

**SUBJECT: Letter of No Objection to Recordation**
**Baywood Garden Villas**
Tax Parcel 234-23.00-270.00,
234-23.00-273.05
SCR00022-LONG NECK ROAD
Indian River Hundred, Sussex County

Dear Mr. Whitehouse:

The Department of Transportation has reviewed the Site Plan, dated January 25, 2023 (last revised September 28, 2023), for the above referenced site, and has no objection to its recordation as shown on the enclosed drawings. This "No Objection to Recordation" approval shall be valid for a period of **five (5) years**. If the Site Plan is not recorded prior to the expiration of the "No Objection to Recordation", then the plan must be updated to meet current requirements and resubmitted for review and approval.

**This letter does not authorize the commencement of entrance construction.** Entrance plans shall be developed in accordance with DelDOT's Development Coordination Manual and submitted to the Development Coordination Section for review and approval.

This "No Objection to Recordation" letter is not a DelDOT endorsement of the project discussed above. Rather, it is a recitation of the transportation improvements, which the applicant may be required to make as a pre-condition to recordation steps and deed restrictions as required by the respective county/municipality in which the project is located. If transportation investments are necessary, they are based on an analysis of the proposed project, its location, and its estimated impact on traffic movements and densities. The required improvements conform to DelDOT's published rules, regulations and standards. Ultimate responsibility for the approval of any project

rests with the local government in which the land use decisions are authorized. There may be other reasons (environmental, historic, neighborhood composition, etc.) which compel that jurisdiction to modify or reject this proposed plan even though DelDOT has established that these enumerated transportation improvements are acceptable.

If I can be of any further assistance, please call me at (302) 760-2266.

Very truly yours,

Wendy L. Polasko

Wendy L. Polasko, P.E.
Subdivision Engineer
Development Coordination

cc: Robert Tunnell, Jr., Pot-Nets Communities - Northeast, LLC
Jason Palkewicz, Solutions IPEM
Sussex County Planning  Zoning
Jessica L. Watson, Sussex Conservation District
Matt Schlitter, South District Public Works Engineer
James Argo, South District Project Reviewer
Richard Larkin, South District Subdivision Manager
Jennifer Pinkerton, Chief Materials  Research Engineer
Linda Osiecki, Pedestrian Coordinator
John Fiori, Bicycle Coordinator
Sean Humphrey, Traffic Development Coordination Engineer
Tim Phillips, Maintenance Support Manager
Dan Thompson, Safety Officer North District
Jared Kauffman, DTC Planner
Shiny Mathew, JMT
Kevin Hickman, Sussex County Review Coordinator
Thomas Gagnon, Sussex County Reviewer

**GEOGRAPHIC INFORMATION OFFICE**

MEGAN NEHRBAS
SENIOR MANAGER OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)
(302) 855-1176 T
(302) 853-5889 F

**Sussex County**
DELAWARE
sussexcountyde.gov

July 18, 2024

Jason Palkewicz | PE, LEED AP | CEO|
Solutions IPEM
303 N Bedford St, Georgetown, DE 19947
302-297-9215

RE: Proposed Subdivision Name

Our department has reviewed the name submitted for your proposed subdivision located in Millsboro, DE 19966 on parcels **234-23.00-270.00**, **273.01**, **273.02**, **273.03** & **273.05**. In reviewing the proposed name, the following has been approved for this subdivision:

# BAYWOOD GARDEN VILLAS

Should you have any questions please contact the Sussex County Geographic Information Department at 302-855-1176.

Sincerely,

*Oana Sofronie Cullen*

Oana Sofronie Cullen
GIS Technician

CC:
Christin Scott, Planning & Zoning

**GEOGRAPHIC INFORMATION OFFICE**

MEGAN NEHRBAS
SENIOR MANAGER OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)
(302) 855-1176 T
(302) 853-5889 F

**Sussex County**
DELAWARE
sussexcountyde.gov

July 18, 2024

Jason Palkewicz | PE, LEED AP | CEO|
Solutions IPEM
303 N Bedford St, Georgetown, DE 19947
302-297-9215

RE: BAYWOOD GARDEN VILLAS Approved Streets

Our office has received proposed street names for proposed subdivision **BAYWOOD GARDEN VILLAS**, located on parcels 234-23.00-270.00, 273.01, 273.02, 273.03 & 273.05 in Millsboro, DE 19966. Based on our review, the following proposed street names have been **approved**:

| | | |
|---|---|---|
| **Camellia Way** | **Firethorn Way** | **Nandia Way** |
| **Pink Dogwood Way** | **Redbud Way** | **Tea Olive Way** |

Use only road names **approved** and issued by this office on letterhead or you will be required to rerecord. Each street name is to be used only once.

Upon final approval of **BAYWOOD GARDEN VILLAS**, please forward a digital copy of the recorded site plan to my attention for the purpose of addressing.

Should you have any questions, please contact the Geographic Information Office at 302-855-1176.

Sincerely,

*Oana Sofronie Cullen*

Oana Sofronie Cullen
GIS Technician

CC: Christin Scott, Office of Planning & Zoning

## Lauren DeVore

**From:** Valerie Thompson
**Sent:** Monday, February 17, 2025 9:10 AM
**To:** Lauren DeVore
**Cc:** Patrick Brown; Jim Eriksen
**Subject:** RE: Baywood Garden Villas Wellhead Protection review

Hi Lauren,

I have reviewed the resubmitted record plan and confirmed the impervious area is below 35%. All SCE comments have been addressed.

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
2 The Circle, Georgetown DE 19947
Office: 302-855-7790
Cell: 443-783-8063
Email: valerie.thompson@sussexcountyde.gov

---

**From:** Jim Eriksen <jeriksen@solutionsipem.com>
**Sent:** Friday, February 14, 2025 11:00 AM
**To:** Lauren DeVore <lauren.devore@sussexcountyde.gov>
**Cc:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>; Patrick Brown <patrick.brown@sussexcountyde.gov>
**Subject:** RE: Baywood Garden Villas Wellhead Protection review

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Hi Lauren,

Attached is an updated site plan rearranging the buildings on the site to reduce the impervious area within the wellhead protection area. The permeable pavement has been removed, and the impervious area is below 35%. We wanted to send this in to ensure that this layout is acceptable as we move forward with engineering revisions.

Thanks,

**Jim Eriksen, PE** | Principal of Engineering |

**Solutions IPEM** | 303 N. Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 |

---

**From:** Patrick Rohlich <prohlich@solutionsipem.com>
**Sent:** Wednesday, October 30, 2024 4:09 PM

**To:** Jim Eriksen <jeriksen@solutionsipem.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
**Subject:** FW: Baywood Garden Villas Wellhead Protection review

**Patrick Rohlich** | EIT |

**Solutions IPEM** | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 |

**From:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>
**Sent:** Wednesday, October 30, 2024 4:07 PM
**To:** Patrick Rohlich <prohlich@solutionsipem.com>
**Cc:** Mark Parker <mark.parker@sussexcountyde.gov>; Patrick Brown <patrick.brown@sussexcountyde.gov>; Lauren DeVore <lauren.devore@sussexcountyde.gov>
**Subject:** Baywood Garden Villas Wellhead Protection review

Good afternoon Patrick,

I've reviewed the Baywood Garden Villas Wellhead Protection revision. Based on the plans provided to Chris Calio on September 17, 2024, I have the following comments:

1. It appears the pond normal pool has been counted as green space. Revise the calculations to include this area (42,029 sf) as impervious cover.
2. Based on the revised calculations, the impervious area would exceed 35% (133,137 + 42,029= 175,166/380,565 = 46%). Per Ch 89-6 F(2), please address the following:
    a. *Impervious cover of that portion of a tax parcel within the wellhead protection area which is greater than 35% but no more than 60% is allowed, provided the applicant demonstrates through an environmental assessment report prepared by a registered professional geologist or registered professional engineer familiar with the hydrogeologic characteristics of Sussex County and using a climatic water budget that will insure that post-development recharge quantity will meet or exceed the existing (predevelopment) recharge quantity. Beneficial efforts to mitigate discharges to impervious surfaces shall count towards the formula used to compute post-development mitigation of any discharges.*
3. The County has concerns with the proposed pervious parking within the wellhead protection area. Per Ch 89-3, land use activities are to be *conducted in such a way as to minimize the impact on and reduce the risk of contamination of excellent groundwater recharge areas and wellhead protection areas which are the source of public drinking water throughout the County.* Parking areas are considered a hotspot source area that can introduce sediment, metals, oil and grease, and trash into runoff. If Solutions IPEM would like to move forward with the pervious pavement element, it would need to be reviewed and approved by the Sussex Conservation District in accordance with the Delaware Sediment & Stormwater Regulations. In addition, please submit a permeable paver Operations & Maintenance plan to Sussex County Engineering for review.

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
2 The Circle, Georgetown DE 19947
Office: 302-855-7790
Cell: 443-783-8063
Email: valerie.thompson@sussexcountyde.gov

**ENGINEERING DEPARTMENT**

JOHN J. ASHMAN
DIRECTOR OF UTILITY PLANNING & DESIGN REVIEW

(302) 855-7370 T
(302) 854-5391 F
jashman@sussexcountyde.gov

**Sussex County**

DELAWARE
sussexcountyde.gov

MIKE HARMER, P.E.
SUSSEX COUNTY ENGINEER

July 30, 2024

Mr. Jim Erickson, PE
Solutions, IPEM
303 North Bedford Street
Georgetown, DE 19947

REF: **BAYWOOD GARDEN VILLAS**
**SUSSEX COUNTY UNIFIED SANITARY SEWER DISTRICT – NCPA AREA**
**SUSSEX COUNTY TAX MAP NUMBER 234-23.00 PARCEL 270.00 & 273.05**
**CLASS-1**
**AGREEMENT NO. 979-1**

Dear Mr. Erickson,

The above referenced project was approved on July 30, 2024, and one (1) set of the approved plan is enclosed. This approval is valid for three (3) years, unless prior to expiration of that three (3) year period, a time extension is requested and approved by the Department. Plans granted an extension beyond the three (3) period will be required to meet updated standards and specifications.

Also, it is your responsibility to secure approvals and/or permits that may be required by other regulatory agencies.

Please contact Mr. Keith Bryan of this Division to initiate pre-construction procedures for private roads.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

SUSSEX COUNTY ENGINEERING DEPARTMENT

Chris Calio
Engineering Technician IV

Cc: Mr. Keith Bryan, w/1 enclosure
Ms. Lisa Walls, w/1 enclosure

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

Office of Engineering
Phone: (302) 741-8640
Fax: (302) 741-8631

July 23, 2024

***LONG NECK WATER COMPANY***

***APPROVAL TO CONSTRUCT***
***Long Neck Water Company***
Baywood Garden Villas
PWS #DE0000625
Approval #24W135

Robert Tunnell, III
Baywood, LLC
34026 Anna's Way, Suite 1
Long Neck, DE 19966

Dear Applicant:

As provided by Section 2.11 of the *State of Delaware Regulations Governing Public Drinking Water Systems*, you are granted approval to construct Baywood Garden Villas in accordance with the plans submitted by Solutions IPEM. The plans consist of:

1. Transmittal letter dated July 17, 2024.
2. Application for Construction of New or Existing PWS.
3. Two copies of the plans entitled "Water Plan C for Baywood Garden Villas" dated March 6, 2023 and revised October 12, 2023.

These plans, as noted, are made a part of this approval. This approval is granted subject to the enclosed list of conditions.

It is the owner's responsibility to ensure as-built drawings are maintained throughout all phases of construction. Prior to receiving an Approval to Operate, the Office of Engineering requires one set of as-built drawings, including profile markups.

The Office of Engineering recommends detectable tracer tape that is three inches wide and blue in color to be installed directly above all water mains larger than two inches in diameter.

I am sending one set of plans with a copy of this approval to Solutions IPEM that is signed and dated by the Office of Engineering.

Should you have any questions regarding this matter, please feel free to contact Natalie Holland at (302) 741-8640.

Plans reviewed by:

Natalie E. Holland
Engineer II
Office of Engineering

cc: Jim Eriksen, P.E., Solutions IPEM
Jason Palkwicz, P.E., Solutions IPEM
James P. Mooney, Long Neck Water Company
Kevin Cottman, Office of Drinking Water

Approval #24W135

1. The approval is void if construction has not been started by July 23, 2025.

2. The project shall be constructed in accordance with the approved plans and all required conditions listed in this Approval to Construct. If any changes are necessary, revised plans shall be submitted and a supplemental approval issued prior to the start of construction. As-built plans including profile mark-ups must be submitted to the Office of Engineering after construction has been completed.

3. Representatives of the Division of Public Health may inspect this project at any time during the construction.

4. This approval does not cover the structural stability of any units or parts of this project.

5. The water system shall be operated in conformance with the *State of Delaware Regulations Governing Public Drinking Water Systems*.

6. All wells, pipes, tanks, and equipment which can convey or store potable water shall be disinfected in accordance with the current AWWA procedures. Plans or specifications shall outline the procedure and include the disinfectant dosage, contact time, and method of testing the results of the procedure. (Recommended Standards for Water Works 2022 Edition 2.15)

7. Water mains crossing sanitary and storm sewers should be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer, and the water main should be above the sewer. At crossings, one full length of water pipe should be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required. In cases where it is not practical to maintain an 18-inch separation, the Division may allow deviation on a case-by-case basis if supported by data from the design engineer.

8. Water mains should be laid 10 feet horizontally from any existing or proposed sanitary or storm sewers. The distance should be measured edge to edge. In cases where it is not practical to maintain a 10-foot separation, the Division may allow deviation on a case-by-case basis if supported by data from the design engineer.

9. All chemicals, materials, mechanical devices, and coatings in contact with potable water shall comply with National Sanitation Foundation/American National Standards Institute Standards (NSF/ANSI) 60 and 61 and shall be inert, nontoxic, and shall not import any taste, odor, or color to the water.

10. Sufficient valves should be provided so that inconvenience and sanitary hazards will be minimized during repairs. Valves should be located at not more than 500-foot intervals in commercial districts and at not more than one block or 800-foot intervals in other districts.

11. There shall be no connection between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system.

12. Fire hydrant drains shall not be connected to or located within 10 feet of sanitary sewers, storm sewers, or storm drains.

13. Prior to usage of water from this new well, water plant, storage plant, or distribution system, approval for the water quality must be obtained from the Division of Public Health.

14. The water system should be capable of providing at least 25 psi at ground level at all times throughout the distribution system.

15. All plastic pipe utilized in this drinking water system shall be approved for potable water use (NSF-pw). If any piping is joined with solder or flux, the solder and flux shall be lead free (less than or equal to 0.2 percent lead).

16. All water lines should be buried to a depth of at least 3 feet.

17. A Certificate of Public Conveniences and Necessity should be acquired from the Public Service Commission, (302) 739-4247.

18. This approval is for the distribution system only. Plans and specifications for all well plumbing, pumps, storage (including any interior coatings), and treatment must be submitted to and approved by this office prior to their installation.

19. The approval is subject to immediate revocation upon violation of any of the preceding conditions.

20. All other local (county/city/town) approvals or permits needed must be obtained prior to beginning construction.

21. Upon completion of construction and before the system is placed into operation, a "Notice of Completion" must be submitted to the Office of Engineering. Before placing the system into operation, the following must be adhered to:
    a. Submit a set of as-built plans with profile markups to the Office of Engineering.
    b. Obtain an Approval to Operate from the Office of Engineering.

## Patrick Rohlich

**From:** Patrick Rohlich
**Sent:** Friday, July 26, 2024 3:26 PM
**To:** shawn.tidwell@irsd.k12.de.us
**Cc:** Jim Eriksen; Jason Palkewicz
**Subject:** Baywood Garden Villas School Bus Stop
**Attachments:** G18052-BaywoodGradenVillas-School.pdf

Mr, Tidwell,

Baywood Garden Villas is a proposed apartment complex in Sussex County within the Indian River School District. As per the conditions for our final approval from Sussex County Planning and Zoning, we are required to coordinate with the school district regarding the location of a school bus stop within the apartment complex. Please find the attached site plan with the location of the proposed bus stop location near the club house. If you have any feedback please let me know. If I don't hear back from you we will assume you are good with the proposed location.

Thanks,

**Patrick Rohlich** | EIT |

**Solutions IPEM** | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 |

Sussex conservation district
PREPARE. PROTECT. PRESERVE.

October 06, 2023

Mr. Robert Tunnell
Tunnell Properties
rtunnell@potnets.com

**RE: Baywood Garden Villas**

Dear Mr. Tunnell:

A Sediment and Stormwater Management Plan has been reviewed for compliance with the Sediment and Stormwater Regulations and is approved with conditions (see attached). Enclosed herein please find a copy of the approved application form and approved plan sets. Please retain a copy for your use, and provide the contractor with a copy to be retained onsite at all times. Failure to keep an approved plan onsite is a violation of the approved plan.

Approval of a Sediment and Stormwater Plan does not grant or imply a right to discharge stormwater runoff. The owner/developer is responsible for acquiring any and all agreements, easements, etc., necessary to comply with State drainage and other applicable laws.

This plan approval pertains to compliance with the Delaware Sediment and Stormwater Regulations. Please understand that the approval of this plan does not relieve you from complying with any and all federal, state, county, or municipal laws and regulations.

As of January 1, 2014, the Sussex Conservation District began collecting financial guarantees to ensure the construction of stormwater management practices is accomplished in accordance with the approved sediment and stormwater plan. Please refer to the SCD Policy on Bonds located on our website at Sussexconservation.org. If you have any questions concerning the aforementioned, please do not hesitate to call 302 856-7219.

Sincerely,

Jessica Watson

Jessica Watson
Program Manager

23818 SHORTLY ROAD, GEORGETOWN, DE 19947 office: 302-856-2105 fax: 302-856-0951 WWW.SUSSEXCONSERVATION.ORG

# CONDITIONS OF APPROVAL

## NOTIFICATION

1. This approved plan will remain valid for 5 years from the date of this approval. If construction does not begin within five years, the approved plan will be considered to have expired and must be resubmitted to the District for a new review. In addition, if work is not completed within the five-year timeframe, the District must be contacted and a request for an extension submitted. Depending on regulation changes, a new plan may need to be submitted to ensure that all stormwater management facilities are constructed to the most recent standards.

2. Submittal of the Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activities together with this approval of the detailed Sediment and Stormwater Plan provide this project with Federal permit coverage to be authorized to discharge stormwater associated with construction activities. It is the owner's responsibility to ensure that permit coverage remains valid throughout construction by submitting the NOI fee annually as requested. The developer is responsible for weekly self-inspection reporting to be retained onsite.

3. Notify the Sussex Conservation District Sediment and Stormwater Management Section of your intent to begin construction in writing five (5) days prior to commencing. Failure to do so constitutes a violation of the approved plan.

## CHANGES

1. This project is to be undertaken in accordance with the plans submitted and as approved. If changes are necessary at any time during the completion of the project, submit revised plans, prior to further construction, to the Sussex Conservation District Sediment and Stormwater Program for review and approval of the revision.

2. Should ownership change during the construction period, a revised plan must be submitted for approval showing the new owner's signature on the owner's certification. In addition, a Transfer of Authorization form must be submitted to DNREC to transfer Federal permit coverage to the new owner.

## CONSTRUCTION AND CLOSEOUT

1. A pre-construction meeting must take place before any land disturbing activity begins. The meeting may take place on site and be attended by the owner, contractor, design consultant, Certified Construction Reviewer, and Sussex Conservation District Sediment and Stormwater Program Construction Reviewer. The owner or the owner's designee shall contact the Sussex Conservation Construction Reviewer to schedule the pre-construction meeting.

2. Keep available onsite, during all phases of construction, a copy of the approved Sediment and Stormwater Management Plan.

3. Keep available onsite, during all phases of constriction, copies of the Developers weekly self-inspection reports and/or the CCR Reports.

4. Any sediment transported off-site to roads or road rights-of-way including ditches shall be removed. Any damage to ditches shall be repaired and stabilized to original condition.

5. Grading shall not impair surface drainage, create an erosion hazard, or create a source of sediment to any

adjacent watercourse or property owner.

6. Failure to implement the permanent stormwater management practices as mentioned herein constitutes a violation of the conditions of this plan approval; it may result in the suspension or revocation of building permits or grading permits issued by the local jurisdiction, and it may result in legal action by the DNREC to bring the site into compliance with the approved Sediment and Stormwater Management Plan and the Delaware Sediment and Stormwater Regulations.

7. The permanent stormwater management facility or facilities must be constructed and accepted by the Sussex Conservation District Sediment and Stormwater Program prior to final closeout of the project site. Post-construction verification documentation of the stormwater management facility or facilities must be completed as soon as construction of the facility or facilities is complete so that any necessary modifications may be made during the construction period.

Sussex conservation district

# DETAILED SEDIMENT AND STORMWATER MANAGEMENT PLAN APPLICATION

NAME OF PROJECT: Baywood Garden Villas

PROJECT DESCRIPTION: 354 Multi-family Units

LOCATION OF PROJECT: 32147 Long Neck Road

PROJECT TAX MAP NUMBER: 234-23.00-270.00, 273.05

PROJECT COORDINATES (*center of site-decimal degrees*) LAT: 38.635857 LONG: -75.188054

TYPE OF PROJECT: Residential WATERSHED: Rehoboth Bay

NUMBER OF LOTS: 1 TOTAL ACRES: 40.79 DISTURBED ACRES: 33.9

## APPLICANT'S CONTACT INFORMATION

FIRST NAME: Robert LAST NAME: Tunnell

COMPANY NAME: Baywood, LLC

ADDRESS: 34026 Anna's Way, Suite 1

CITY: Long Neck STATE: DE ZIP: 19966

PHONE NUMBER: 302.945.9300 FAX NUMBER: 302.945.4032

EMAIL ADDRESS: RTunnell@potnets.com

## CONSULTANT CONTACT INFORMATION

CONSULTANT/ENGINEER NAME: Solutions IPEM

CONTACT PERSON/PROJECT MANAGER: Jim Eriksen

PHONE #: ( 302 ) 297-9215 FAX #: ( )

EMAIL ADDRESS: JEriksen@SolutionsIPEM.com

## SUSSEX CONSERVATION DISTRICT APPROVAL

REVIEWER: [signature] DATE: 10/6/2023

APPROVAL: [signature] DATE: 10/6/23

*If ownership of this project changes during the construction period, Sussex Conservation District will require a new signed owner's certification statement.... In addition, the authorization to discharge stormwater under the regulations Part 2 Special Conditions for Storm Water Discharges Associated with Construction Activities, must be transferred by the original owner to the new owner, please contact DNREC for assistance at 302-739-9921.*

RECEIVED

JUN 20 2023

## OWNER/DEVELOPER CERTIFICATION

- I/We certify that the information on this form and the attached plans are true and accurate to the best of my/our knowledge.
- I/We understand that DNREC/Delegated Agency may request information in addition to that set forth herein as may be deemed appropriate in considering this application.
- I/We will abide by the conditions of this approval as issued.
- I/We hereby certify that all clearing, grading, construction and/or development will be done pursuant to the approved plan, and that all responsible personnel involved in the land disturbing activities will have a Sediment and Stormwater Management Certification from DNREC/Delegated Agency.
- I/We hereby authorize the right of entry for periodic on site inspection by DNREC/Delegated Agency personnel and/or authorized agents.

OWNER/DEVELOPER SIGNATURE:_____ DATE: _____

OWNER/DEVELOPER PRINTED NAME: _____

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## AGENT AUTHOIZATION

*(If this authorization form is completed with the application, all future correspondence may be signed by the duly authorized agent.)*

I, _____, hereby designate and authorize the following identified agent to act on my behalf in the processing of this application and to furnish any information that is requested.

AGENT NAME:_____

AGENT ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

AGENT PHONE #: (  ) _____ FAX #: _____

EMAIL ADDRESS: _____

OWNER/DEVELOPER SIGNATURE:_____ DATE: _____

AGENT SIGNATURE: _____ DATE: _____

*Please attach project Supplemental BMP Data Sheet to the Detailed Sediment and Stormwater Management Plan Application.*

## PROJECT BMP DATA SHEET

List the BMP(s) utilized in the project stormwater management quantity and water quality strategy.

| BMP NAME | BMP TYPE | ACRES TREATED | BMP LOCATION COORDINATES (@ BMP release point - decimal degrees) | |
|---|---|---|---|---|
| | | | *LATITUDE* | *LONGITUDE* |
| Pond 1 | Wet pond | 39.16 | 38.641646 | -75.188689 |
| Pond 2 | Wet pond | 0 | 38.636886 | -75.187322 |
| Pond 3 | Wet pond | 0 | 38.635085 | -75.188739 |
| Pond 4 | Wet pond | 0 | 38.635027 | -75.188325 |
| | Wet pond | | | |
| | Wet pond | | | |
| | Wet pond | | | |
| | Wet pond | | | |

DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

89 Kings Highway
Dover, DE 19901
(302) 739-9000
dnrec.delaware.gov

July 17, 2024

Robert Tunnell, III
Baywood, LLC
34026 Anna's Way, Suite 1
Long Neck, DE 19966

Ref: Baywood Garden Villas
State Wastewater Construction Permit No. WPCC 3069/23

To Robert Tunnell, III:

Please find enclosed a copy of the construction permit that was issued for the referenced project.

We expect the permitted construction to be completed within the permit term. If the construction cannot be completed by the permit expiration date, a one-time, no-cost two-year permit extension is available, as long as the request is received in writing prior to the expiration date and as long as the scope of the project has not changed significantly, as determined by the Department.

Per Part II.A.2.a of the enclosed permit, notify the Department of any changes to the construction authorized therein. Per Part II.B.1, submit a set of "as-built" plans of the constructed wastewater facilities within ninety (90) days of construction completion. The as-built plans must be signed and sealed by a Professional Engineer licensed in Delaware.

If you have any questions, please contact me at (302) -739-9946 or via email at Wenjia.Fan@delaware.gov.

From,

Wenjia Fan, PhD, P.E.
Engineer IV
Commercial and Government Services Section
DNREC Division of Water

Email Enclosure:

1. Jim Eriksen – Solutions IPEM (JEriksen@SolutionsIPEM.com)
2. Christin Scott – Sussex County Planner (Christin.Scott@sussexcountyde.gov)
3. Scott Thornton – Sussex County Engineering (scott.thornton@sussexcountyde.gov)
4. Lisa Walls – Sussex Co. Engineering Project Coordination (lwalls@sussexcountyde.gov)
5. Keith Bryan – Sussex County Utility Construction (KBryan@sussexcountyde.gov)
6. Susan Isaacs – Sussex Co. Planning & Zoning Department Planner (SIsaacs@sussexcountyde.gov)

Project: Baywood Garden Villas
State Permit Number: WPCC 3069/23
Effective Date: 07/17/2024
Expiration Date: 07/16/2027
Page 1 of 7 Pages

**AUTHORIZATION TO CONSTRUCT UNDER THE**

**LAWS OF THE STATE OF DELAWARE**

**PART I**

1. **In compliance with the provisions of 7 Del. C., §6003,**

**Sussex County Council**
**P.O. Box 589**
**Georgetown, DE 19947**

**and**

**Baywood, LLC**
**34026 Anna's Way, Suite 1**
**Long Neck, DE 19966**

**are authorized, jointly and individually, to construct facilities consisting of the following:**

Approximately one hundred and thirty linear feet (130 LF) of ten (10) inch diameter gravity sewer main, one thousand one hundred and eighty-seven linear feet (1,187 LF) of eight (8) inch diameter gravity sewer main, two thousand five hundred and thirty-two linear feet (2,532 LF) of eight (8) inch diameter gravity sewer main, one thousand one hundred and sixty-seven linear feet (1,167 LF) of six (6) inch diameter sanitary sewer force main, one (1) duplex sanitary sewer pump station and related appurtenances to serve 354 apartment units and a pool amenity building in the Baywood Garden Villas residential development, located at 32147 Long Neck Road, Long Neck, Sussex County, Delaware. The proposed pump station will be owned and operated by Inland Bays Preservation Company LLC. The pump station will be located within the residential development and discharge into the 6-inch force main that connects to an existing Inland Bays Preservation Company sewer system.

**The subject project will be constructed in accordance with plans and specifications as described below and limitations, requirements and other conditions set forth in Parts I, II and III hereof.**

2. The plans, specifications, municipality standards and other documents submitted with the construction permit application consist of the following, which are incorporated by reference and made part of this authorization:

Twelve (12) drawings** prepared by Solutions IPEM, LLC, titled "BAYWOOD GARDEN VILLAS", dated 09-26-23, signed and stamped by James R. Eriksen, P.E. and the current Sussex County Engineering Standards, Specifications and Details.

John Rebar Jr.
John J Rebar Jr., Program Manager II
Commercial and Government Services Section
State of Delaware Department of Natural Resources
and Environmental Control

07/17/2024
Date Signed

**Drawings include:

Sheet 1 – Cover Sheet
Sheet 2 – General Notes
Sheet 26 – Sanitary Sewer Index
Sheet 27 – Sanitary Sewer Plan A
Sheet 28 – Sanitary Sewer Plan B
Sheet 29 – Sanitary Sewer Plan C
Sheet 30 – Sanitary Sewer Profiles 1
Sheet 31 – Sanitary Sewer Profiles 2
Sheet 32 – Sanitary Sewer Details 1
Sheet 33 – Sanitary Sewer Details 2
Sheet 34 – Pump Station Plan
Sheet 35 – Pump Station Details

3. The liquid waste will be discharged through an existing wastewater collection and transmission system to Baywood Wastewater Treatment Facility, which discharges treated wastewater via spray irrigation, in accordance with DNREC State Permit No. 359012-04.

A. Effluent Limitations on Pollutants Attributable to Industrial Users

The use of the constructed facility is conditioned on meeting all applicable pretreatment standards under 40 CFR, Part 403, or toxic pollutant discharge limitations under Section 307(a) of the Clean Water Act of 1977, PL 95-217.

B. Flow and Usage Limitations

This permit authorizes a daily average discharge of N/A gallons*. The flow in the system shall be measured at least every N/A.

The estimated average daily discharge for the subject project is 90,000 GPD, which is based on approximately 354 apartment units and a pool amenity building to interconnect at 250 GPD/EDU.

* This permit authorizes only the construction of the wastewater collection and conveyance facilities referenced herein.

C. Monitoring and Reporting (When Required)

1. Representative sampling of the volume and nature of the monitored discharge shall be conducted at the request of the Division of Water.

2. Reporting

Monitoring results shall be reported to the:
Delaware Department of Natural Resources and Environmental Control
Division of Water, Commercial and Government Services Section
89 Kings Highway
Dover, DE 19901
302-739-9946

3. Definitions

a. “Daily average flow" means the total flow during a calendar month divided by the number of days in the month that the facility was operating.

b. “Daily maximum flow" means the highest total flow during any calendar day.

c. "Daily Peak Flow" means the flow which can be safely transported within the sewage system without causing an overflow or a backup into the building(s) or residence(s).

d. “Bypass” means the intentional diversion of wastes from any portion of a treatment facility.

e. “Measured flow” means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

f. “Estimate” means a value to be based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The date, exact place and time of sampling or measurement;

b. The person(s) who performed the sampling and/or measurement;

c. The date(s) and time(s) analysis was performed;

d. The individual(s) who performed each analysis;

e. The analytical technique(s) or method(s) used;

f. The results of each analysis; and

g. Appropriate quality assurance information.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, all records of instrument calibration and maintenance and all charts from continuous monitoring instruments, shall be retained for three (3) years. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

6. Test Procedures

Test procedures for the analysis of pollutants shall conform to the applicable test procedures identified in 40 CFR, Part 136, unless otherwise specified in this permit.

END OF PART I

**PART II**

A. Management Requirements

1. Duty to Comply

The permittee must comply with the terms and conditions of this permit. Failure to do so constitutes a violation of this permit, which is grounds for enforcement and the imposition of penalties as provided in 7 Del.C., Chapter 60, grounds for permit termination or loss of authorization to discharge or operate pursuant to this permit, grounds for permit revocation and reissuance or permit modification, or denial of a permit renewal application.

2. Notification

a. Changes in Authorized Activities

The permittee shall notify the Department of any proposed change in the activity authorized herein, of any proposed substantive change in the operation of the facility or facilities authorized herein, or of any anticipated facility expansions, production increases, or process modifications. Notification is required only when such alteration, addition or change may justify the inclusion of conditions that are absent or different from those specified in this permit. This includes, for example, the construction of additional wastewater collection, transmission or treatment facilities and changes which will result in new, different, or increased discharges of pollutants. Following such notice, the Department may require the submission of a new permit application and this permit may be reopened and modified to address the proposed changes.

b. Noncompliance

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this permit, the permittee shall provide the Department with the following information, in writing, within five (5) days of becoming aware of such condition:

A description of the discharge and cause of noncompliance; and

The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all collection and treatment facilities and systems (and related appurtenances) installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective management, adequate operator staffing and training and adequate laboratory process controls, including appropriate quality assurance procedures.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the State resulting from noncompliance with this permit, including such accelerated or

additional monitoring as necessary to determine the nature and extent of the noncomplying discharge.

5. Bypassing

Any bypass or intentional diversion of waste streams from the facilities authorized by this permit, or any portion thereof, is prohibited, except (i) where unavoidable to prevent loss of human life, personal injury or severe property damage, or (ii) where excessive storm drainage or run-off would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Department, in writing, of each such diversion or bypass.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the surface water or groundwater.

B. Responsibilities

1. Within 90 days following the completion of construction, the permittee shall submit to the Department an "as-built" set of plans of the facility or facilities constructed, bearing the seal and signature of a licensed Professional Engineer registered in the State of Delaware.

2. Right of Entry

The permittee shall allow the Secretary of the Department of Natural Resources and Environmental Control, or his authorized representative(s), upon the presentation of credentials:

a. To enter upon the permittee's premises for inspection of any records, flow measurements, construction or other activity authorized by this permit or any condition required under the terms of this permit; and

b. At reasonable times, to have access to and to copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and

c. To sample any discharge.

3. Transferability

This permit is transferable with the Department’s consent, provided that an intention to transfer accompanied by a copy of the permit is provided to the Department, signed by both the transferor and the transferee at least ten (10) days prior to the actual transfer.

4. Availability of Reports

All reports submitted with the application and those reports required under the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013. Any person who causes or contributes to the discharge of a pollutant into State waters either in excess of any conditions specified in this permit or in absence of a specific permit condition shall report such an incident to the Department required

under 7 Del. C. §6028.

5. Permit Modification

This permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any term or condition of this permit;

b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts;

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized activity; or

d. Information that the permitted activity poses a threat to human health or welfare, or to the environment.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under 7 Del. C., Chapter 60.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable. If any provision of this permit is held invalid, or if the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

END OF PART II

**PART III**

A. Special Conditions

1. This permit authorizes only the construction of the wastewater facilities and related work referenced herein.

2. If well pointing is required during construction, the wells must be installed by a licensed well driller, and a permit to construct such wells must first be obtained from the Well Permits Branch of the Water Supply Section.

3. All construction shall be in agreement with plans and specifications submitted under this project and approved by the Department of Natural Resources and Environmental Control.

4. All construction shall be in accordance with Ten States Standards and other applicable local utility construction specifications and standards.

5. Connections or additions to the proposed system, other than those proposed on the plans, will not be allowed without prior approval from the Department.

END OF PART III

**PLANNING & ZONING COMMISSION**
ROBERT C. WHEATLEY, CHAIRMAN
HOLLY J. WINGATE, VICE-CHAIRMAN
BRIAN BUTLER
J. BRUCE MEARS
G. SCOTT COLLINS

**Sussex County**
DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

August 30, 2024

Mr. Jim Eriksen, P.E.
Principal of Engineering
Solutions IPEM, LLC
303 North Bedford Street
Georgetown, DE 19947

By email to: jeriksen solutionsipem.com

RE: Staff Review of the Final Site Plan for Baywood Garden Villas (F.K.A. Baywood Gardens) RPC (C/Z 1922) Phase 1 for the establishment of a Residential Planned Community for the establishment of 514 multifamily units housed within 13, four-story buildings to include a clubhouse, indoor pool, outdoor (in-ground pool), pavilion, tot lot, parking and other related improvements to be located on the north side and south side of Long Neck Road (Route 23), approximately 0.47 miles east of the intersection of Long Neck Road and John J. Williams Highway (Route 24)
Tax Parcels: 234-23.00-270.00, 273.01, 273.02, 273.03 & 273.05

Dear Mr. Eriksen,

Further to your submission of July 24th, 2024, Staff have reviewed the submitted Final Site Plan for Baywood Garden Villas (F.K.A. Baywood Gardens) RPC (C/Z 1922) Phase 1 for the establishment of a Residential Planned Community for the establishment of 514 multifamily units housed within 13, four-story buildings to include a clubhouse, indoor pool, outdoor (in-ground pool), pavilion, tot lot, parking and other related improvements s. The properties are located on the north side and south side of Long Neck Road (Route 23), approximately 0.47 miles east of the intersection of Long Neck Road and John J. Williams Highway (Route 24). The parcels are zoned HR-1 RPC (High Density Residential, Residential Planned Community.) The parcels also lie within the Coastal Area per Sussex County's 2018 Comprehensive Plan Update.

Staff note that the Plan being reviewed is Phase 1 of the Residential Planned Community (RPC), which consists of the following: 9, 4-story, proposed apartment buildings, to include Buildings "E" through "M" with proposed Building "E" (1 building) containing 16,975 square feet of gross floor area and 34 units and Buildings "F" through "M" (8 buildings) containing 20,370 square feet and 40 units each for a total of 179,935 square feet of multifamily uses as 354 apartment units, a 3,4446 square foot clubhouse, a 5,506 square foot indoor pool building and a 3,192 square foot in-ground pool, boardwalks and multiple gazebos.

Staff further note that the subject property was the subject of a previous Change of Zone Application (Change of Zone No. 1922). At their meeting of Tuesday, December 14, 2021, the Sussex County Council approved a Change of Zone for the parcel through C/Z 1922 from Neighborhood Business (B-1) District, General Commercial (C-1) District and Commercial Residential (CR-1) District to a High-Density Residential, Residential Planned Community (HR-1 RPC) District and the change was adopted through Ordinance No. 2820.

Staff also note that the subject property (Tax Parcel ID: 234-23.00-270.00) was also the subject of a previous Future Land Use Map (FLUM) Amendment from the Commercial Area to the Coastal Area in order to permit the High-Density Residential, Residential Planned Community District (HR-RPC) Zoning of the property.

Staff have reviewed the submitted Final Site Plan for compliance with the Zoning Code, Subdivision Code, and all Conditions of Approval. Staff have the following comments for your consideration with regard to the Final Site Plan:

<u>Overall Site Plan</u>

1. **Please add a General Note to the Site Data Column on the Cover Sheet which notes the following:**
    a. **The subject property was the subject of a previous Change of Zone Application (Change of Zone No. 1922). At their meeting of Tuesday, December 14, 2021, the Sussex County Council approved a Change of Zone for the parcel through C/Z 1922 from Neighborhood Business (B-1) District, General Commercial (C-1) District and Commercial Residential (CR-1) District to a High-Density Residential, Residential Planned Community (HR-1 RPC) District and the change was adopted through Ordinance No. 2820.**
    b. **The subject property (Tax Parcel ID: 234-23.00-270.00) was also the subject of a previous Future Land Use Map (FLUM) Amendment from the Commercial Area to the Coastal Area in order to permit the High-Density Residential, Residential Planned Community District (HR-RPC) Zoning of the property.**
2. **Staff request a breakdown of Phase 1 only versus the entire RPC for further clarity purposes. For example, there were 514 multifamily apartment units and 13 apartment buildings approved in the RPC as a whole, but this part of the proposal only includes 354 units and 9 apartment buildings. This includes a breakdown of the parking for the entire RPC compared to the Phase 1 area only.**
3. **Please include details regarding any plantings/landscaping/areas of existing mature trees/vegetation to remain on the Plans. For example: Is the existing forested area being retained between this proposal and the existing Baywoods Subdivision located on the northern and eastern sides of the proposal? Or are tree plantings for purposes of screening to be provided in this location (ie: between proposed "Red Bud Way" also in the area on the east side of the parking lot proposed on the northeast side of the property.) If not, Staff recommend retention of trees or plantings in this area for purposes of screening.**

4. **Staff note that two (2) dumpsters have been provided in front of Buildings "E" and "F" along the project frontage with Long Neck Road (Route 23). Staff recommend relocating these elements to an alternative location on the Site. If relocation is not feasible due to existing site constraints, Staff recommend providing appropriate visual screening for all proposed dumpsters to make these areas as inconspicuous as possible and retain the aesthetic appeal of the proposed Residential Planned Community (RPC).**
5. Please remove General Note #11 on Sheet 2 as it states that the property has a Future Land Use Map Designation of Low Density Area, which does not apply to this property.
6. General Note #12 states that Artesian Water Company, inc. and Artesian Wastewater Management are granted a perpetual easement on the property. Does this apply as the project appears to be serviced by Tidewater? Please clarify.
7. Please include a space between the words "Open" and "Space" in the 9th bullet point in the Site Data Column on Sheet No. 2.
8. Please include on the top center of the Cover Sheet that this proposal is for a Residential Planned Community (RPC) and that the project was formerly known as (F.K.A. Baywood Gardens).
9. Please note on the top of the Cover Sheet that this is a Final Site Plan instead of a Record Site Plan.
10. Please note on the Plan Sheets that Long Neck Road is also Route 23.

<u>Compliance w/Conditions of Approval</u>

1. **Please coordinate with the Indian River School District to establish a school bus stop area which shall be shown on the Final Site Plan to comply with Condition "J" of the Conditions of Approval.**
2. **Condition "M" of the Conditions of Approval allows lighted signs to be *"permitted at each of the four entrances to the development"* no more than 32 square feet in size. Please show the location of the signs on the Plans in order to meet the provisions of this Condition.**
3. **Condition "O" of the Conditions of Approval requires the Developer to coordinate with DelDOT on *"safe and clearly marked pedestrian crossings at the intersection of Long Neck Road and School Lane for the two sections of this development."* Please show the location and character of this sage crossing on the Final Site Plan and include a General Note on the Plan that *"No apartments shall be constructed on the south side of Long Neck Road until safe crossing provisions have been provided and addressed at the direction of DelDOT."***
4. Staff note that no more than 514 units have been provided, which complies with Condition "A" of the Conditions of Approval.
5. Staff note that the Plans contain a signature block for the approval of the Sussex County Conservation District for the design and location of all stormwater management areas and erosion and sedimentation facilities, which accords with Condition "I" of the Conditions of Approval.

6. Staff note that a General Note has been added to the Plan Sheets which indicates that all lighting on the site will be downward screened so that it does not shine on neighboring properties or roadways which complies with Condition "L" of the Conditions of Approval.

Chapter 89, Section 6 – Wellhead Protection Areas

1. **Staff note that a portion of the subject property (Parcel 270.00) is located within an established Wellhead Protection Area. There are specific provisions with regard to the types of construction which may be placed within the Wellhead Protection Area (which are very limited in size and scope) in order to minimize the amount of impervious surface cover provided within the Safe Zone area surrounding the existing well. Please note that the provisions outlined in §89-6(A-F) will have to be adhered to, including submittal of approval from the Sussex County Engineering Department in relation to the existing Wellhead Protection Area on the Site.**

Chapter 99, Section 26 – Final Subdivision Plans

1. **Please include on the Plans, a breakdown of Open Space by Open Space Area for further clarity (§99-26(A)(19)).**
2. Please add to the Plans the names of all adjacent Subdivisions for completeness (§99-26(A)(6)).
3. Please show the location of all crosswalks on the Plans (§99-26(A)(10)).
4. Please include the dimensions, bearings and dimensions and area of any land set aside for forested buffer strips (§99-26(A)(16)).
5. Please note that an AutoCAD drawing file containing all items required shall be submitted in electronic format to the Geographic Information Office (GIO). The data shall be referenced in NAD 1983 StatePlane Delaware FIPS 0700 (U.S. Feet) Projected Coordinate System (§99-26(C)).

Chapter 99, Section 27 – Supporting Statements

1. **Please include on the Plans a summary of deed restrictions applicable within the subdivision, including agreements for the operation and maintenance by the property owners or agency in the subdivision of street and road improvements, surface drainage facilities, erosion and sedimentation control facilities, water supply facilities, sanitary sewer facilities, forested buffer strips, all areas approved as Open Space (Open Space (§99-27(A)).**
2. **Please ensure that the Plans contain evidence that all conditions related to the preliminary plat approval have been satisfied (§99-27(B)).**

Chapter 115, Section 118 – Residential Planned Communities – Purpose

1. **Please note that the purpose of Residential Planned Communities is to *"create a superior living environment through unified developments, and to provide for the application of design ingenuity while protecting existing and future developments and achieving the goals of the Comprehensive Plan"* (115-118). Please ensure that the Plans fully demonstrate these elements.**

Chapter 115 – Zoning Ordinance, Section 221 – Final Site Plan

1. **Please include a Landscape Plan that complies with §99-5 and is signed by a Registered Landscape Architect (RLA) (§115-221(B)(1)).**
2. **Please amend the "Net Area" note in the Site Data Column of the Plans to "Net Development Area." As a general reminder, "Net Development Area" shall refer to the total area of land available for development, not necessarily the total area of the property itself and shall not include open space, drainage land, regional roads and land used for other public facilities (§115-221(B)(3)).**
3. **Please include the location and character of construction of all loading spaces on the Plans (§115-221(B)(5)).**
4. **Please clearly include the proposed setback/Building Restriction Lines (BRL) on the Plans (§115-221(B)(6)).**
5. **Please submit a Bulk Grading Plan with the proposal (§115-221(B)(17)).**
6. Please include the Zoning District of all of the surrounding/adjacent Parcels on the Plans (§115-221(B)(2)).
7. Please include further specificity with regard to the type of units to be provided (ie: "Apartment Buildings" instead of "Multifamily Units.") §115-221(B)(4)).
8. Please include the Plans and elevations of the several dwelling types and other buildings, as may be necessary (§115-221(B)(8)).
9. Please include the location, height and material of all fences, walls, screen planting and landscaping (§115-221(B)(9)).
10. Please include the location, character, height and orientation of proposed signs (§115-221(B)(11)).
11. Please clarify whether mail will be centralized or not. If mail is to be retained at a central location, please show the proposed location of any community mail kiosks on the Plans.
12. Please include on the Plans, details pertaining to proposed dumpster enclosures.
13. Staff encourage the use of the following elements within the proposed Final Site Plan where practicable:
    - Provision of a bike rack to encourage multimodal travel within the Residential Planned Community (RPC).
    - Provision of an electric vehicle charging station. The Delaware Department of Natural Resources and Environmental Control provides an Electric Vehicle Charging Equipment Rebate Program for public areas. The rebate amounts are $3,500 for single port and $7,000 for dual port. Please contact DNREC's Division of Climate, Coastal and Energy for further information if interested (302)735-3480.
    - Provision of landscaping islands within parking areas to eliminate the amount of impervious surface cover provided.
    - Provision of further aesthetic improvements such as Complete Streets which foster a shared sense of place and community to include items such as street

pole flags, pavers, walking trails, pocket parks, fountains, further outdoor seating, pavilions, gardens, or communal gathering areas.

Chapter 115, Section 166 – Design Standards

1. **Please note that, when off-street parking areas for 10 or more automobiles are located closer than 50 feet to a lot in a residential district or to any lot upon which there is a dwelling as a permitted use and where such parking areas are not entirely screened visually from such lot by an intervening building or structure, there shall be provided along the lot a continuous visual screen with a minimum height of six feet. Such screen may consist of a compact evergreen hedge or foliage screening or a louvered wall or fence (§115-166(H)). Please ensure that this is incorporated into the Plans.**
2. Please note that off-street parking spaces shall be separated from walkways, sidewalks, streets or alleys by a wall, fence or curbing or other approved protective device or by distance so that vehicles cannot protrude over publicly used areas (§115-166(C)). Please ensure that this consideration is incorporated into the Plans.

Prior to approval of the Final Site Plan, approval letters or letters of no objection from the following agencies shall be submitted to the Sussex County Planning and Zoning Office (All items in which a check mark (✓) appears have been received by the Department. Any items in **bold** have not been received and still require submittal to the Department):

- Sussex Conservation District✓
- Office of State Fire Marshal ✓
- **Delaware Department of Transportation (DelDOT)**
  - **a)** Letter of No Objection (LONO) ✓
  - **b) Entrance Permit**
- **Sussex County Engineering Department**
  - a) Approval for Sewer Provisions and Street Design ✓
  - b) **Approval for the Wellhead Protection Area on the property and any related requirements as outlined by SCED.**
- **Tidewater – Willing and able to serve letter or other similar documentation for provision of water and sewer to the subject property.**
- Sussex County Geographic Information Office (GIO – formerly known as the Sussex County Department of Mapping and Addressing.)
  - a) Approval for proposed Subdivision Name. ✓
  - b) Approval for all proposed street names. ✓
- Office of Drinking Water (Public Health) ✓
- Delaware Department of Natural Resources & Environmental Control (DNREC) – Wastewater Construction Permit✓

- **The local school district regarding bus stop provisions as required under Condition "J" of the Conditions of Approval.**
- **Copies of all draft/proposed HOA/COA documents for the file.**
- **Copies of the proposed Master Plan for the proposal.**

Once all of the above matters have been addressed and all required agency approvals have been submitted, please provide **one (1) full-size copy (24" x 36") folder paper copy** and **one (1) electronic PDF** copy of a Final Site Plan, Landscape Plan, Grading Plans and Master Plan at least **ten (10) days prior** to the Planning and Zoning Commission meeting you wish for your application to be considered at.

If you wish for your Application to be considered by the Planning and Zoning Commission as an "Other Business" item at their meeting scheduled for **Wednesday, September 25th, 2024**, please submit all required materials later than close of business on **Monday, September 16th, 2024.**

Please feel free to contact me with any questions during business hours 8:30 A.M. – 4:30 P.M., Monday through Friday at 302-855-7878.

Sincerely,

Ms. Lauren DeVore, AICP
Planner III

solutions
Integrated Planning
Engineering & Management, LLC

February 20, 2025

Ms. Lauren DeVore
Sussex County Planning and Zoning Commission

**RE: Baywood Garden Villas – RPZ (C/Z 1922)**

Dear Lauren,

Please allow this letter to serve as our response to the Final Site Plan review of the Baywood Garden Villas. Answers to comments have been provided following each comment taken directly from your comment letter for ease of use. Our response are in red for ease of review.

Please note that adjustments were made to the site plan to comply with chapter 89, section 6. The amenity area has also been updated.

Overall Site Plan

1. **Please add a General Note to the Site Data Column on the Cover Sheet which notes the following:**
    a. **The subject property was subject of a previous Change of Zone Application (Change of Zone No. 1922). At their meeting of Tuesday, December 14, 2021, the Sussex County Council approved a Change of Zone for the parcel through C/Z 1922 from Neighborhood Business (B-1) District, General Commercial (C-1) District and Commercial (CR-1) District to a High-Density Residential, Residential Planned Community (HR-1 RPC) District and the change was adopted through Ordinance No. 2820.**
    b. **The subject property (Tax Parcel ID: 234-23.00-270.00) was also the subject of a previous Future Land Use Map (FLUM) Amendment from the Commercial Area to the Coastal Area in order to permit High-Density Residential, Residential Planned Community District (HR-RPC) Zoning of the propery.**

   Notes added to the Site Data Column on sheet 2.
2. **Staff request a breakdown of Phase 1 only versus the entire RPC for further clarity purposes. For example, there were 514 multifamily apartments units and 13 apartment buildings approved in the RPC as a whole, but this part of the proposal only includes 354 units and 9 apartment buildings. This includes a breakdown of the parking for the entire RPC compared to the Phase 1 area only.**

   Parking breakdown and area description added to phase 1 and entire RPC.
3. **Please include details regarding any plantings/landscaping/areas of existing mature trees/vegetation to remain on the Plans. For example: Is the existing forested area being retained between this proposal and the existing Baywoods Subdivision located on the northern**

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E: ideas@solutionsipem.com

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**and eastern sides of the proposal? Or are tree plantings for purposes of screening to be provided in this location (ie: between proposed "Red Bud Way" also in the area on the east side of the parking lot proposed on the northeast side of the property.) If not, Staff recommend retention of trees or plantings in this area for purposes of screening.**
Proposed landscaping added to the plans. Area of 20' buffer where existing trees are to remain has been hatched.

4. **Staff note that two (2) dumpsters have been provided in front of Buildings "E" and "F" along the project frontage with Long neck Road (Route 23). Staff recommend relocating these elements to an alternative location on the Site. If relocation is not feasible due to existing site constraints, Staff recommend providing appropriate visual screening for all proposed dumpsters to make these areas as inconspicuous as possible and retain the aesthetic appeal of the proposed Residential Planned Community (RPC).**
   The developer intends to shield the dumpsters with enclosures and existing trees.
5. **Please remove General Note #11 on Sheet 2 as is states that the property has a Future Land Use Map Designation of Low Density Area, which does not apply to this property.**
   Note removed.
6. **General Note #12 states that Artesian Water Company, inc. and Artesian Wastewater Management are granted a perpetual easement on the property. Does this apply as the project appears to be serviced by Tidewater? Please clarify.**
   Note removed. Long Neck Water Company provides water and Inland Bay Preservation Company provides sanitary sewer service.
7. **Please include a space between the words "Open" and "Space" in the 9th bullet point in the Site Data Column on Sheet No. 2.**
   Space added.
8. **Please include on the top center of the Cover Sheet that this proposal is for a Residential Planned Community (RPC) and that the project was formerly known as (F.K.A. Baywood Gardens).**
   Notation added.
9. **Please note on the top of Cover Sheet That this is a Final Site Plan instead of a Record Site Plan.**
   Notation revised.
10. **Please note on the Plan Sheets that Long Neck Road is also Route 23.**
    Notation added.

<u>Compliance w/ Conditions of approval</u>

1. **Please coordinate with Indian River School District to establish a school bus stop area which shall be shown on the Final Site Plan to Comply with Condition "J" of the Conditions of Approval.**
   School has been notified and bus stop area shown on the Final site plan. Correspondence with school district has been included with this submittal.
2. **Condition "M" of the Conditions of Approval allows lighted signs to be "*permitted at each of the found entrances to the development*" no more than 32 square feet in size. Please show the location of the signs on the Plans in order to meet the provisions of this Condition.**
   Sign and note added to plan.
3. **Condition "O" of the Conditions of Approval requires the Developer to coordinate with DelDOT of "safe and clearly marked pedestrian crossings at the intersection of Long Neck Road and School**

**Lane for the two sections of this development." Please show the location and character of this safe crossing on the Final Site Plan and include a General Note on the Plan that "No apartments shall be constructed on the south side of Long Neck Road until safe crossing provisions have been provided and addressed at the direction of DelDOT.**
Note added to sheet 3 pertaining to condition "O". Coordination, design and approval with DelDOT will be completed prior to any building permits being issue for the Phase 2 portion of this project.

4. **Staff note that no more than 514 units have been provided, which complies with Condition "A" of the Conditions of Approval.**
   Noted
5. **Staff note that the Plans contain a signature block for the approval of Sussex County Conservation District for the design and location of all stormwater management areas and erosion and sedimentation facilities, which accords with Condition "I" of the Conditions of Approval.**
   Noted
6. **Staff note that General Note has been added to the Plan Sheets which indicates that all lighting on the site will be downward screened so that it does not shine on neighboring properties or roadways which complies with Condition "L" of the Conditions of Approval.**
   Noted.

<u>Chapter 89, Section 6 – Wellhead Protection Areas</u>

1. **Staff note that a portion of the subject property (Parcel 270.00) is located within an established Wellhead Protection Area. There are specific provisions with regard to the types of construction which may be placed within the Wellhead Protection Area (which are very limited in size and scope) in order to minimize the amount of impervious surface cover provided within the Safe Zone area surrounding the existing well. Please note that the provisions outlined in §89-6 (A-F) will have to be adhered to, including submittal of approval from the Sussex County Engineering Department in relation to the existing Wellhead Protection Area on the Site.**
   Area within the well head protection area has been revised to comply with the code. Stormwater pond 2, Buildings H &I and associated parking and drive isles have been reconfigured with this submittal.

<u>Chapter 99, Section 26 – Final Subdivision Plans</u>

1. **Please include on the Plans, a breakdown of Open Space by Open Space Area for further clarity (§99-26(A)(19)).**
   Areas tables update on sheet 2.
2. **Please add to the Plans the names of all adjacent Subdivisions for completeness (§99-26(A)(6)).**
   Adjacent subdivision names added to plan.
3. **Please show the location of all crosswalks on the Plans (§99-26(A)(10)).**
   Crosswalks added to plan as applicable.
4. **Please include the dimensions, bearings and dimensions and area of any land set aside for forested buffer strips (§99-26(A)(16)).**
   Forested buffer area labeled with dimensions, bearings and distances and area.

5. **Please note than an AutoCAD drawing file containing all items required shall be submitted in electronic format to the Geographic Information Office (GIO). The data shall be referenced to NAD 1983 State Plane Delaware FIPS 0700 (U.S. Feet) Projected Coordinate System (§99-26(C)).**
   Noted.

Chapter 99-27 – Supporting Statements

1. **Please include on the Plans a summary of deed restrictions applicable within the subdivision, including agreements for the operation and maintenance by the property owners or agency in the subdivision of street and road improvements, surface drainage facilities, erosion and sedimentation control facilities, water supply facilities, sanitary sewer facilities, forested buffer strips, all areas approved as Open Space (Open Space (§99-27(B)).**
   Notes on Cover Sheet specify that the owner shall maintain above items in perpetuity.
2. **Please ensure that the Plans contain evidence that all conditions related to the preliminary plat approval have been satisfied (§99-27(B)).**
   Plans reflect all conditions related to the preliminary approval.

Chapter 115, Section 118 – Residential Planned Communities – Purpose

1. **Please note that the purpose of Residential Planned Communities is to "*create a superior living environment through unified developments, and to provide for the application of design ingenuity while protecting existing and future developments and achieving the goals of the Comprehensive Plan*" (115-118). Please ensure that the Plans fully demonstrate these elements.**
   Plans demonstrate required elements of design and have already received preliminary approval.

Chapter 115 – Zoning Ordinance, Section 221 – Final Site Plan

1. **Please include a Landscape Plan that complies with §99-5 and is signed by a Registered Landscape Architect (RLA) (§115-221(B)(1)).**
   Landscaping added to plan.
2. **Please amend the "Net Area" note in the Site Data Column of the Plans to "Net Development Area." As a general reminder, "Net Development Area" shall refer to the total area of land available for development, not necessarily the total area of the property itself and shall not include open space, drainage Land, regional roads and land used for other public facilities (§115-221(B)(3)).**
   Net development area added to site data column on the cover.
3. **Please include the location and character of construction of all loading spaces on the Plans (§115-221(B)(5)).**
   Loading spaces added to plan.
4. **Please clearly include the proposed setback/Building Restriction Lines (BRL) on the Plans (§115-221(B)(6)).**
   Setback lines and labels added to plan.
5. **Please submit a Bulk Grading Plan with the proposal (§115-221(B)(17)).**

Bulk Grading plan added to plan set.

6. **Please include the Zoning District of all of the surrounding/adjacent Parcels on the Plans (§115-221(B)(2)).**
   Zoning shown surrounding/adjacent parcels.
7. **Please include further specificity with regard to the type of units to be provided (ie: "Apartment Buildings" instead of "Multifamily Units.") §115-221(B)(4)).**
   Sheet 2, Site Data, Proposed Use revised to "Apartment Units"
8. **Please include the Plans and elevations of the several dwelling types and other buildings, as may be necessary (§115-221(B)(8)).**
   Plans and elevations of buildings are not necessary for this project's approval.
9. **Please include the location, height and material of all fences, walls, screen planting and landscaping (§115-221(B)(9)).**
   Landscaping added to plans. Fence height and material at club house called out on plan.
10. **Please include the location, character, height and orientation of proposed signs (§115-221(B)(11)).**
    Sign locations and character note added to plan.
11. **Please clarify whether mail will be centralized or not. If mail is to be retained at a central location, please show the proposed location of any community mail kiosks on the Plans.**
    Mail boxes will be centralized. Location label added to plans.
12. **Please include on the Plans, details pertaining to proposed dumpster enclosures.**
    Dumpster enclosure detail added to plans.
13. **Staff encourage the use of the following elements within the proposed Final Site Plan where practicable:**
    - **Provisions of a bike rack to encourage multimodal travel within the Residential Planned Community (RPC).**
    - **Provisions of an electric vehicle charging station. The Delaware Department of Natural Resources and Environmental Control provides an Electric Vehicle Charging Equipment Rebate Program for public areas. The rebate amounts are $3,500 for single port and $7,000 for dual port. Please Contact DNREC's Division of Climate, Coastal and Energy for further information if interested (302)735-3480.**
    - **Provisions of landscape islands within parking areas to eliminate the amount of impervious surface cover provided.**
    - **Provisions of further aesthetic improvements such as Complete Streets which foster sense of place and community to include items such as street pole flags, pavers, walking trails, pocket parks, fountains, further outdoor seating, pavilions, gardens, or communal gathering areas.**

    Noted

<u>Chapter 115, Section 166 – Design Standards</u>

1. **Please note that, when off-street parking areas for 10 or more automobiles are located closer than 50 feet to a lot in a residential district or to any lot upon which there is a dwelling as permitted use by and where such parking areas are not entirely screened visually from such lot a continuous visual screen with a minimum height of six feet. Such screen may consist of compact**

**evergreen hedge or foliage screening or a louvered wall of fence (§115-166(H)). Please ensure that this is incorporated into the plans.**
Existing trees are remaining in buffer area as feasible. Additional fencing and landscaping added to plans for screening.

2. **Please note that off-street parking spaces shall be separated from walkways, sidewalks streets or alleys by a wall, fence or curbing or other approved protective device or by distance so that vehicles cannot protrude over publicly used areas (§115-166(C)). Please ensure that this consideration is incorporated into the plans.**
All parking spaces are separated from sidewalks/walkways by curbing.

Thanks,

Jim Eriksen
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## PURPOSE OF PLAN:

THE PURPOSE OF THIS PLAN IS TO CONSTRUCT A 24,000 SF FACILITY FOR RECREATIONAL USE.

## GENERAL DATA:

1. PROPERTY OWNER/SITE ADDRESS
   YASIN & LAYLA, LLC
   31507 OAK ORCHARD ROAD
   MILLSBORO, DELAWARE 19966
   E-MAIL ADDRESS: YILMAZDAWN@HOTMAIL.COM

   MAILING ADDRESS
   31507 OAK ORCHARD ROAD
   MILLSBORO, DELAWARE 19966

2. VERTICAL DATUM:
   BENCHMARK:

3. SOURCE OF TITLE: DR 3790-12 & DR 3986-224

4. TAX PARCEL NO.: 234-29.00-263.12

5. PROPERTY ADDRESS: 31507 OAK ORCHARD ROAD, MILLSBORO, DELAWARE 19966

6. LOTS:
   EXISTING: 1
   PROPOSED: 0 NEW

7. ZONING: SUSSEX COUNTY
   ZONED: C-2

8.
   MINIMUM LOT AREA: 10,000 SF (½ ACRES IF UNSEWERED)
   MINIMUM LOT WIDTH: 75' (100 FT NUMBERED ROAD)
   MAXIMUM BUILDING HEIGHT: 42' (12 STORIES)
   FRONT YARD SETBACK: 60'
   SIDE YARD SETBACK: 5'
   REAR YARD SETBACK: 5' / 30' WHEN ADJACENT TO RESIDENTIAL PROPERTY
   PAVING SETBACKS: NONE

9. GROSS LOT AREA: 4.7436 ± ACRES (206,629 ± SF)

10. TRACT BREAKDOWN:
    EXISTING:

| COVERAGE | USE | ACREAGE |
|---|---|---|
| OPEN SPACE | GRASS | 2.1336 |
| BUILDINGS | SHOPPING CENTER | 0.56 |
| OTHER IMPERVIOUS | WALKWAYS/PAVING | 2.05 |

    PROPOSED:

| COVERAGE | USE | ACREAGE |
|---|---|---|
| OPEN SPACE | GRASS | 0.4236 |
| BUILDINGS | SHOPPING CENTER/ SOCCER FIELD | 1.12 |
| OTHER IMPERVIOUS | WALKWAYS/PAVING | 3.2 |

11. PARKING RATIONAL:
    EXISTING PARKING SPACES: 141 PS
    REQUIRED PARKING SPACES:
    SHOPPING CENTER: 5 PER 1,000 SF: 5 * (23,682/1,000) = 118.41 ≈ 119 PS
    INDOOR COMMERCIAL RECREATION: 1 PER 150 SF: 1 * (23,760/150) = 159 PS
    TOTAL REQUIRED: 278 PS
    PROPOSED PARKING SPACES: 285 PS

12. DEBRIS DISPOSAL: NO DEBRIS WILL BE BURIED ON THIS SITE

13. FLOOD ZONE: THE PROPERTY IS LOCATED IN A FLOOD ZONE "X" PER FIRM MAP NO. 10005C0477K, PANEL NO. 477 OF 660, DATED MARCH 16, 2015 AND DOES NOT LIE WITHIN THE 100 YEAR FLOODPLAIN.

14. THE ENTRANCE OF THIS SITE SHALL CONFORM TO THE STATE OF DELAWARE, DEPARTMENT OF TRANSPORTATION AND WILL BE SUBJECT TO ITS APPROVAL

15. THE LOCATIONS OF UNDERGROUND AND OVERHEAD UTILITY AND THEIR ASSOCIATED EASEMENTS TO BE VERIFIED BY THE CONTRACTORS. MISS UTILITY TO BE CONTACTED PRIOR TO THE COMMENCEMENT OF ANY WORK. UNDERGROUND UTILITIES EXIST WITHIN PROPOSED SITE LOD. FIELD VERIFICATION AND LOCATION SHALL BE PERFORMED AT TIME OF CONSTRUCTION BY CONTRACTOR.

16. SOURCE OF THE TOPOGRAPHY:

17. NO WETLANDS EXISTS ON THIS SITE PER STATE AND FEDERAL WETLAND INVENTORY MAPS

18. WATER SUPPLIER: TIDEWATER UTILITIES, INC.

19. DRAINAGE, EROSION & SEDIMENT CONTROL, AND STORMWATER MANANGEMENT SHALL BE PROVIDED IN ACCORDANCE WITH THE DELAWARE SEDIMENT AND STROMWATER REGULATIONS (LAST REVISED, FEBRUARY 2019).

20. OWNER TO OBTAIN APPROVAL FROM CIVIC ASSOCIATION ARCHITECTURAL COMMITTEE DEVELOPER, AND COMPLY WITH DEED RESTRICTIONS WHERE REQUIRED.

21. PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT

22. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT IS THE CONTRACTORS' RESPONSIBILITY TO CONTACT MISS UTILITY AT 1-800-282-8555 AND OBTAIN THE BEST, MOST CURRENT, UTILITY LOCATIONS HORIZONTAL AND VERTICAL, PRIOR TO CLEARING OR EXCAVATING AND TO CONFORM TO APPLICABLE LAWS REGARDING UTILITIES.

23. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.

24. PROPOSED BUILDING CONSTRUCTION: Vb

25. MAXIMUM BUILDING HEIGHT: 30 FEET

26. NEAREST EXISTING FIRE HYDRANT LOCATED AT OAK ORCHARD ENTRANCE TO SITE

27. THIS STRUCTURE WILL BE PROTECTED BY AUTOMATIC SPRINKLERS IN ACCORDANCE WITH NFPA 13.

28. RPZs (1013 A.S.S.E.) WILL BE LOCATED INSIDE THE MECHANICAL ROOM WITH AND OUTSIDE ACCESS DOOR.

29. SITE LOCATION IN DECIMAL DEGREES: LAT=38.6151 LON=75.2008

30. FUTURE LAND USE MAP DESIGNATION: COMMERCIAL

31. NET DEVELOPMENT AREA: 1.73 AC

32. ALL PROPOSED SIGNAGE REQUIRES A SEPARATE PERMIT FROM SUSSEX COUNTY

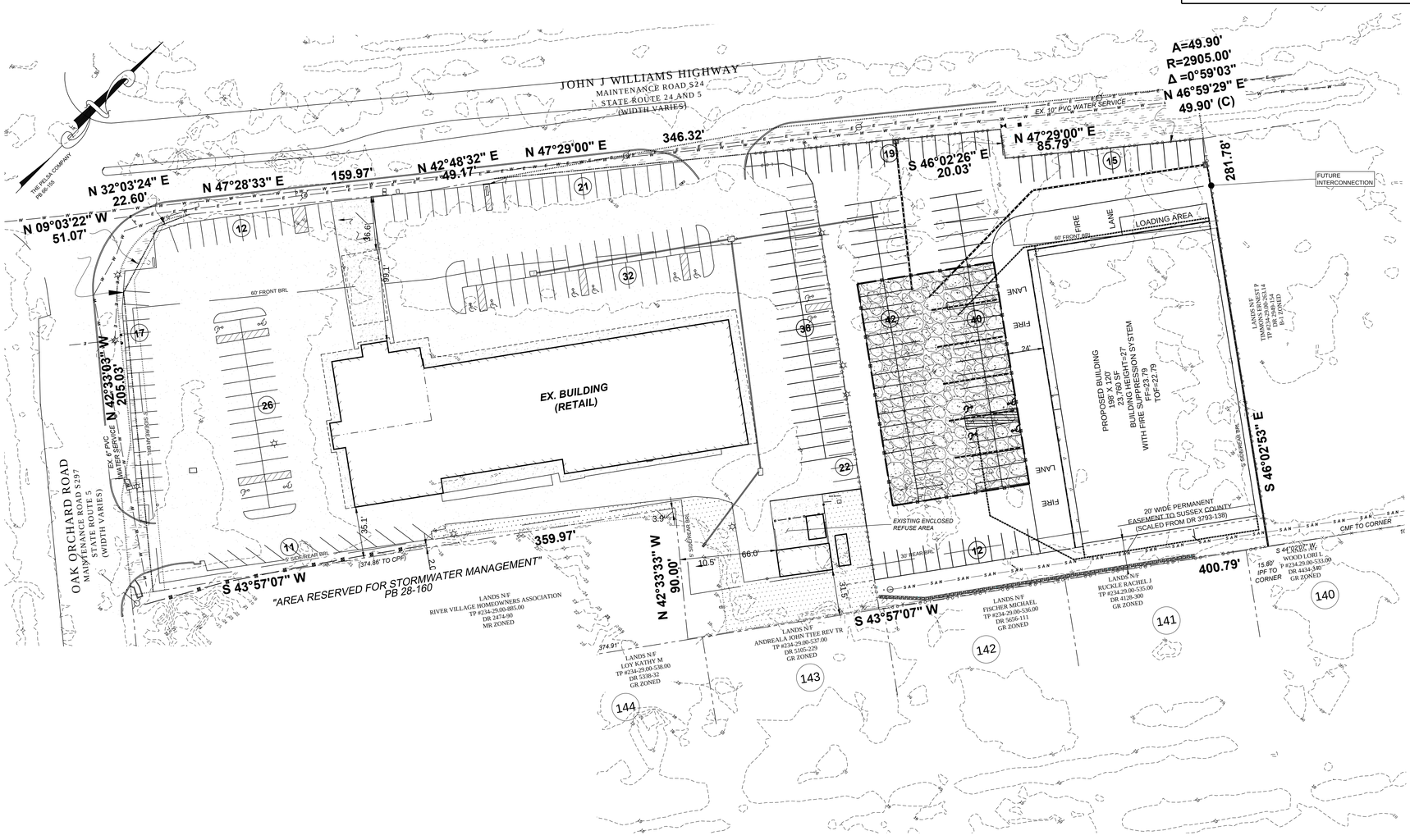
33. VARIANCE NO. 13037, REGARDING THE REAR YARD SETBACK, WAS APPROVED BY THE BOARD OF ADJUSTMENT ON MARCH 10, 2025

## LEGEND

| | |
|---|---|
| SAN SAN | EXISTING SANITARY SEWER |
| (SAN) (SAN) | PROPOSED SANITARY SEWER |
| (W) (W) | PROPOSED WATER SERVICE |
| W W | EXISTING WATER SERVICE |
| | EXISTING PROPERTY LINE |
| | PROPOSED BUILDING RESTRICTION LINE |
| SF SF | SILT FENCE |
| SS SS | ORANGE SAFETY FENCE |
| | EXISTING CONTOUR |
| | PROPOSED CONTOUR |
| × × | EXISTING FENCE |
| E | EXISTING ELECTRICAL TRANSFORMER |
| | EXISTING ASPHALT |
| | EXISTING CONCRETE |

ADC MAP: 22 GRID: J-12 SCALE 1" = 800'

VICINITY MAP




CERTIFICATION OF OWNERSHIP:

I, YASIN AND LAYLA LLC, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THE CONTENTS OF THIS PLAN, PROPOSED BY THIS PLAN AS MADE IN MY DIRECTION, I AUTHORIZE THIS PLAN TO BE RECORDED IN ACCORDANCE WITH THE REGULATIONS OF THE SUSSEX COUNTY CODE.

YASIN AND LAYLA LLC, MANAGING MEMBER — DATE: 3/11/2025

CERTIFICATION OF ACCURACY:

I, MICHAEL R. PARASKEWICH JR., CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE. THE INFORMATION ON THIS PLAN REGARDING THE BOUNDARY & TOPOGRAPHY IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED SURVEYING STANDARDS AND PRACTICES AND BY THE SUSSEX COUNTY CODE.

No. 17056

MICHAEL R. PARASKEWICH , JR. PHD. PE — DATE:

GRAPHIC SCALE

0 40' 80' 120'

( IN FEET )

1 inch = 40 ft.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 3/11/2025 | REVISED PER 3/11/25 COMMENTS | JAP |

OWNER/ADDRESS:
YASIN & LAYLA, LLC
31507 OAK ORCHARD ROAD
MILLSBORO, DELAWARE 19966

THE PELSA COMPANY
ENGINEERING, SURVEYING, ENVIRONMENTAL SCIENCES
610 PEOPLES PLAZA, NEWARK, DE 19702
PHONE: (302)834-3771 FAX: (302)834-228
EMAIL: PELSAOFFICE@THEPELSACOMPANY.COM

# SITE PLAN

PREPARED FOR
YASIN & LAYLA, LLC
31507 OAK ORCHARD ROAD
INDIAN RIVER HUNDRED
SUSSEX COUNTY - STATE OF DELAWARE

SURVEY BY: PELSA
DRAWN BY: DKW
CHECKED BY: MRP
SCALE: 1:40
DATE: 7/3/2019
SHEET NO. 1 OF 1
DRAWING NO. P-3486

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

March 11, 2024

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning Commission
Sussex County Administration Building
P.O. Box 417
Georgetown, Delaware 19947

**SUBJECT: Letter of No Contention Approval**
31507 Oak Orchard Road
Tax Parcel # 234-29.00-263.12
SCR00024-JOHN J WILLIAMS HIGHWAY
Indian River Hundred, Sussex

Dear Mr. Whitehouse:

The Delaware Department of Transportation (DelDOT) has reviewed a request, dated December 21, 2023, to obtain a Letter of No Contention (LONC) to use an existing commercial building and site entrance for the above referenced project, and has approved the request. This approval shall be valid for a period of **one (1) year**.

This determination is based on the project information as provided in the completed Permit Application, and verification of the requirements on the LONC approval checklist.

The following conditions are provided with this approval:

1) Site shall have access from the existing entrance located on John J Willians Highway (SCR 00024).
2) No entrance modifications or traffic pattern changes are proposed or authorized under this LONC approval.
3) DelDOT reserves the right to review, modify or revoke this LONC approval in the future if proposed activities create traffic conflicts, safety concerns or operational issues.
4) The property owner is responsible to:
   a. Submit information to DelDOT, regarding any future operational or site changes, (including but not limited to: rezoning, site layout changes, changes in use, entrance modifications, expanded/additional uses, new uses, etc.). Changes of this nature may alter the flow and/or volume of traffic and could require a new LONC or formal review for Approvals and/or Permits.

b. Establish and maintain clear sight lines at the entrance. There shall be no placement of structures, signs, objects, items for sale or parking of vehicles within State right-of-way or entrance limits. Shrubbery, Plantings, trees and/or other visual barriers that could obstruct the sight distance of a driver preparing to enter the roadway are prohibited.

5) The property owner and applicant are responsible to coordinate with DelDOT Outdoor Advertising & Roadside Control at (302) 853-1327, for information on obtaining specific permits for sign installation on private property. Permits for Utilities construction within State right-of-way require separate permit applications please contact DelDOT's South District at (302) 853-1345.

If the Department can be of any further assistance, please call me at (302) 760-2266.

Sincerely,

John Pietrobono
Sussex County Review Coordinator,
Development Coordination

cc: Mahmut Yilmaz
Michael Paraskewich, P.E.L.S.A. Company, Inc.
Sussex County Planning & Zoning
Matt Schlitter, South District Public Works Engineer
James Argo, South District Project Reviewer
Les Mannering, South District Subdivision Manager
Wendy L. Polasko, P.E., Subdivision Engineer
Thomas Gagnon, Sussex County Reviewer

December 16, 2024

Michael Paraskewich
The PELSA Company
pelsaoffice@thepelsacompany.com

**RE: Game on Sports Complex**
**Final Approval**

Dear Michael Paraskewich:

A Sediment and Stormwater Management Plan has been reviewed for compliance with the Sediment and Stormwater Regulations and is approved with conditions (see attached). Enclosed herein please find a copy of the approved application form and approved plan sets. Please retain a copy for your use, and provide the contractor with a copy to be retained onsite at all times. Failure to keep an approved plan onsite is a violation of the approved plan.

Approval of a Sediment and Stormwater Plan does not grant or imply a right to discharge stormwater runoff. The owner/developer is responsible for acquiring any and all agreements, easements, etc., necessary to comply with State drainage and other applicable laws.

This plan approval pertains to compliance with the Delaware Sediment and Stormwater Regulations. Please understand that the approval of this plan does not relieve you from complying with any and all federal, state, county, or municipal laws and regulations.

As of January 1, 2014, the Sussex Conservation District began collecting financial guarantees to ensure the construction of stormwater management practices is accomplished in accordance with the approved sediment and stormwater plan. Please refer to the SCD Policy on Bonds located on our website at Sussexconservation.org. If you have any questions concerning the aforementioned, please do not hesitate to call 302 856-7219.

Sincerely,

Jessica Watson

Jessica Watson
Program Manager

# CONDITIONS OF APPROVAL

**NOTIFICATION**

1. This approved plan will remain valid for 5 years from the date of this approval. If construction does not begin within five years, the approved plan will be considered to have expired and must be resubmitted to the District for a new review. In addition, if work is not completed within the five-year timeframe, the District must be contacted and a request for an extension submitted. Depending on regulation changes, a new plan may need to be submitted to ensure that all stormwater management facilities are constructed to the most recent standards.

2. Submittal of the Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activities together with this approval of the detailed Sediment and Stormwater Plan provide this project with Federal permit coverage to be authorized to discharge stormwater associated with construction activities. It is the owner's responsibility to ensure that permit coverage remains valid throughout construction by submitting the NOI fee annually as requested. The developer is responsible for weekly self-inspection reporting to be retained onsite.

3. Notify the Sussex Conservation District Sediment and Stormwater Management Section of your intent to begin construction in writing five (5) days prior to commencing. Failure to do so constitutes a violation of the approved plan.

**CHANGES**

1. This project is to be undertaken in accordance with the plans submitted and as approved. If changes are necessary at any time during the completion of the project, submit revised plans, prior to further construction, to the Sussex Conservation District Sediment and Stormwater Program for review and approval of the revision.

2. Should ownership change during the construction period, a revised plan must be submitted for approval showing the new owner's signature on the owner's certification. In addition, a Transfer of Authorization form must be submitted to DNREC to transfer Federal permit coverage to the new owner.

**CONSTRUCTION AND CLOSEOUT**

1. A pre-construction meeting must take place before any land disturbing activity begins. The meeting may take place on site and be attended by the owner, contractor, design consultant, Certified Construction Reviewer, and Sussex Conservation District Sediment and Stormwater Program Construction Reviewer. The owner or the owner's designee shall contact the Sussex Conservation Construction Reviewer to schedule the pre-construction meeting.

2. Keep available onsite, during all phases of construction, a copy of the approved Sediment and Stormwater Management Plan.

3. Keep available onsite, during all phases of constriction, copies of the Developers weekly self-inspection reports and/or the CCR Reports.

4. Any sediment transported off-site to roads or road rights-of-way including ditches shall be removed. Any damage to ditches shall be repaired and stabilized to original condition.

5. Grading shall not impair surface drainage, create an erosion hazard, or create a source of sediment to any

adjacent watercourse or property owner.

6. Failure to implement the permanent stormwater management practices as mentioned herein constitutes a violation of the conditions of this plan approval; it may result in the suspension or revocation of building permits or grading permits issued by the local jurisdiction, and it may result in legal action by the DNREC to bring the site into compliance with the approved Sediment and Stormwater Management Plan and the Delaware Sediment and Stormwater Regulations.

7. The permanent stormwater management facility or facilities must be constructed and accepted by the Sussex Conservation District Sediment and Stormwater Program prior to final closeout of the project site. Post-construction verification documentation of the stormwater management facility or facilities must be completed as soon as construction of the facility or facilities is complete so that any necessary modifications may be made during the construction period.

# OFFICE OF THE STATE FIRE MARSHAL
## Technical Services

22705 Park Avenue
Georgetown, DE 19947

## SFMO PERMIT – SHALL BE POSTED ON JOBSITE UNTIL FINAL INSPECTION

**Plan Review Number:** 2024-04-216059-MJS-02
**Status:** Approved as Submitted

**Tax Parcel Number:** 234-29.00-263.12
**Date:** 03/28/2024

### Project

American Legion Post 28 - 31507 Oak Orchard Road
31507 Oak Orchard Road - Trading Post Plaza building
Trading Post Plaza Property - 31507 Oak Orchard Road

31507 Oak Orchard Road
Millsboro DE 19966

### Scope of Project

**Number of Stories:**
**Square Footage:**
**Construction Class:**
**Fire District:** 80 - Indian River Volunteer Fire Co., Inc.

**Occupant Load Inside:**
**Occupancy Code:** 9641

### Applicant

Michael Paraskewich, Jr.
610 Peoples Plaza
Newark, DE 19702

This office has reviewed the plans and specifications of the above described project for compliance with the Delaware State Fire Prevention Regulations, in effect as of the date of this review.

A Review Status of "Approved as Submitted" or "Not Approved as Submitted" must comply with the provisions of the attached Plan Review Comments.

Any Conditional Approval does not relieve the Applicant, Owner, Engineer, Contractor, nor their representatives from their responsibility to comply with the plan review comments and the applicable provisions of the Delaware State Fire Prevention Regulations in the construction, installation and/or completion of the project as reviewed by this Agency.

A final inspection is required.

This Plan Review Project was prepared by:

John Colpo
Fire Protection Specialist

# FIRE PROTECTION PLAN REVIEW COMMENTS

**Plan Review Number:** 2024-04-216059-MJS-02
**Tax Parcel Number:** 234-29.00-263.12
**Status:** Approved as Submitted
**Date:** 03/28/2024

## PROJECT COMMENTS

| | |
|---|---|
| **1002 A** | **This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) ADOPTED September 1, 2021. The Delaware State Fire Prevention Regulations are available on our website at www.statefiremarshal.delaware.gov.These plans were not reviewed for compliance with the Americans with Disabilities Act (ADA). These plans were not reviewed for compliance with any Local, Municipal, nor County Building Codes. The Office of the State Fire Marshal recommends theinstallation of fire sprinkler systems in all residential occupancies, including one- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here:https://statefiremarshal.delaware.gov /wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf** |
| **1040 A** | **This site meets Water Flow Table 2, therefore the following water for fire protection requirements apply: Main Sizes: 6" minimum. Minimum Capacity: 1,000 gpm @ 20 psi residual for 1 hour duration. Hydrant Spacing: 800' on center.** |
| **1180 A** | **This report reflects site review only. It is the responsibility of the applicant and owner to forward copies of this review to any other agency as required by those agencies.** |
| **1190 A** | **Separate plan submittal is required for the building(s) proposed for this project.** |
| **2500 A** | **A final inspection is required for this project prior to occupancy (DSFPR Part I, Section 4-7). Contact this Agency to schedule this inspection. Please have the plan review number available. A MINIMUM OF FIVE (5) WORKING DAYS NOTICE IS REQUIRED.** |
| **2710 A** | **The following items will be field verified by this Agency at the time of final inspection:** |
| **1299 A** | **The required Fire Lane Access and Perimeter Access and all fire lane markings shall be in accordance with the site plan as approved by this Agency. This will be field verified at the final inspection. Noncompliance may cause a delay in** |

| | |
|---|---|
| | **approval forCertificate of Occupancy.** |
| **1501 A** | **If there are any questions about the above referenced comments please feel free to contact the Fire Protection Specialist who reviewed this project. Please have the plan review number available when calling about a specific project. When changes orrevisions to the plans occur, plans are required to be submitted, reviewed, and approved.** |

AXIOM ENGINEERING L.L.C.

Axiom Engineering, LLC
18 Chestnut Street
Georgetown, DE 19947

Phone: 302-855-0810
E-mail: axiom@axeng.com
Web: www.axeng.com

**February 10, 2025**

RECEIVED
FEB 10 2025
SUSSEX COUNTY
PLANNING & ZONING

Sussex County Planning and Zoning
2 The Circle, PO Box 417
Georgetown, DE 19947

Attn: Christin Scott - Planner II - christin.scott@sussexcountyde.gov

RE: Amendment to Conditional Use 2290 - Kingstowne Flex Park - Prettyman Road
(formerly known as the Toback Flex Park)

Dear Mrs. Scott:

On May 10, 2022, Sussex County Council Approved Conditional Use 2290 for the Toback Flex Park. On January 3, 2024, the Sussex County Planning and Zoning Commission granted preliminary approval (Exhibit 1) to a site plan for Conditional Use 2290 - Toback Flex Park (Exhibit 2). On April 2, 2024, Michael Makowski filed an application to amend Conditional Use 2290 (Exhibit 3).

The nature of the amendments to 2290 were detailed in my April 2, 2024 letter. That letter and all exhibits attached to it are available for download here:

https://www.dropbox.com/scl/fo/c4soq65qtolw19mf16gwg/h?rlkey=n6gp4bjxm8ak1n7x8dilrqt61&dl=0

On May 28, 2024, you acknowledged that the application was complete and was being prepared for introduction to County Council (Exhibit 10). Conditional Use 2290 is set to expire May 10, 2025. Please accept this letter as a formal request to grant a 1-year extension to the approval of CU 2290, and a request to expedite the review of last years request to amend Condition A of CU 2290. Submitted April 2, 2024. Since filing the amendment request, the applicant has submitted plans and received review comments from the following agencies:

- Delaware Department of Transportation
- Delaware State Fire Marshal's Office
- Sussex Conservation District
- Artesian Water & Artesian Wastewater Management

The exhibits highlighted below have been added to the DROPBOX, all other Exhibits are identical to those submitted last year.

Please notify me if any additional information is needed to review this extension and expedited review requests, including:

- review letters from regulatory agencies
- hard copies of construction plans or the above correspondence
- applications
- fees

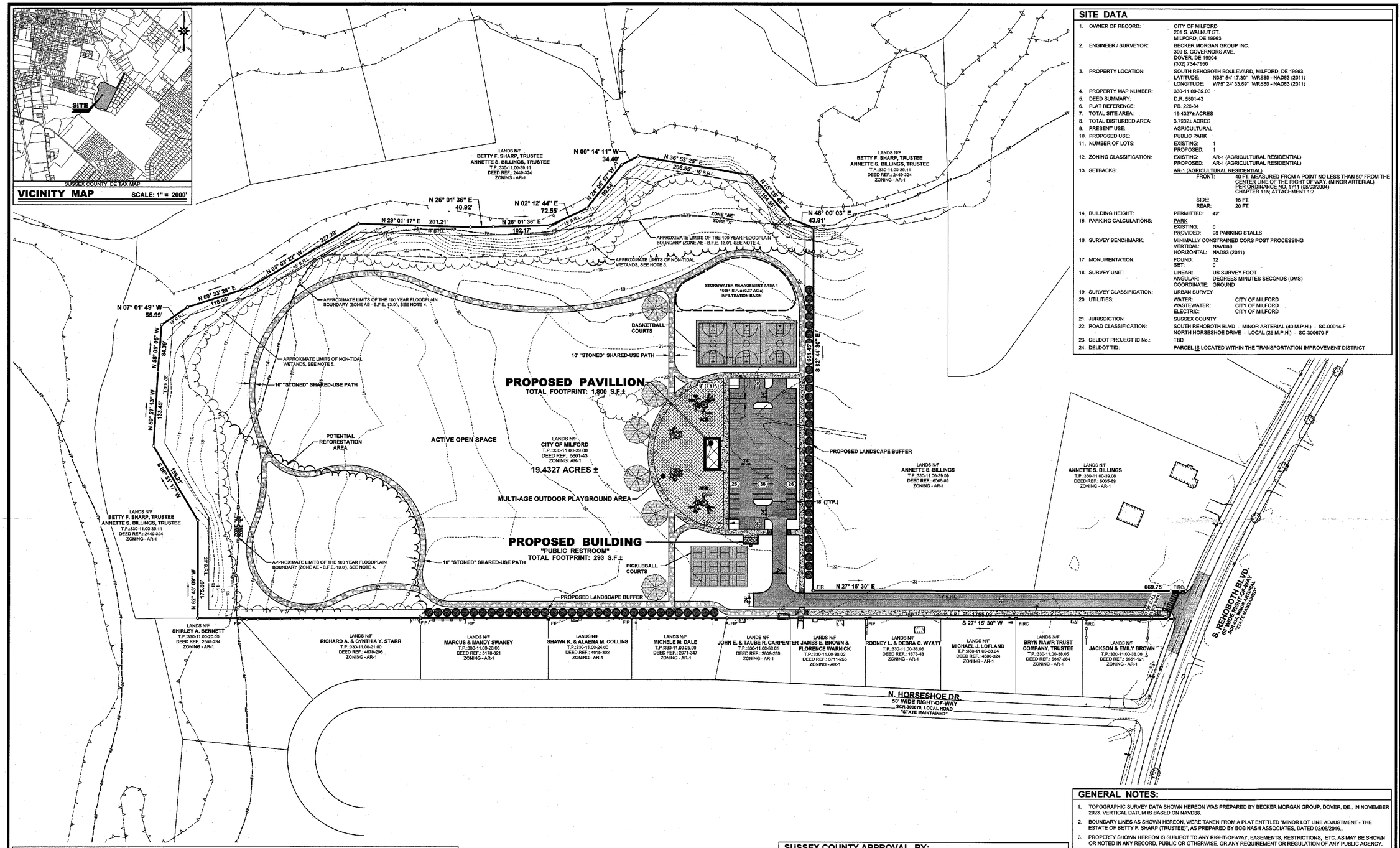
Sincerely,

Kenneth R. Christenbury, P.E.
President, Axiom Engineering, LLC

Exhibits:

0. 4/2/2024 Cover Letter for CU 2290 Amendment
1. 1/3/2024 Planning and Zoning Commission Meeting Minutes
2. 12/7/2023 Approved Preliminary Site Plan - C/U 2290
3. Conditional Use Application to amend C/U 2290
4. 8/4/2023 DelDOT Letter of No Objection to Recordation -Toback Flex Park
5. 8/3/2023 Record Plan prepared by Scaled Engineering.
6. ITE Land Use: 770 - Business Park
7. 3/28/2024 DelDOT SLER
8. 4/2/2024 Amended Preliminary Site Plan
9. Condition A edits tracked
10. 5/28/2024 E-mail from P & Z RE- CU Amendment application complete
11. 1/17/2025 revised site construction plan set

AXIOM ENGINEERING LLC
EXCELLENCE IN ENGINEERING




## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | CITY OF MILFORD<br>201 S. WALNUT ST.<br>MILFORD, DE 19963 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 S. GOVERNORS AVE.<br>DOVER, DE 19904<br>(302) 734-7950 |
| 3. | PROPERTY LOCATION: | SOUTH REHOBOTH BOULEVARD, MILFORD, DE 19963<br>LATITUDE: N38° 54' 17.30" WRS80 - NAD83 (2011)<br>LONGITUDE: W75° 24' 33.59" WRS80 - NAD83 (2011) |
| 4. | PROPERTY MAP NUMBER: | 330-11.00-39.00 |
| 5. | DEED SUMMARY: | D.R. 5601-43 |
| 6. | PLAT REFERENCE: | PB. 226-84 |
| 7. | TOTAL SITE AREA: | 19.4327± ACRES |
| 8. | TOTAL DISTURBED AREA: | 3.7932± ACRES |
| 9. | PRESENT USE: | AGRICULTURAL |
| 10. | PROPOSED USE: | PUBLIC PARK |
| 11. | NUMBER OF LOTS: | EXISTING: 1<br>PROPOSED: 1 |
| 12. | ZONING CLASSIFICATION: | EXISTING: AR-1 (AGRICULTURAL RESIDENTIAL)<br>PROPOSED: AR-1 (AGRICULTURAL RESIDENTIAL) |
| 13. | SETBACKS: | AR-1 (AGRICULTURAL RESIDENTIAL)<br>FRONT: 40 FT. MEASURED FROM A POINT NO LESS THAN 50' FROM THE CENTER LINE OF THE RIGHT OF WAY. (MINOR ARTERIAL) PER ORDINANCE NO. 1711 (08/03/2004) CHAPTER 115; ATTACHMENT 1:2<br>SIDE: 15 FT.<br>REAR: 20 FT. |
| 14. | BUILDING HEIGHT: | PERMITTED: 42' |
| 15. | PARKING CALCULATIONS: | PARK<br>EXISTING: 0<br>PROVIDED: 98 PARKING STALLS |
| 16. | SURVEY BENCHMARK: | MINIMALLY CONSTRAINED CORS POST PROCESSING<br>VERTICAL: NAVD88<br>HORIZONTAL: NAD83 (2011) |
| 17. | MONUMENTATION: | FOUND: 12<br>SET: 0 |
| 18. | SURVEY UNIT: | LINEAR: US SURVEY FOOT<br>ANGULAR: DEGREES MINUTES SECONDS (DMS)<br>COORDINATE: GROUND |
| 19. | SURVEY CLASSIFICATION: | URBAN SURVEY |
| 20. | UTILITIES: | WATER: CITY OF MILFORD<br>WASTEWATER: CITY OF MILFORD<br>ELECTRIC: CITY OF MILFORD |
| 21. | JURISDICTION: | SUSSEX COUNTY |
| 22. | ROAD CLASSIFICATION: | SOUTH REHOBOTH BLVD - MINOR ARTERIAL (40 M.P.H.) - SC-00014-F<br>NORTH HORSESHOE DRIVE - LOCAL (25 M.P.H.) - SC-300670-F |
| 23. | DELDOT PROJECT ID No.: | TBD |
| 24. | DELDOT TID: | PARCEL IS LOCATED WITHIN THE TRANSPORTATION IMPROVEMENT DISTRICT |

## LEGEND

| ITEM | EXISTING | PROPOSED |
|---|---|---|
| CONCRETE CURB & GUTTER | | |
| CONCRETE SIDEWALK, SLAB / PAVING | | |
| IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT | | |
| INDIVIDUAL TREE OR BUSH | EVERGREEN DECIDUOUS | N/A |
| WIRE FENCE | | |
| CHAINLINK FENCE | | |
| STOCKADE FENCE | | |
| STRUCTURE (CONCRETE, WOOD, METAL, ETC.) | | |
| DRAINAGE DITCH OR SWALE | | |
| WETLAND BOUNDARY LINE | | N/A |
| CONTOUR | 49 | 55 |
| ELEVATION SPOT SHOT | 49.55 | 28.16 25.50 T.C. 25.00 B.C. |
| BENCH MARK | | N/A |
| PROPERTY OR RIGHT-OF-WAY LINE | | |
| CENTERLINE | | |
| LIGHT POLE | | |

| ITEM | EXISTING | PROPOSED |
|---|---|---|
| SANITARY GRAVITY SEWER LINE (S) SIZE & FLOW DIRECTION | EX. 10"S | 10" S |
| SANITARY SEWER FORCE MAIN (F.M.) SIZE & FLOW DIRECTION | EX. 10" F.M. | 12" F.M. |
| SANITARY SEWER MANHOLE (S.S.M.H.) | | |
| SANITARY SEWER CLEANOUT (C.O.) | | |
| WATER MAIN & SIZE | EX. 10" W | 12" W |
| FIRE HYDRANT (F.H.) | F.H. | F.H. |
| WATER VALVE (W.V.) OR METER (W.M.) | W.M. W.V. | W.M. W.V. |
| STORM DRAIN MANHOLE (S.D.M.H.) | | |
| STORM DRAIN LINE (CMP, RCP, HDPE) | | |
| CATCH BASIN (C.B.) | | |
| UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (O.T.), ELECTRIC (O.E.) | | |
| UNDERGROUND ELECTRIC (U.E.) | U.E. | U.E. |
| UNDERGROUND TELEPHONE (U.T.) | U.T. | U.T. |
| UNDERGROUND GAS MAIN (G) | EX. 2" G | 2" G |

## SURVEY LEGEND

| ITEM | EXISTING | PROPOSED |
|---|---|---|
| UNMARKED POINT | O | O |
| CONCRETE MONUMENT | FCM | SCM |
| IRON PIPE | FIP | SIP |
| IRON PIPE W/ CAP | FIPC | |
| IRON ROD | FIR | SIR |
| IRON ROD W/ CAP | FIRC | SIRC |
| DRILL HOLE | FDH | SDH |
| STONE | FSTONE | |
| PK NAIL | FPK | SPK |

## SUSSEX COUNTY APPROVAL BY:

SIGNATURE _____ DATE _____

## OWNERS CERTIFICATION

WE, THE CITY OF MILFORD, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

SIGNATURE _____ DATE _____

## ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD, P.E, HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

JONATHAN D. RICHARD P.E. NO. 18832 DATE

## GENERAL NOTES:

1. TOPOGRAPHIC SURVEY DATA SHOWN HEREON WAS PREPARED BY BECKER MORGAN GROUP, DOVER, DE., IN NOVEMBER 2023. VERTICAL DATUM IS BASED ON NAVD88.
2. BOUNDARY LINES AS SHOWN HEREON, WERE TAKEN FROM A PLAT ENTITLED "MINOR LOT LINE ADJUSTMENT - THE ESTATE OF BETTY F. SHARP (TRUSTEE)", AS PREPARED BY BOB NASH ASSOCIATES, DATED 02/08/2016..
3. PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
4. PORTIONS OF SUBJECT PARCEL ARE LOCATED WITHIN ZONE "X" , AREA OF MINIMAL FLOOD HAZARD AND ZONE AE, B.F.E. 13.0', BASED ON SUSSEX CO. FEMA FIRM MAP 10005C0043K, EFFECTIVE DATE 03/16/2015.
5. APPROXIMATE WETLAND LIMITS SHOWN HEREON ARE BASED ON STATE OF DELAWARE WETLAND MAPS AS TAKEN FROM THE STATE GIS DATAMIL. NO FIELD WETLAND DELINEATION PERFORMED ON PROPERTY.
6. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
7. THE EXISTING UTILITIES SHOWN WERE TAKEN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (1-800-282-8555) TO VERIFY THEIR EXACT LOCATION PRIOR TO THE START OF ANY CONSTRUCTION. ANY DAMAGE INCURRED TO ANY UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
8. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
9. THE DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
10. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM THE CITY OF MILFORD, DELAWARE DEPARTMENT OF TRANSPORTATION AND APPROPRIATE STATE AND COUNTY AGENCIES.
11. ALL ACCESSIBLE PARKING STALLS, LOGOS, AND ACCESS AISLES SHALL BE MARKED WITH BLUE PAINT AND HATCHED ACCORDINGLY.
12. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE CITY OF MILFORD AND THE STATE OF DELAWARE STANDARDS, AND CONSTRUCTION SPECIFICATIONS.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

**Delaware**
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

**Maryland**
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

**North Carolina**
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

# DEEP BRANCH PARK

S. REHOBOTH BOULEVARD
CITY OF MILFORD
SUSSEX COUNTY, DE
CEDAR CREEK HUNDRED

SHEET TITLE

## PRELIMINARY SITE PLAN

0 40 80 160

SCALE: 1" = 80'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1. | 02/18/25 | REVISED PER SUSSEX COUNTY PLANNING COMMENTS |

LAYER STATE: C-001

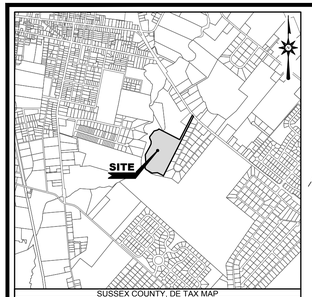
| | |
|---|---|
| PROJECT NO.: | 2023139.00 |
| DATE: | 06/14/2024 |
| SCALE: | 1" = 80' |
| DRAWN BY: A.J.D. | PROJ. MGR.: C.D.C. |

SHEET

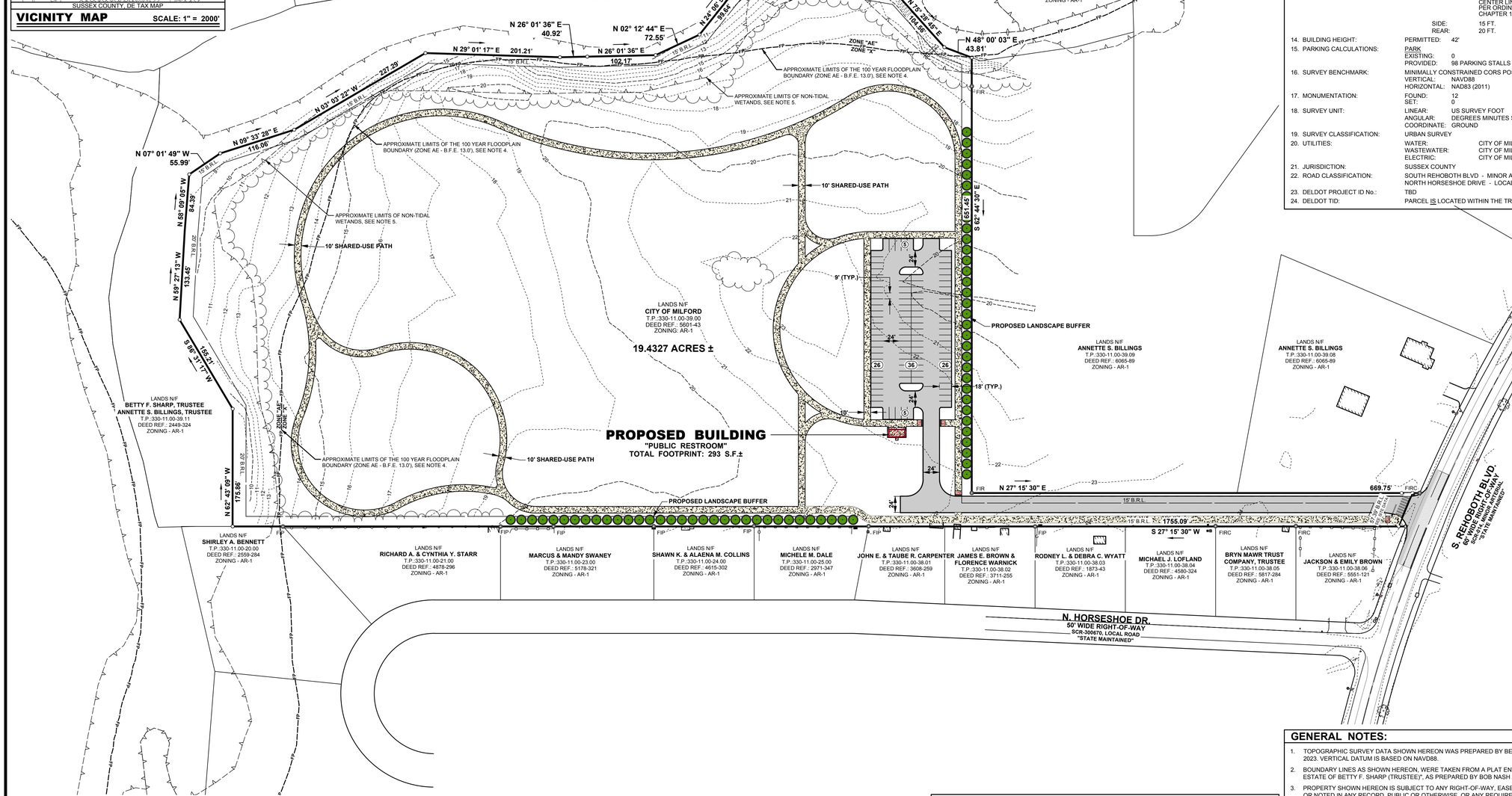
C-001

COPYRIGHT 2024

F:\AutoCAD\Projects\2023\2023139\DWG\2023139-SITE-CSD21.dwg, Feb 21, 2025 - 2:16pm




**VICINITY MAP** SCALE: 1" = 2000'




## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | CITY OF MILFORD<br>201 S. WALNUT ST.<br>MILFORD, DE 19963 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 S. GOVERNORS AVE.<br>DOVER, DE 19904<br>(302) 734-7950 |
| 3. | PROPERTY LOCATION: | SOUTH REHOBOTH BOULEVARD, MILFORD, DE 19963<br>LATITUDE: N38° 54' 17.30" WRS80 - NAD83 (2011)<br>LONGITUDE: W75° 24' 33.69" WRS80 - NAD83 (2011) |
| 4. | PROPERTY MAP NUMBER: | 330-11.00-39.00 |
| 5. | DEED SUMMARY: | D.R. 5601-43 |
| 6. | PLAT REFERENCE: | PB. 226-84 |
| 7. | TOTAL SITE AREA: | 19.4327± ACRES |
| 8. | TOTAL DISTURBED AREA: | 3.7932± ACRES |
| 9. | PRESENT USE: | AGRICULTURAL |
| 10. | PROPOSED USE: | PUBLIC PARK |
| 11. | NUMBER OF LOTS: | EXISTING: 1<br>PROPOSED: 1 |
| 12. | ZONING CLASSIFICATION: | EXISTING: AR-1 (AGRICULTURAL RESIDENTIAL)<br>PROPOSED: AR-1 (AGRICULTURAL RESIDENTIAL) |
| 13. | SETBACKS: | AR-1 (AGRICULTURAL RESIDENTIAL)<br>FRONT: 40 FT. MEASURED FROM A POINT NO LESS THAN 50' FROM THE CENTER LINE OF THE RIGHT OF WAY. (MINOR ARTERIAL) PER ORDINANCE NO. 1711 (08/03/2004) CHAPTER 115; ATTACHMENT 1:2<br>SIDE: 15 FT.<br>REAR: 20 FT. |
| 14. | BUILDING HEIGHT: | PERMITTED: 42' |
| 15. | PARKING CALCULATIONS: | PARK<br>EXISTING: 0<br>PROVIDED: 98 PARKING STALLS |
| 16. | SURVEY BENCHMARK: | MINIMALLY CONSTRAINED CORS POST PROCESSING<br>VERTICAL: NAVD88<br>HORIZONTAL: NAD83 (2011) |
| 17. | MONUMENTATION: | FOUND: 12<br>SET: 0 |
| 18. | SURVEY UNIT: | LINEAR: US SURVEY FOOT<br>ANGULAR: DEGREES MINUTES SECONDS (DMS)<br>COORDINATE: GROUND |
| 19. | SURVEY CLASSIFICATION: | URBAN SURVEY |
| 20. | UTILITIES: | WATER: CITY OF MILFORD<br>WASTEWATER: CITY OF MILFORD<br>ELECTRIC: CITY OF MILFORD |
| 21. | JURISDICTION: | SUSSEX COUNTY |
| 22. | ROAD CLASSIFICATION: | SOUTH REHOBOTH BLVD - MINOR ARTERIAL (40 M.P.H.) - SC-00014-F<br>NORTH HORSESHOE DRIVE - LOCAL (25 M.P.H.) - SC-300670-F |
| 23. | DELDOT PROJECT ID No.: | TBD |
| 24. | DELDOT TID: | PARCEL IS LOCATED WITHIN THE TRANSPORTATION IMPROVEMENT DISTRICT |

## LEGEND

| ITEM | EXISTING | PROPOSED | ITEM | EXISTING | PROPOSED |
|---|---|---|---|---|---|
| CONCRETE CURB & GUTTER | | | SANITARY GRAVITY SEWER LINE (S) SIZE & FLOW DIRECTION | EX. 10"S | 10" S |
| CONCRETE SIDEWALK, SLAB / PAVING | | | SANITARY SEWER FORCE MAIN (F.M.) SIZE & FLOW DIRECTION | EX. 10" F.M. | 12" F.M. |
| IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT | | | SANITARY SEWER MANHOLE (S.S.M.H.) | | |
| INDIVIDUAL TREE OR BUSH | EVERGREEN DECIDUOUS | N/A | SANITARY SEWER CLEANOUT (C.O.) | | |
| WIRE FENCE | | | WATER MAIN & SIZE | EX. 10" W | 12" W |
| CHAINLINK FENCE | | | FIRE HYDRANT (F.H.) | F.H. | F.H. |
| STOCKADE FENCE | | | WATER VALVE (W.V.) OR METER (W.M.) | W.M. W.V. | W.M. W.V. |
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| WETLAND BOUNDARY LINE | | N/A | CATCH BASIN (C.B.) | | |
| CONTOUR | 49 | 55 | UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (O.T.), ELECTRIC (O.E.) | | |
| ELEVATION SPOT SHOT | 43.55 | 25.15 25.50 T.C. 25.00 B.C. | UNDERGROUND ELECTRIC (U.E.) | U.E. | U.E. |
| BENCH MARK | | N/A | UNDERGROUND TELEPHONE (U.T.) | U.T. | U.T. |
| PROPERTY OR RIGHT-OF-WAY LINE | | | UNDERGROUND GAS MAIN (G) | EX. 2" G | 2" G |
| CENTERLINE | | | | | |
| LIGHT POLE | | | | | |

## SURVEY LEGEND

| ITEM | EXISTING | PROPOSED |
|---|---|---|
| UNMARKED POINT | | |
| CONCRETE MONUMENT | FCM | SCM |
| IRON PIPE | FIP | SIP |
| IRON PIPE W/ CAP | FIPC | |
| IRON ROD | FIR | SIR |
| IRON ROD W/ CAP | FIRC | SIRC |
| DRILL HOLE | FDH | SDH |
| STONE | FSTONE | |
| PK NAIL | FPK | SPK |

## SUSSEX COUNTY APPROVAL BY:

SIGNATURE _____ DATE _____

## OWNERS CERTIFICATION

WE, THE CITY OF MILFORD, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

SIGNATURE _____ DATE _____

## ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD, P.E, HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

JONATHAN D. RICHARD P.E. NO. 18832 DATE

## GENERAL NOTES:

1. TOPOGRAPHIC SURVEY DATA SHOWN HEREON WAS PREPARED BY BECKER MORGAN GROUP, DOVER, DE., IN NOVEMBER 2023. VERTICAL DATUM IS BASED ON NAVD88.
2. BOUNDARY LINES AS SHOWN HEREON, WERE TAKEN FROM A PLAT ENTITLED "MINOR LOT LINE ADJUSTMENT - THE ESTATE OF BETTY F. SHARP (TRUSTEE)", AS PREPARED BY BOB NASH ASSOCIATES, DATED 02/08/2016..
3. PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
4. PORTIONS OF SUBJECT PARCEL ARE LOCATED WITHIN ZONE "X" , AREA OF MINIMAL FLOOD HAZARD AND ZONE AE, B.F.E. 13.0', BASED ON SUSSEX CO, FEMA FIRM MAP 10005C0043K, EFFECTIVE DATE 03/16/2015.
5. APPROXIMATE WETLAND LIMITS SHOWN HEREON ARE BASED ON STATE OF DELAWARE WETLAND MAPS AS TAKEN FROM THE STATE GIS DATAMIL. NO FIELD WETLAND DELINEATION PERFORMED ON PROPERTY.
6. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
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910.341.7600

**www.beckermorgan.com**

PROJECT TITLE

# DEEP BRANCH PARK

S. REHOBOTH BOULEVARD
CITY OF MILFORD
SUSSEX COUNTY, DE
CEDAR CREEK HUNDRED

SHEET TITLE

## PRELIMINARY SITE PLAN

0 40 80 160
SCALE: 1" = 80'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1. | 02/18/25 | REVISED PER SUSSEX COUNTY PLANNING COMMENTS |

LAYER/STATE: C001

| | |
|---|---|
| PROJECT NO.: | 2023139.00 |
| DATE: | 06/14/2024 |
| SCALE: | 1" = 80' |
| DRAWN BY: A.J.D. | PROJ. MGR.: C.D.C. |

SHEET
**C-001**

COPYRIGHT 2024

F:\AutoCAD\Projects\2023\2023139\DWG\2023139-SITE-C3D21.dwg, Feb 18, 2025 - 1:47pm

**PLANNING & ZONING COMMISSION**
ROBERT C. WHEATLEY, CHAIRMAN
HOLLY J. WINGATE, VICE-CHAIRMAN
J. BRUCE MEARS
GREGORY SCOTT COLLINS
BRIAN BUTLER

**Sussex County**
DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR

March 12, 2025

Mr. Jonathan Richard, P.E.
Becker Morgan Group
309 South Governors Ave.
Dover, DE 19904

By email to: jrichard@beckermorgan.com

RE: Staff Review of the Revised Preliminary Site Plan for (S-25-03) Deep Branch Park – (City of Milford) for a public park to be located on a Parcel lying on the south side of South Rehoboth Boulevard (Route 14) approximately (500) feet west of the intersection with Windward Boulevard
Tax Parcel: 330-11.00-39.00

Dear Mr. Richard,

Further to your submission of February 24, 2025, the Planning and Zoning Department has reviewed the submitted Preliminary Site Plan for (S-25-03) Deep Branch Park – (City of Milford) for a public park at the site. The Plan proposes a public park with paved vehicle and multi-modal ingress/egress from South Rehoboth Boulevard to include playground area with children's play equipment, a pavilion, six (6) pickleball courts, three (3) basketball courts, open space, parking, a multi-use trail network within the site, parking, and a small utility structure. The Parcel is comprised of a total of (19.4327) acres and located on the south side of South Rehoboth Boulevard (Route 14) approximately (500) feet west of the intersection of South Rehoboth Boulevard (Route 14) and Windward Boulevard. The parcel is within the Agricultural Residential (AR-1) Zoning District and lies within the "Town Center" Area per Sussex County's 2018 Comprehensive Plan. Staff have reviewed the Preliminary Site Plan for compliance with the Sussex County Zoning Code and the Conditions of Approval (CU 2336) and have the following comments:

**Chapter 115 – Zoning**

**Preliminary Site Plan**

1. Please include the location & detail on any proposed lighting to ensure the Plan meets (§115-166(G))
2. Please include number of construction phases proposed, if any, with the plot showing the approximate boundaries of each phase and the proposed completion date of each phase (§115-220(B)(12)).
3. County procedures require the access road provide a minimum ROW width of (30) feet mirroring State of DE road standards. Please add notation to the plan indicating

a (30) foot ROW is encompassing the paved road and trail within the access corridor connecting S. Rehoboth Boulevard and the parking area.

4. Please clearly denote any proposed fencing on the Plan.

Additionally, Staff are providing the following design recommendations.

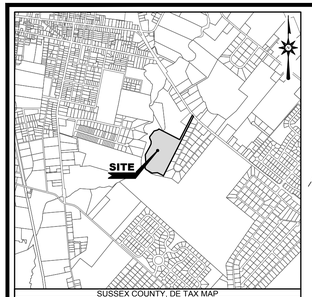
5. Staff recommend the Applicant consider more of a setback, fencing, buffer, or improved landscape screening for the proposed pickleball courts given their proximity to the residential Parcels bordering the site. Staff recommend the pickleball courts be designed to meet the requirements of (§115-192). Specifically, Staff have concerns about visual screening and sound screening relating to Parcel #s 25.00, 38.01, & 38.02.
6. Prior to approval of the Final Plan, approval letters or letters of no objection from the following agencies shall be submitted to the Sussex County Planning and Zoning Office:
    a) Sussex Conservation District (SCD)
    b) Delaware Department of Transportation (DelDOT)
    c) Office of the State Fire Marshal (OSFM)

Please provide **one (1) full-size copy** and **one (1) electronic copy** of a Revised Preliminary Site Plan at least ten (10) days prior to your scheduled Planning and Zoning Commission meeting.

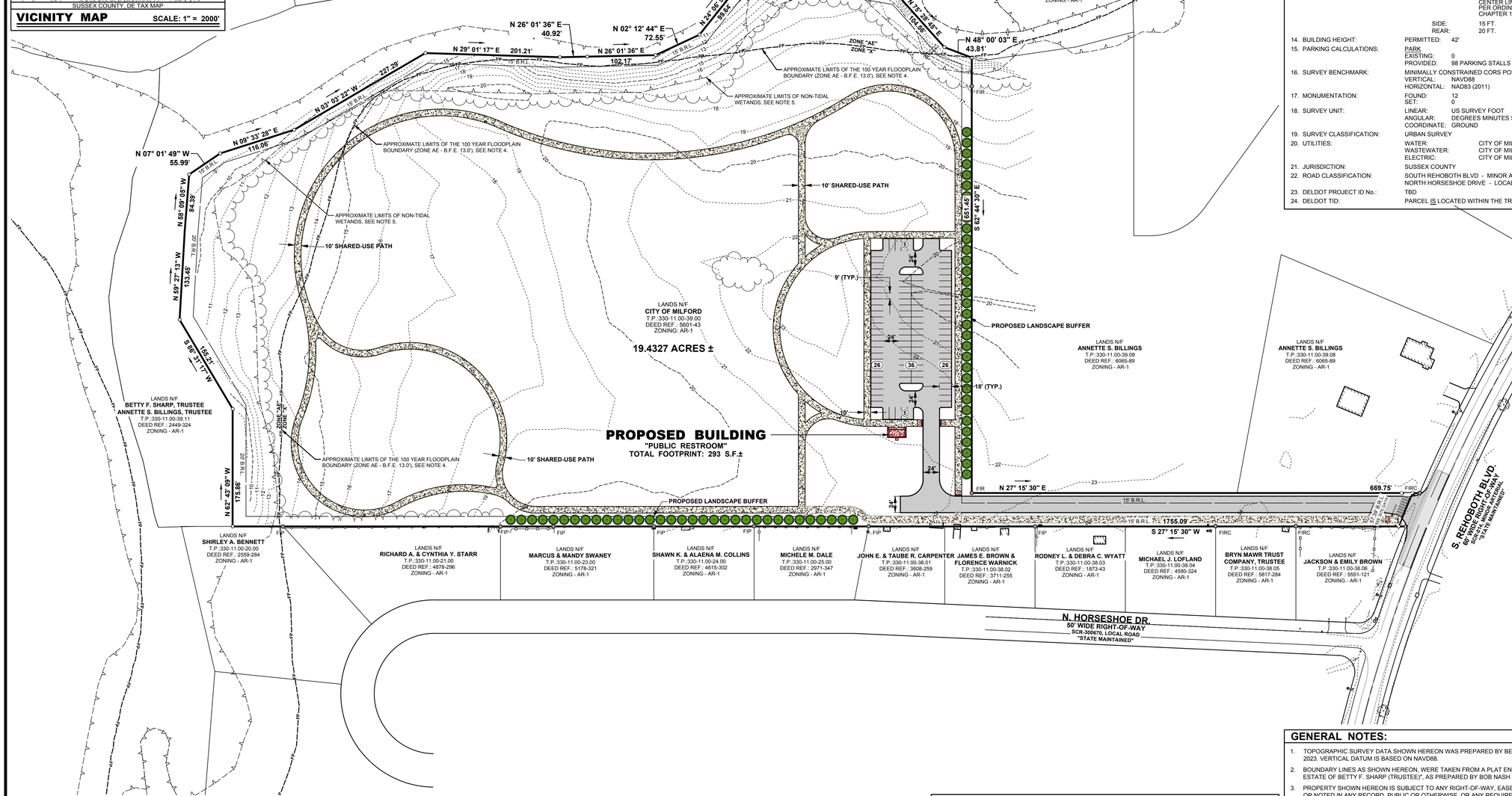
Please feel free to contact me with any questions during business hours 8:30 A.M. – 4:30 P.M., Monday through Friday at 302-855-7878.

Sincerely,

Mr. Michael Lowrey
Planner III




**VICINITY MAP** SCALE: 1" = 2000'




## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | CITY OF MILFORD<br>201 S. WALNUT ST.<br>MILFORD, DE 19963 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 S. GOVERNORS AVE.<br>DOVER, DE 19904<br>(302) 734-7950 |
| 3. | PROPERTY LOCATION: | SOUTH REHOBOTH BOULEVARD, MILFORD, DE 19963<br>LATITUDE: N38° 54' 17.30" WRS80 - NAD83 (2011)<br>LONGITUDE: W75° 24' 33.69" WRS80 - NAD83 (2011) |
| 4. | PROPERTY MAP NUMBER: | 330-11.00-39.00 |
| 5. | DEED SUMMARY: | D.R. 5601-43 |
| 6. | PLAT REFERENCE: | PB. 226-84 |
| 7. | TOTAL SITE AREA: | 19.4327± ACRES |
| 8. | TOTAL DISTURBED AREA: | 3.7932± ACRES |
| 9. | PRESENT USE: | AGRICULTURAL |
| 10. | PROPOSED USE: | PUBLIC PARK |
| 11. | NUMBER OF LOTS: | EXISTING: 1<br>PROPOSED: 1 |
| 12. | ZONING CLASSIFICATION: | EXISTING: AR-1 (AGRICULTURAL RESIDENTIAL)<br>PROPOSED: AR-1 (AGRICULTURAL RESIDENTIAL) |
| 13. | SETBACKS: | AR-1 (AGRICULTURAL RESIDENTIAL)<br>FRONT: 40 FT. MEASURED FROM A POINT NO LESS THAN 50' FROM THE CENTER LINE OF THE RIGHT OF WAY. (MINOR ARTERIAL) PER ORDINANCE NO. 1711 (08/03/2004) CHAPTER 115; ATTACHMENT 1:2<br>SIDE: 15 FT.<br>REAR: 20 FT. |
| 14. | BUILDING HEIGHT: | PERMITTED: 42' |
| 15. | PARKING CALCULATIONS: | PARK<br>EXISTING: 0<br>PROVIDED: 98 PARKING STALLS |
| 16. | SURVEY BENCHMARK: | MINIMALLY CONSTRAINED CORS POST PROCESSING<br>VERTICAL: NAVD88<br>HORIZONTAL: NAD83 (2011) |
| 17. | MONUMENTATION: | FOUND: 12<br>SET: 0 |
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| 19. | SURVEY CLASSIFICATION: | URBAN SURVEY |
| 20. | UTILITIES: | WATER: CITY OF MILFORD<br>WASTEWATER: CITY OF MILFORD<br>ELECTRIC: CITY OF MILFORD |
| 21. | JURISDICTION: | SUSSEX COUNTY |
| 22. | ROAD CLASSIFICATION: | SOUTH REHOBOTH BLVD - MINOR ARTERIAL (40 M.P.H.) - SC-00014-F<br>NORTH HORSESHOE DRIVE - LOCAL (25 M.P.H.) - SC-300670-F |
| 23. | DELDOT PROJECT ID No.: | TBD |
| 24. | DELDOT TID: | PARCEL IS LOCATED WITHIN THE TRANSPORTATION IMPROVEMENT DISTRICT |

## LEGEND

| ITEM | EXISTING | PROPOSED | ITEM | EXISTING | PROPOSED |
|---|---|---|---|---|---|
| CONCRETE CURB & GUTTER | | | SANITARY GRAVITY SEWER LINE (S) SIZE & FLOW DIRECTION | EX. 10"S | 10" S |
| CONCRETE SIDEWALK, SLAB / PAVING | | | SANITARY SEWER FORCE MAIN (F.M.) SIZE & FLOW DIRECTION | EX. 10" F.M. | 12" F.M. |
| IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT | | | SANITARY SEWER MANHOLE (S.S.M.H.) | | |
| INDIVIDUAL TREE OR BUSH | EVERGREEN DECIDUOUS | N/A | SANITARY SEWER CLEANOUT (C.O.) | | |
| WIRE FENCE | | | WATER MAIN & SIZE | EX. 10" W | 12" W |
| CHAINLINK FENCE | | | FIRE HYDRANT (F.H.) | F.H. | F.H. |
| STOCKADE FENCE | | | WATER VALVE (W.V.) OR METER (W.M.) | W.M. W.V. | W.M. W.V. |
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| CONTOUR | 49 | 55 | UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (O.T.), ELECTRIC (O.E.) | | |
| ELEVATION SPOT SHOT | 43.55 | 25.15 25.50 T.C. 25.00 B.C. | UNDERGROUND ELECTRIC (U.E.) | U.E. | U.E. |
| BENCH MARK | | N/A | UNDERGROUND TELEPHONE (U.T.) | U.T. | U.T. |
| PROPERTY OR RIGHT-OF-WAY LINE | | | UNDERGROUND GAS MAIN (G) | EX. 2" G | 2" G |
| CENTERLINE | | | | | |
| LIGHT POLE | | | | | |

## SURVEY LEGEND

| ITEM | EXISTING | PROPOSED |
|---|---|---|
| UNMARKED POINT | | |
| CONCRETE MONUMENT | FCM | SCM |
| IRON PIPE | FIP | SIP |
| IRON PIPE W/ CAP | FIPC | |
| IRON ROD | FIR | SIR |
| IRON ROD W/ CAP | FIRC | SIRC |
| DRILL HOLE | FDH | SDH |
| STONE | FSTONE | |
| PK NAIL | FPK | SPK |

## SUSSEX COUNTY APPROVAL BY:

SIGNATURE _____ DATE _____

## OWNERS CERTIFICATION

WE, THE CITY OF MILFORD, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

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JONATHAN D. RICHARD P.E. NO. 18832 DATE

## GENERAL NOTES:

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4. PORTIONS OF SUBJECT PARCEL ARE LOCATED WITHIN ZONE "X" , AREA OF MINIMAL FLOOD HAZARD AND ZONE AE, B.F.E. 13.0', BASED ON SUSSEX CO, FEMA FIRM MAP 10005C0043K, EFFECTIVE DATE 03/16/2015.
5. APPROXIMATE WETLAND LIMITS SHOWN HEREON ARE BASED ON STATE OF DELAWARE WETLAND MAPS AS TAKEN FROM THE STATE GIS DATAMIL. NO FIELD WETLAND DELINEATION PERFORMED ON PROPERTY.
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8. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
9. THE DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
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12. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE CITY OF MILFORD AND THE STATE OF DELAWARE STANDARDS, AND CONSTRUCTION SPECIFICATIONS.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

**Delaware**
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

**Maryland**
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

**North Carolina**
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

**www.beckermorgan.com**

PROJECT TITLE

# DEEP BRANCH PARK

S. REHOBOTH BOULEVARD
CITY OF MILFORD
SUSSEX COUNTY, DE
CEDAR CREEK HUNDRED

SHEET TITLE

## PRELIMINARY SITE PLAN

0 40 80 160
SCALE: 1" = 80'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1. | 02/18/25 | REVISED PER SUSSEX COUNTY PLANNING COMMENTS |

LAYER/STATE: C001

| | |
|---|---|
| PROJECT NO.: | 2023139.00 |
| DATE: | 06/14/2024 |
| SCALE: | 1" = 80' |
| DRAWN BY: A.J.D. | PROJ. MGR.: C.D.C. |

SHEET
**C-001**

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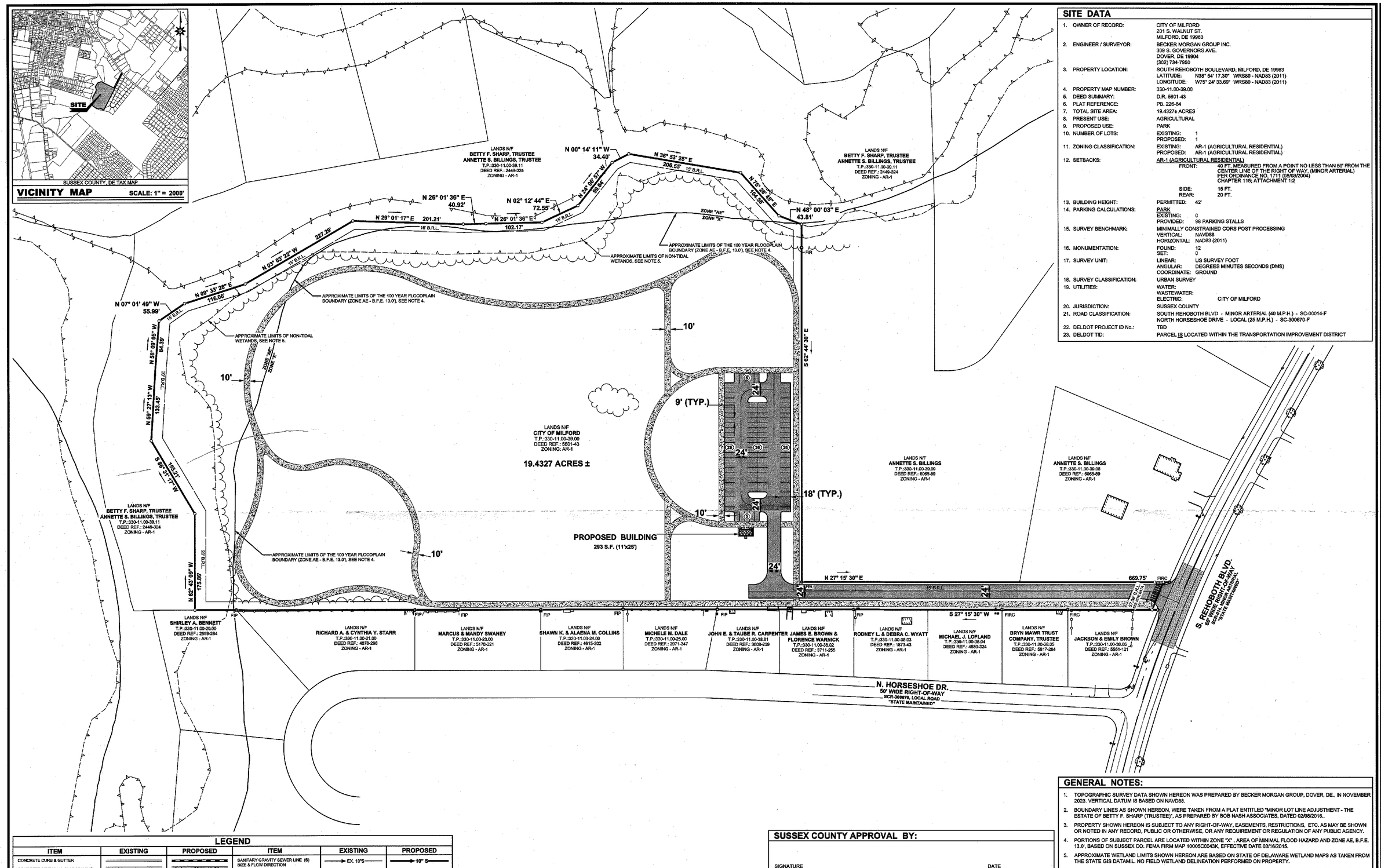
F:\AutoCAD\Projects\2023\2023139\DWG\2023139-SITE-C3D21.dwg, Feb 18, 2025 - 1:47pm

**VICINITY MAP** SCALE: 1" = 2000'




## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | CITY OF MILFORD<br>201 S. WALNUT ST.<br>MILFORD, DE 19963 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 S. GOVERNORS AVE.<br>DOVER, DE 19904<br>(302) 734-7950 |
| 3. | PROPERTY LOCATION: | SOUTH REHOBOTH BOULEVARD, MILFORD, DE 19963<br>LATITUDE: N38° 54' 17.30" WRS80 - NAD83 (2011)<br>LONGITUDE: W75° 24' 33.69" WRS80 - NAD83 (2011) |
| 4. | PROPERTY MAP NUMBER: | 330-11.00-39.00 |
| 5. | DEED SUMMARY: | D.R. 5601-43 |
| 6. | PLAT REFERENCE: | PB. 226-84 |
| 7. | TOTAL SITE AREA: | 19.4327± ACRES |
| 8. | PRESENT USE: | AGRICULTURAL |
| 9. | PROPOSED USE: | PARK |
| 10. | NUMBER OF LOTS: | EXISTING: 1<br>PROPOSED: 1 |
| 11. | ZONING CLASSIFICATION: | EXISTING: AR-1 (AGRICULTURAL RESIDENTIAL)<br>PROPOSED: AR-1 (AGRICULTURAL RESIDENTIAL) |
| 12. | SETBACKS: | AR-1 (AGRICULTURAL RESIDENTIAL)<br>FRONT: 40 FT. MEASURED FROM A POINT NO LESS THAN 50' FROM THE CENTER LINE OF THE RIGHT OF WAY. (MINOR ARTERIAL) PER ORDINANCE NO. 1711 (08/03/2004) CHAPTER 115; ATTACHMENT 1.2<br>SIDE: 15 FT.<br>REAR: 20 FT. |
| 13. | BUILDING HEIGHT: | PERMITTED: 42' |
| 14. | PARKING CALCULATIONS: | PARK<br>EXISTING: 0<br>PROVIDED: 98 PARKING STALLS |
| 15. | SURVEY BENCHMARK: | MINIMALLY CONSTRAINED CORS POST PROCESSING<br>VERTICAL: NAVD88<br>HORIZONTAL: NAD83 (2011) |
| 16. | MONUMENTATION: | FOUND: 12<br>SET: 0 |
| 17. | SURVEY UNIT: | LINEAR: US SURVEY FOOT<br>ANGULAR: DEGREES MINUTES SECONDS (DMS)<br>COORDINATE: GROUND |
| 18. | SURVEY CLASSIFICATION: | URBAN SURVEY |
| 19. | UTILITIES: | WATER:<br>WASTEWATER:<br>ELECTRIC: CITY OF MILFORD |
| 20. | JURISDICTION: | SUSSEX COUNTY |
| 21. | ROAD CLASSIFICATION: | SOUTH REHOBOTH BLVD - MINOR ARTERIAL (40 M.P.H.) - SC-00014-F<br>NORTH HORSESHOE DRIVE - LOCAL (25 M.P.H.) - SC-300670-F |
| 22. | DELDOT PROJECT ID No.: | TBD |
| 23. | DELDOT TID: | PARCEL IS LOCATED WITHIN THE TRANSPORTATION IMPROVEMENT DISTRICT |

## LEGEND

| ITEM | EXISTING | PROPOSED | ITEM | EXISTING | PROPOSED |
|---|---|---|---|---|---|
| CONCRETE CURB & GUTTER | | | SANITARY GRAVITY SEWER LINE (S) SIZE & FLOW DIRECTION | EX. 10"S | 10" S |
| CONCRETE SIDEWALK, SLAB / PAVING | | | SANITARY SEWER FORCE MAIN (F.M.) SIZE & FLOW DIRECTION | EX. 10" F.M. | 12" F.M. |
| IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT | | | SANITARY SEWER MANHOLE (S.S.M.H.) | | |
| INDIVIDUAL TREE OR BUSH | EVERGREEN DECIDUOUS | N/A | SANITARY SEWER CLEANOUT (C.O.) | | |
| WIRE FENCE | X X X | X X X | WATER MAIN & SIZE | EX. 10" W | 12" W |
| CHAINLINK FENCE | | | FIRE HYDRANT (F.H.) | F.H. | F.H. |
| STOCKADE FENCE | | | WATER VALVE (W.V.) OR METER (W.M.) | W.M. W.V. | W.M. W.V. |
| STRUCTURE (CONCRETE, WOOD, METAL ETC.) | | | STORM DRAIN MANHOLE (S.D.M.H.) | | |
| DRAINAGE DITCH OR SWALE | | | STORM DRAIN LINE (CMP, RCP, HDPE) | | |
| WETLAND BOUNDARY LINE | | N/A | CATCH BASIN (C.B.) | | |
| CONTOUR | 49 | 50 | UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (O.T.), ELECTRIC (O.E.) | | |
| ELEVATION SPOT SHOT | 43.55 | 25.15 25.50 T.C. 25.00 B.C. | UNDERGROUND ELECTRIC (U.E.) | U.E. | U.E. |
| BENCH MARK | | N/A | UNDERGROUND TELEPHONE (U.T.) | U.T. | U.T. |
| PROPERTY OR RIGHT-OF-WAY LINE | | | UNDERGROUND GAS MAIN (G) | EX. 2" G | 2" G |
| CENTERLINE | | | | | |
| LIGHT POLE | | | | | |

## SURVEY LEGEND

| ITEM | EXISTING | PROPOSED |
|---|---|---|
| UNMARKED POINT | O | O |
| CONCRETE MONUMENT | FCM | SCM |
| IRON PIPE | FIP | SIP |
| IRON PIPE W/ CAP | FIPC | |
| IRON ROD | FIR | SIR |
| IRON ROD W/ CAP | FIRC | SIRC |
| DRILL HOLE | FDH | SDH |
| STONE | FSTONE | |
| PK NAIL | FPK | SPK |

## SUSSEX COUNTY APPROVAL BY:

SIGNATURE _____ DATE _____

## OWNERS CERTIFICATION

WE, THE CITY OF MILFORD, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

SIGNATURE _____ DATE _____

## ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD, P.E, HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

JONATHAN D. RICHARD P.E. NO. 18832 DATE

## GENERAL NOTES:

1. TOPOGRAPHIC SURVEY DATA SHOWN HEREON WAS PREPARED BY BECKER MORGAN GROUP, DOVER, DE., IN NOVEMBER 2023. VERTICAL DATUM IS BASED ON NAVD88.
2. BOUNDARY LINES AS SHOWN HEREON, WERE TAKEN FROM A PLAT ENTITLED "MINOR LOT LINE ADJUSTMENT - THE ESTATE OF BETTY F. SHARP (TRUSTEE)", AS PREPARED BY BOB NASH ASSOCIATES, DATED 02/08/2016..
3. PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
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BECKER MORGAN GROUP

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ENGINEER
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The Tower at STAR
100 Discovery Boulevar
Newark, DE 197
302.369.3700
Maryland
312 West Main Street,
Salisbury, MD 21
410.546.9100
North Caroli
3333 Jaeckle Drive, S
Wilmington, NC 2
910.341.7600
www.beckermorg

PROJECT TITLE
DEEP BRA
PARK

S. REHOBOTH BOUL
CITY OF MILFORD
SUSSEX COUNTY,
CEDAR CREEK HU

SHEET TITLE
PRELIMINAR
SITE PLAN

0 40 80
SCALE: 1" =

ISSUE BLOCK

| MARK | DATE | DES |
|---|---|---|

LAYER STATE: 5-001

PROJECT NO.:
DATE:
SCALE:
DRAWN BY: A.J.D. PRO

SHEET
C-001

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F:\AutoCAD\Projects\2023\2023139\DWG\2023139-SITE-C3D21.dw

## Michael Lowrey

**From:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Sent:** Wednesday, March 12, 2025 9:55 AM
**To:** Michael Lowrey
**Subject:** RE: (S-25-03) Deep Branch Park - Revised Preliminary Site Plan - Staff Review 3.12.2025

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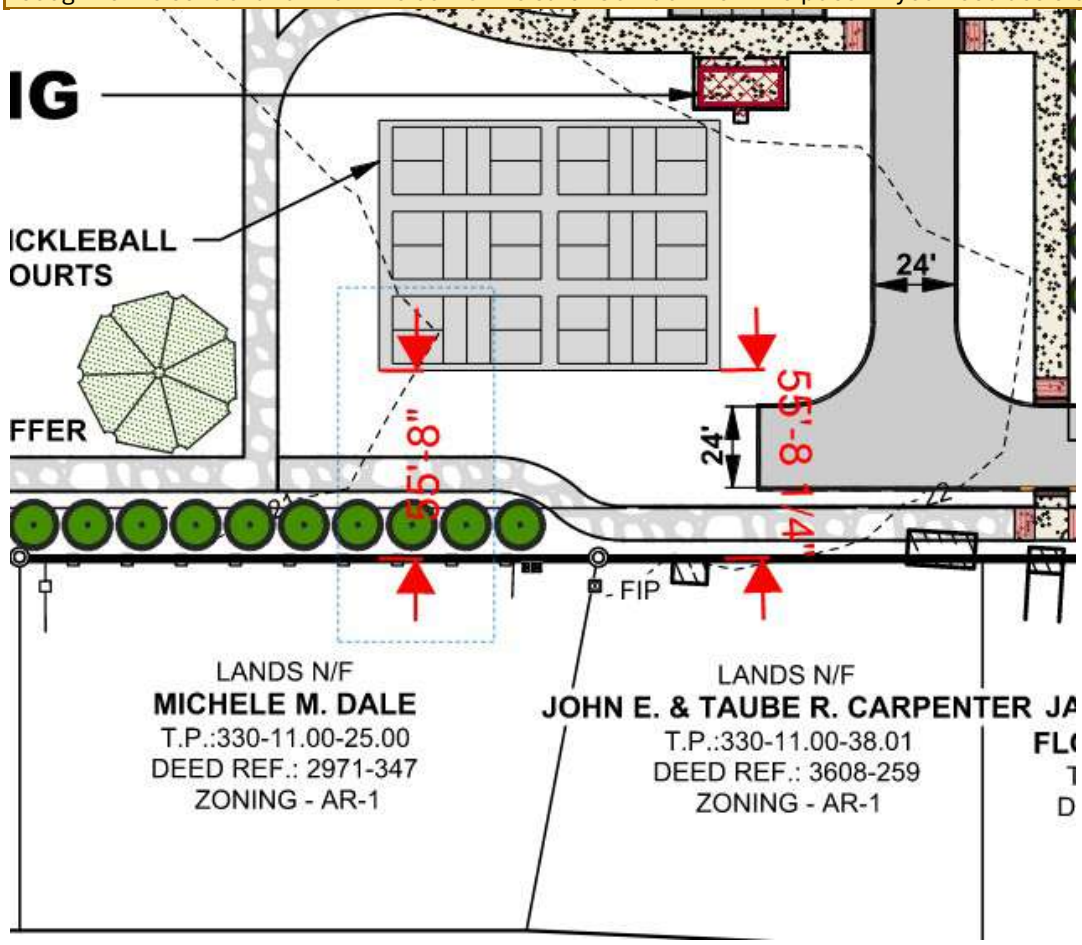


**From:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Sent:** Wednesday, March 12, 2025 9:54 AM
**To:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Revised Preliminary Site Plan - Staff Review 3.12.2025

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878

michael.lowrey@sussexcountyde.gov

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf
Much of the County's Planning and Zoning Information can be found online at:
https://sussexcountyde.gov/sussex-county-mapping-applications
Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

---

**From:** Michael Lowrey
**Sent:** Wednesday, March 12, 2025 8:23 AM
**To:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Revised Preliminary Site Plan - Staff Review 3.12.2025

Mr. Richard,

Please see the attached Preliminary Site plan review for the Subject Plan.
Feel free to reach out with any questions.

Regards,
Michael

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878
michael.lowrey@sussexcountyde.gov

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Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

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**From:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Sent:** Thursday, March 6, 2025 10:19 AM
**To:** Jonathan D. Richard <jrichard@beckermorgan.com>; Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

Jonathan, Good afternoon,

Please accept my apologies for the delay. Following the Planning & Zoning Commission meeting on February 19th, I had planned to put this on for March 5th. However, due to an unexpected full-day attendance at the Court of Common Pleas for one of the County's cases on February 26th (this is the day we published the agenda for March 5th) this task fell to the side.

This is my fault entirely. I have already started drafting the agenda for March 19th, and I can confirm that this item is on the agenda as drafted. There are reminders to the entire team that this must go.

I hope that this is of assistance,

Thank you,

Jamie

Mr. Jamie Whitehouse, AICP, MRTPI
Director, Department of Planning & Zoning
Sussex County
2 The Circle, P.O. Box 417, Georgetown, DE, 19947
Tel: 302-855-7878, Fax: 302-854-5079

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---

**From:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Sent:** Thursday, March 6, 2025 9:08 AM
**To:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>; Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

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Jamie Good Morning,
We were looking at the Planning Commission Agenda for yesterday, could you please inform us why the project was not listed on the agenda since it was deferred at the last meeting? Can you please confirm that this project will be on the March 19th agenda.
Thank you,
Jonathan

**Jonathan D. Richard, P.E.**
Senior Associate
**BECKER MORGAN GROUP, INC.**
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302.734.7950 x 246 o
302.423.6848 c
jrichard@beckermorgan.com
www.beckermorgan.com
Facebook | LinkedIn | Instagram

---

**From:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Sent:** Thursday, February 20, 2025 10:16 AM
**To:** Jonathan D. Richard <jrichard@beckermorgan.com>; Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

Jonathan, Good morning,

Thank you for your email. There was no discussion prior to the motion being made, so I am equally unclear as to why. It is my intention to place this back on for the next meeting.

Thank you,

Jamie

Mr. Jamie Whitehouse, AICP, MRTPI
Director, Department of Planning & Zoning
Sussex County
2 The Circle, P.O. Box 417, Georgetown, DE, 19947
Tel: 302-855-7878, Fax: 302-854-5079

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https://sussexcountyde.gov/2018-comp-plan-documents

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**From:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Sent:** Thursday, February 20, 2025 8:10 AM

**To:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>; Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

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Michael and Jamie,
I was in attendance yesterday for Planning and Zoning Commission. Could you please provide insight as to why the Planning and Zoning Commission deferred the project?
Thank you,
Jonathan

**Jonathan D. Richard, P.E.**
Senior Associate
**BECKER MORGAN GROUP, INC.**
Delaware | Maryland | North Carolina
302.734.7950 x 246 o
302.423.6848 c
jrichard@beckermorgan.com
www.beckermorgan.com
Facebook | LinkedIn | Instagram

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**From:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Sent:** Wednesday, February 19, 2025 9:02 AM
**To:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>; Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

Jonathan,

Received – thank you,
It has been added to the file and uploaded to the website. I will provide the Commission with paper copies as well.

Regards,
Michael

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878
michael.lowrey@sussexcountyde.gov

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
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https://sussexcountyde.gov/2018-comp-plan-documents

---

**From:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Sent:** Tuesday, February 18, 2025 2:00 PM
**To:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Cc:** Chad D. Carter <ccarter@beckermorgan.com>; Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

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Michael,
In response to your Preliminary Site Plan review letter, we would like to include a revised Preliminary Site Plan and comment response for your review. If you can please include this for tomorrow's Planning and Zoning Commission Meeting packet to the commissioners. A hard copy will be submitted to your office today.
Thank you,
Jonathan

**Jonathan D. Richard, P.E.**
Senior Associate
**BECKER MORGAN GROUP, INC.**
Delaware | Maryland | North Carolina
302.734.7950 x 246 o
302.423.6848 c
jrichard@beckermorgan.com
www.beckermorgan.com
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**From:** Chad D. Carter <ccarter@beckermorgan.com>
**Sent:** Monday, February 17, 2025 12:03 PM
**To:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>; michael.lowery@sussexcountyde.gov

**Cc:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

We will prepare an updated plan today and a comment response letter as well.

To be frank, I don't have concerns about the agenda if staff is recommending approval. I think pulling from the already published agenda is going to cause more issues with public perception, then moving forward with staff recommendation.

Chad D. Carter – Sr. Associate
Landscape Architect, RLA, ASLA
BECKER MORGAN GROUP, INC.

---

**From:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Sent:** Monday, February 17, 2025 11:54 AM
**To:** Chad D. Carter <ccarter@beckermorgan.com>; michael.lowery@sussexcountyde.gov
**Cc:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

Chad,

Understood – I can speak to the Chairman and pull this item from Wednesday's agenda if that would alleviate any concerns?

Thanks,

Jamie

---

**From:** Chad D. Carter <ccarter@beckermorgan.com>
**Sent:** Monday, February 17, 2025 11:42 AM
**To:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>; michael.lowery@sussexcountyde.gov
**Cc:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Jamie, I appreciate that, however a heads up from Mike would have been helpful. The agenda was published on the 12th, and the comments were received on the 13th. There was no indication that the plan would be heard on the 19th, when the comments clearly stated that plans would need to be submitted 10 days prior.

Just caught us by surprise. I understand that this is other business, and not open to public comment. We would have liked to have the opportunity to respond to the comments prior to planning commission meeting. However, at this point I would rather move forward with the agenda as-is assuming that you and staff are recommending approval?

Chad D. Carter – Sr. Associate
Landscape Architect, RLA, ASLA
BECKER MORGAN GROUP, INC.

---

**From:** Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Sent:** Monday, February 17, 2025 11:31 AM
**To:** Chad D. Carter <ccarter@beckermorgan.com>; michael.lowery@sussexcountyde.gov
**Cc:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

Chad,

Mike should be back in the office tomorrow and should be able to provide a more detailed respond then.

I can respond to your process related question: Following the receipt of the plans after our email discussion in Jan, I asked staff to put this on the agenda for the Planning & Zoning Commission. Generally, if the total area of buildings is below 5,000 sf. then staff are able to review and approve administratively. However, having looked at the design more closely since submittal, this is a project that we would prefer to run through the Planning & Zoning Commission.

It would help to have any revised plans ahead of Wednesday's discussion, but there is a window between Preliminary Plan approval and Final Plan approval to consider amendments (depending on what actions are taken at Wednesday's meeting).

I hope that this is of assistance,

Thank you,

Jamie

Mr. Jamie Whitehouse, AICP, MRTPI
Director, Department of Planning & Zoning
Sussex County
2 The Circle, P.O. Box 417, Georgetown, DE, 19947
Tel: 302-855-7878, Fax: 302-854-5079

Much of the County's Planning and Zoning Information can be found online at:
https://sussexcountyde.gov/sussex-county-mapping-applications

Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

---

**From:** Chad D. Carter <ccarter@beckermorgan.com>
**Sent:** Monday, February 17, 2025 11:23 AM
**To:** michael.lowery@sussexcountyde.gov
**Cc:** Jonathan D. Richard <jrichard@beckermorgan.com>; Jamie Whitehouse <jamie.whitehouse@sussexcountyde.gov>
**Subject:** RE: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Michael,
I just received a call from our client at City of Milford regarding the Deep Branch Park. He is fielding reporter inquiries in relation to the project being included on the February 19th agenda.
We just received comments from staff last Thursday, the 13th requesting updated plans to be included 10 days prior to a scheduled meeting.

1. The comments were received 4 business days prior to the hearing that you have scheduled, and
2. Per the attached email from Jamie, the plans were expected to be reviewed administratively.

My main concern is that the county has not given us adequate notice to update the plans accordingly, nor provide a comment response. Secondly, we were under the impression that the county would review and approve these plans administratively, as this is a municipal park with minor building improvements.

Please advise us on the status of above at your earliest convenience.

Chad D. Carter – Sr. Associate
Landscape Architect, RLA, ASLA
BECKER MORGAN GROUP, INC.

---

**From:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Sent:** Thursday, February 13, 2025 4:56 PM
**To:** Chad D. Carter <ccarter@beckermorgan.com>
**Subject:** FW: (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review 2023139.01

FYI

---

**From:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Sent:** Thursday, February 13, 2025 4:39 PM
**To:** Jonathan D. Richard <jrichard@beckermorgan.com>
**Subject:** (S-25-03) Deep Branch Park - Preliminary Site Plan - Staff Review

Mr. Richard,

Please see the attached Preliminary Site plan review for the Subject Plan.
Fee free to reach out with any questions.

Regards,
Michael

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department

2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878
michael.lowrey@sussexcountyde.gov

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf
Much of the County's Planning and Zoning Information can be found online at:
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BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

February 18, 2025

Mr. Jamie Whitehouse
Sussex County Planning and Zoning
2 The Circle
Georgetown, DE 19947

RE: **Preliminary Site Plan Submission #2**
**DEEP BRANCH PARK**
Milford, Delaware
2023139.01

Dear Mr. Whitehouse:

Becker Morgan Group, Inc, is hereby resubmitting a copy of the Preliminary Site Plan for the above referenced project on behalf of our client, the City of Milford. Please find the attached following documents for a Preliminary submission that has been revised per the comments dated 2/12/2025 in the following manner.

**Preliminary Site Plan**

1. Please clarify the nature/use of the proposed building adjacent to the parking area on the Plan. ***BMG Response: The proposed building is proposed to be building for restrooms for park patrons.***
2. Please include topographic contours at one-foot intervals on the Plan or include a separate request for waiver by the Commission (§115-220(B)(4)). ***BMG Response: Topographic contours have been added to the plan.***
3. Please include the net development area in the Site Data Column (§115-220(B)(5)). ***BMG Response: Development area has been added to the Site Data Column.***
4. Please include the location & detail on any proposed lighting to ensure the Plan meets (§115-166(G)). ***BMG Response: The proposed park is planned to be a dawn to dusk park. Therefore, no site lighting is proposed.***
5. Please include number of construction phases proposed, if any, with the plot showing the approximate boundaries of each phase and the proposed completion date of each phase (§115-220(B)(12)). ***BMG Response: This project is proposed to be in one phase.***
6. Please include the location & detail on any proposed lighting to ensure the Plan meets (§115-166(G)). ***BMG Response: See response to comment #4.***
7. County procedures require the access road provide a minimum ROW width of (30) feet mirroring State of DE road standards. Please add notation to the plan indicating a (30) foot ROW is encompassing the paved road and trail within the access corridor connecting S. Rehoboth Boulevard and the parking area. ***BMG Response: The proposed access road is proposed to be privately owned and maintained by the City of Milford. No ROW dedication is proposed other than for what is required by DelDOT, along S. Rehoboth Blvd.***
8. Please provide screening on the Plan for the parking area as required where the distance from the parking is "closer than 50 feet to a lot in a residential district or to any lot upon which there is a dwelling" (§115-166(H)). ***BMG Response: The***

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

PORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

1942 EAST 7TH STREET, SUITE 240
CHARLOTTE, NORTH CAROLINA 28204
980.270.9100

314 EAST MAIN STREET
CLAYTON, NORTH CAROLINA 27520
919.243.1332

www.beckermorgan.com

BECKER MORGAN GROUP
ARCHITECTURE ENGINEERING

***Plan has been updated to include screening and buffering along the residential properties.***

9. Please revise the plan to meet, or provide detail showing how, the Plan meets the separation requirements for "sidewalks and/or walkways" (Proposed Trail) adjacent to the parking area (§115-166(C)). ***BMG Response: In areas where the sidewalk is adjacent to the parking lot, upright curb or parking bumpers will be used so vehicles do not protrude over the sidewalk. This will be detailed in the preparation of the construction plans. At the scale the of the current plan it is hard to represent that level of detail.***

Staff design recommendations:

10. Given the approximation of the jurisdictional wetland boundary on the Plan, Staff recommend the Applicant consider a minor revision to the geometry of the proposed paved multi-use trail in the southwest corner of the site to ensure no proposed improvements are within areas potentially containing jurisdictional wetlands. ***BMG Response: The proposed trail has been adjusted to provide a 25' buffer to the wetlands. This plan will comply with all wetland setbacks and buffers per Sussex County's Code.***
11. Staff recommend the Applicant consider a design which provides improved screening for the adjacent Parcels along the access corridor (Parcel #s 39.09 & 38.01-38.06) via landscape design or fencing. ***BMG Response: We have added screening/buffering from the listed parcels.***
12. Staff recommend the Applicant consider a design which provides more separation from the proposed trail for Parcel #s 21.00, 23.00, 24.00, & 25.00. Staff recommend the Applicant consider screening or buffering from perimeter residential properties where dwelling units are immediately adjacent to the Parcel and where no natural screening exists. Many of the residential structures with frontage on N. Horseshoe Drive would be within 20-25 feet of the proposed trail. Several of the exiting accessory structures would be immediately adjacent to the trail. ***BMG Response: The proposed trail has been adjusted to provide extra room for screening/buffering from the residential properties along the southside of the project.***
13. Staff recommend the Applicant consider more of a setback, buffer, or improved screening around the perimeter of the site to possibly include greater setbacks for any improvements, landscaping, fencing, etc. ***BMG Response: Some areas have been adjusted to provide more screening/buffers area. As the design progresses, more adjustments will be made to provide buffering to the adjacent properties.***
14. Staff recommend the Applicant consider relocation of the parking area a greater distance from the boundary with the neighboring Parcel in order to accommodate the design standards & screening required under (§115-166). ***BMG Response: As the design progresses, we will take this into consideration.***

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

15. Prior to approval of the Final Plan, approval letters or letters of no objection from the following agencies shall be submitted to the Sussex County Planning and Zoning Office:
    a. Sussex Conservation District (SCD)
    b. Delaware Department of Transportation (DelDOT)
    c. Office of the State Fire Marshal (OSFM)

    ***BMG Response: Acknowledged.***

Enclosed is One (1) Copy of the revised Preliminary Site Plan

Please contact me with any questions you may have.

Sincerely,

BECKER MORGAN GROUP, INC.

Jonathan D. Richard, P.E.
Senior Associate

Enclosures

202313901ad-ltr-S.C.P.Z.docx

S-25-03

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

RECEIVED

JAN 23 2025

SUSSEX COUNTY PLANNING & ZONING

January 22, 2025

Mr. Jamie Whitehouse
Sussex County Planning and Zoning
2 The Circle
Georgetown, DE 19947

RE: **Preliminary Administrative Site Plan Submission**
**DEEP BRANCH PARK**
Milford, Delaware
2023139.01

Dear Mr. Whitehouse:

Becker Morgan Group, Inc, is hereby submitting a copy of the Preliminary Site Plan for the above referenced project on behalf of our client, the City of Milford. Please find the attached following documents for a Preliminary submission for consideration for an Administrative Site Plan submission.

- Three (3) Copies - Preliminary Site Plan

RECEIVED

JAN 23 2025

SUSSEX COUNTY PLANNING & ZONING

Please contact me with any questions you may have.

Sincerely,

BECKER MORGAN GROUP, INC.

Jonathan D. Richard, P.E.
Senior Associate

Enclosures

202313901ac-ltr-S.C.P.Z.docx

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
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919.243.1332

www.beckermorgan.com

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

February 18, 2025

Mr. Jamie Whitehouse
Sussex County Planning and Zoning
2 The Circle
Georgetown, DE 19947

RE: **Preliminary Site Plan Submission #2**
**DEEP BRANCH PARK**
Milford, Delaware
2023139.01

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BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

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    b. Delaware Department of Transportation (DelDOT)
    c. Office of the State Fire Marshal (OSFM)

    ***BMG Response: Acknowledged.***

Enclosed is One (1) Copy of the revised Preliminary Site Plan

Please contact me with any questions you may have.

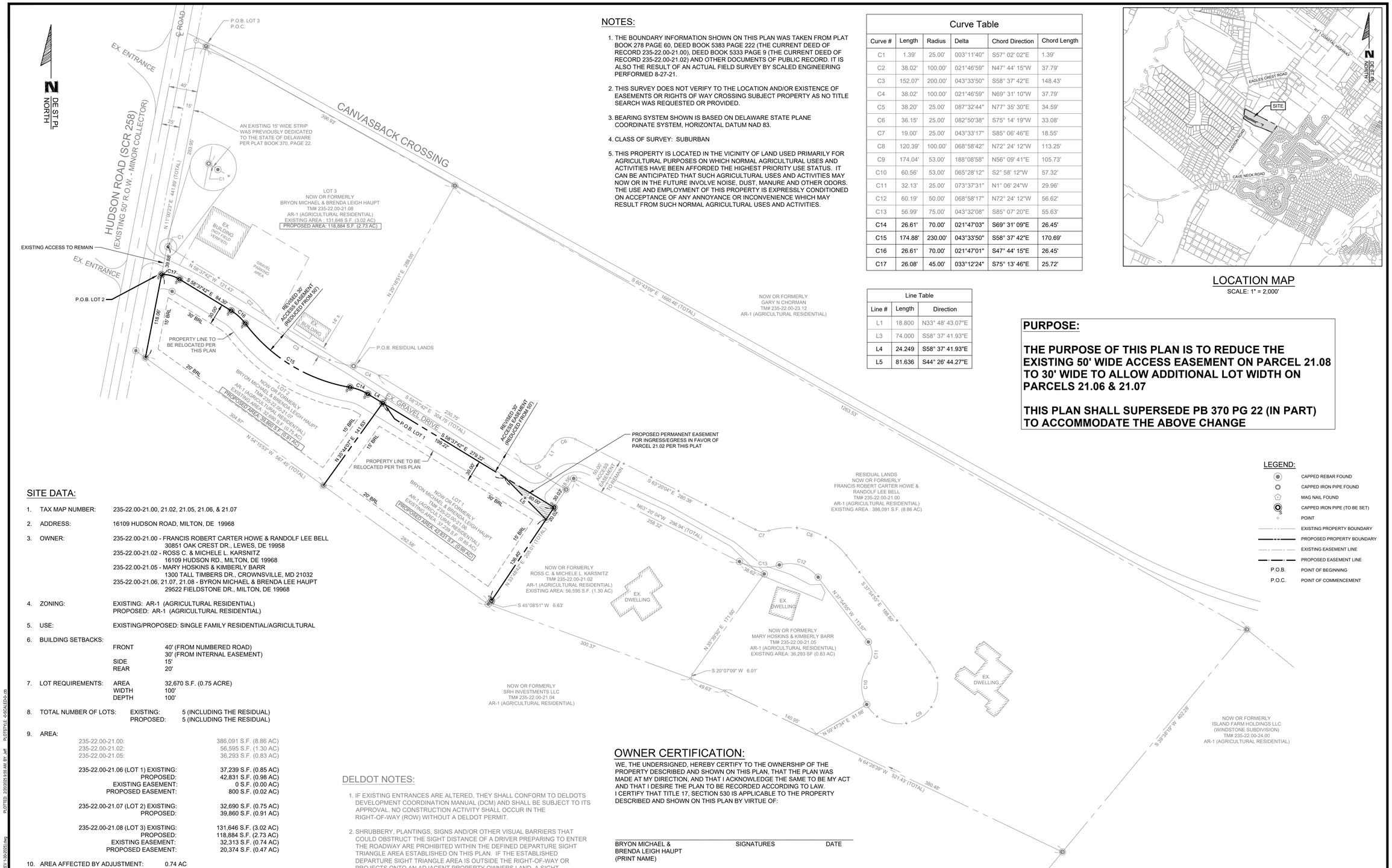
Sincerely,

BECKER MORGAN GROUP, INC.

Jonathan D. Richard, P.E.
Senior Associate

Enclosures

202313901ad-ltr-S.C.P.Z.docx




## NOTES:

1. THE BOUNDARY INFORMATION SHOWN ON THIS PLAN WAS TAKEN FROM PLAT BOOK 278 PAGE 60, DEED BOOK 5383 PAGE 222 (THE CURRENT DEED OF RECORD 235-22.00-21.00), DEED BOOK 5333 PAGE 9 (THE CURRENT DEED OF RECORD 235-22.00-21.02) AND OTHER DOCUMENTS OF PUBLIC RECORD. IT IS ALSO THE RESULT OF AN ACTUAL FIELD SURVEY BY SCALED ENGINEERING PERFORMED 8-27-21.
2. THIS SURVEY DOES NOT VERIFY TO THE LOCATION AND/OR EXISTENCE OF EASEMENTS OR RIGHTS OF WAY CROSSING SUBJECT PROPERTY AS NO TITLE SEARCH WAS REQUESTED OR PROVIDED.
3. BEARING SYSTEM SHOWN IS BASED ON DELAWARE STATE PLANE COORDINATE SYSTEM, HORIZONTAL DATUM NAD 83.
4. CLASS OF SURVEY: SUBURBAN
5. THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE AND OTHER ODORS. THE USE AND EMPLOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES.

### Curve Table

| Curve # | Length | Radius | Delta | Chord Direction | Chord Length |
|---|---|---|---|---|---|
| C1 | 1.39' | 25.00' | 003°11'40" | S57° 02' 02"E | 1.39' |
| C2 | 38.02' | 100.00' | 021°46'59" | N47° 44' 15"W | 37.79' |
| C3 | 152.07' | 200.00' | 043°33'50" | S58° 37' 42"E | 148.43' |
| C4 | 38.02' | 100.00' | 021°46'59" | N69° 31' 10"W | 37.79' |
| C5 | 38.20' | 25.00' | 087°32'44" | N77° 35' 30"E | 34.59' |
| C6 | 36.15' | 25.00' | 082°50'38" | S75° 14' 19"W | 33.08' |
| C7 | 19.00' | 25.00' | 043°33'17" | S85° 06' 46"E | 18.55' |
| C8 | 120.39' | 100.00' | 068°58'42" | N72° 24' 12"W | 113.25' |
| C9 | 174.04' | 53.00' | 188°08'58" | N56° 09' 41"E | 105.73' |
| C10 | 60.56' | 53.00' | 065°28'12" | S2° 58' 12"W | 57.32' |
| C11 | 32.13' | 25.00' | 073°37'31" | N1° 06' 24"W | 29.96' |
| C12 | 60.19' | 50.00' | 068°58'17" | N72° 24' 12"W | 56.62' |
| C13 | 56.99' | 75.00' | 043°32'08" | S85° 07' 20"E | 55.63' |
| C14 | 26.61' | 70.00' | 021°47'03" | S69° 31' 09"E | 26.45' |
| C15 | 174.88' | 230.00' | 043°33'50" | S58° 37' 42"E | 170.69' |
| C16 | 26.61' | 70.00' | 021°47'01" | S47° 44' 15"E | 26.45' |
| C17 | 26.08' | 45.00' | 033°12'24" | S75° 13' 46"E | 25.72' |

### Line Table

| Line # | Length | Direction |
|---|---|---|
| L1 | 18.800 | N33° 48' 43.07"E |
| L3 | 74.000 | S58° 37' 41.93"E |
| L4 | 24.249 | S58° 37' 41.93"E |
| L5 | 81.636 | S44° 26' 44.27"E |




LOCATION MAP
SCALE: 1" = 2,000'

## PURPOSE:

**THE PURPOSE OF THIS PLAN IS TO REDUCE THE EXISTING 50' WIDE ACCESS EASEMENT ON PARCEL 21.08 TO 30' WIDE TO ALLOW ADDITIONAL LOT WIDTH ON PARCELS 21.06 & 21.07**

**THIS PLAN SHALL SUPERSEDE PB 370 PG 22 (IN PART) TO ACCOMMODATE THE ABOVE CHANGE**

## LEGEND:

- CAPPED REBAR FOUND
- CAPPED IRON PIPE FOUND
- MAG NAIL FOUND
- CAPPED IRON PIPE (TO BE SET)
- POINT
- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT

## SITE DATA:

1. TAX MAP NUMBER: 235-22.00-21.00, 21.02, 21.05, 21.06, & 21.07
2. ADDRESS: 16109 HUDSON ROAD, MILTON, DE 19968
3. OWNER: 235-22.00-21.00 - FRANCIS ROBERT CARTER HOWE & RANDOLF LEE BELL
   30851 OAK CREST DR., LEWES, DE 19958
   235-22.00-21.02 - ROSS C. & MICHELE L. KARSNITZ
   16109 HUDSON RD., MILTON, DE 19968
   235-22.00-21.05 - MARY HOSKINS & KIMBERLY BARR
   1300 TALL TIMBERS DR., CROWNSVILLE, MD 21032
   235-22.00-21.06, 21.07, 21.08 - BYRON MICHAEL & BRENDA LEE HAUPT
   29522 FIELDSTONE DR., MILTON, DE 19968
4. ZONING: EXISTING: AR-1 (AGRICULTURAL RESIDENTIAL)
   PROPOSED: AR-1 (AGRICULTURAL RESIDENTIAL)
5. USE: EXISTING/PROPOSED: SINGLE FAMILY RESIDENTIAL/AGRICULTURAL
6. BUILDING SETBACKS:
   FRONT 40' (FROM NUMBERED ROAD)
   30' (FROM INTERNAL EASEMENT)
   SIDE 15'
   REAR 20'
7. LOT REQUIREMENTS: AREA 32,670 S.F. (0.75 ACRE)
   WIDTH 100'
   DEPTH 100'
8. TOTAL NUMBER OF LOTS: EXISTING: 5 (INCLUDING THE RESIDUAL)
   PROPOSED: 5 (INCLUDING THE RESIDUAL)
9. AREA:

| | |
|---|---|
| 235-22.00-21.00: | 386,091 S.F. (8.86 AC) |
| 235-22.00-21.02: | 56,595 S.F. (1.30 AC) |
| 235-22.00-21.05: | 36,293 S.F. (0.83 AC) |
| 235-22.00-21.06 (LOT 1) EXISTING: | 37,239 S.F. (0.85 AC) |
| PROPOSED: | 42,831 S.F. (0.98 AC) |
| EXISTING EASEMENT: | 0 S.F. (0.00 AC) |
| PROPOSED EASEMENT: | 800 S.F. (0.02 AC) |
| 235-22.00-21.07 (LOT 2) EXISTING: | 32,690 S.F. (0.75 AC) |
| PROPOSED: | 39,860 S.F. (0.91 AC) |
| 235-22.00-21.08 (LOT 3) EXISTING: | 131,646 S.F. (3.02 AC) |
| PROPOSED: | 118,884 S.F. (2.73 AC) |
| EXISTING EASEMENT: | 32,313 S.F. (0.74 AC) |
| PROPOSED EASEMENT: | 20,374 S.F. (0.47 AC) |

10. AREA AFFECTED BY ADJUSTMENT: 0.74 AC
11. POSTED SPEED LIMIT: 40 MPH
12. SEWER PROVIDER: ON-SITE SEPTIC
13. WATER PROVIDER: ON-SITE WELL
14. THIS PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOOD ZONE, DELINEATED BY THE NATIONAL FLOOD INSURANCE PROGRAM AS SHOWN AS ON FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 10005C0188K REVISED JANUARY 6, 2005 (ZONE X).
15. NO WETLANDS ARE ON SITE PER THE FEDERAL WETLANDS INVENTORY.
16. PROXIMITY TO DELDOT TID AREA: SITE IS ±10 MILES OUTSIDE OF THE HENLOPEN TID
17. RECHARGE AREA: FAIR

## DELDOT NOTES:

1. IF EXISTING ENTRANCES ARE ALTERED, THEY SHALL CONFORM TO DELDOTS DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL. NO CONSTRUCTION ACTIVITY SHALL OCCUR IN THE RIGHT-OF-WAY (ROW) WITHOUT A DELDOT PERMIT.
2. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNERS LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
3. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
4. REFER TO DELDOT STANDARD DETAIL M-2 (2011) FOR RIGHT-OF-WAY MONUMENTS.
5. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.

## OWNER CERTIFICATION:

WE, THE UNDERSIGNED, HEREBY CERTIFY TO THE OWNERSHIP OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, AND THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND THAT I DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.
I CERTIFY THAT TITLE 17, SECTION 530 IS APPLICABLE TO THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN BY VIRTUE OF:

| | | |
|---|---|---|
| BRYON MICHAEL & BRENDA LEIGH HAUPT (PRINT NAME) | SIGNATURES | DATE |
| PARCEL 21.00 (PRINT NAME) | SIGNATURE | DATE |
| PARCEL 21.02 (PRINT NAME) | SIGNATURE | DATE |
| PARCEL 21.05 (PRINT NAME) | SIGNATURE | DATE |

## ENGINEERS CERTIFICATION

I, CARLTON R. SAVAGE, JR, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

CARLTON R. SAVAGE, JR., P.E. (LICENSE #16457) DATE

SCALED. ENGINEERING
Sealed Engineering Inc.
20246 Coastal Highway
Rehoboth Beach, DE 19971
Phone: (302) 236-3600

LOT LINE ADJUSTMENT PLAN

# LOTS 1, 2, & 3 OF HOWE AND BELL SUBDIVISION
## TAX MAP 235-22.00-21.06, 21.07 & 21.08
BROADKILL HUNDRED, SUSSEX COUNTY, DELAWARE

REVISIONS:
2-12-25 ADJUSTED LOTS 1 & 2. REVISED ACCESS EASEMENT ON LOT 3

| | |
|---|---|
| DATE: | 10-18-24 |
| SCALE: | 1" = 60' |
| DRAWN BY: | JRE |
| PROJECT NO. | BHAU001 |

THIS DRAWING INCLUDING DESIGN AND CONSTRUCTION FEATURES ARE PROPRIETARY TO SCALED ENGINEERING INC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. COPYRIGHT © 2025

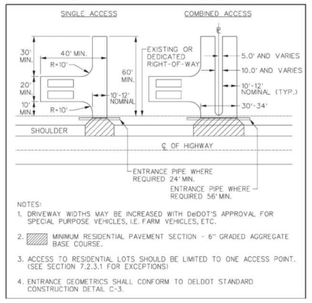
S:\SURVEY\HAUPT\DESIGN\BHAU001 - MINOR SUBDIVISION - Concept - (REV 1-30-2025).dwg PLOTTED: 2/20/2025 9:55 AM, BY: Jeff PLOTSTYLE: A-SCALED-Ok.ctb

## DelDOT NOTES

1. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO THE PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
3. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION THEN ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
4. THE POSTED SPEED LIMIT FOR SCR 326 (BETHESDA ROAD) IS 50MPH.
5. LOT 1, LOT 2, AND RESIDUAL LANDS SHALL HAVE ACCESS TO SCR 326 VIA THE 30-FOOT WIDE INGRESS/EGRESS EASEMENT.

*DelDOT Development Coordination Manual*

***Figure 7.2.3.3-a Residential Access Design Requirements***



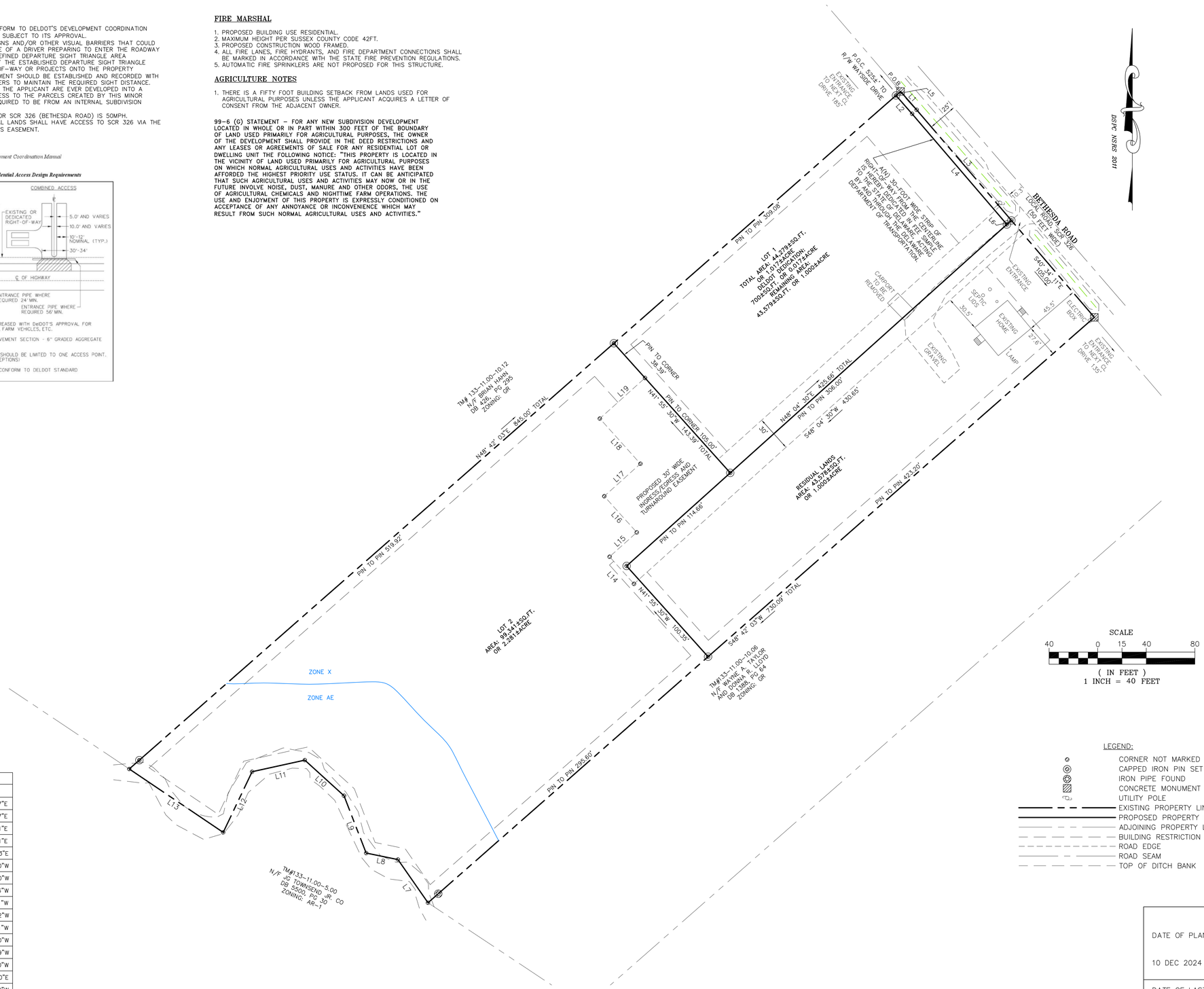

## FIRE MARSHAL

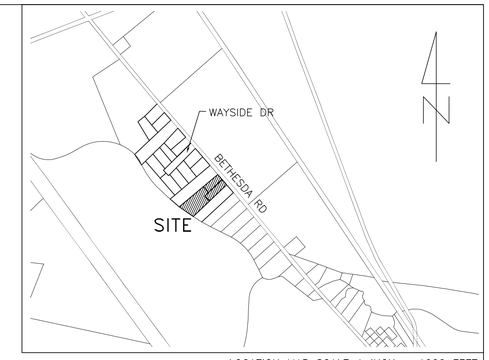
1. PROPOSED BUILDING USE RESIDENTIAL.
2. MAXIMUM HEIGHT PER SUSSEX COUNTY CODE 42FT.
3. PROPOSED CONSTRUCTION WOOD FRAMED.
4. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
5. AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THIS STRUCTURE.

## AGRICULTURE NOTES

1. THERE IS A FIFTY FOOT BUILDING SETBACK FROM LANDS USED FOR AGRICULTURAL PURPOSES UNLESS THE APPLICANT ACQUIRES A LETTER OF CONSENT FROM THE ADJACENT OWNER.

**99-5 (G) STATEMENT – FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR IN PART WITHIN 300 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, THE OWNER OF THE DEVELOPMENT SHALL PROVIDE IN THE DEED RESTRICTIONS AND ANY LEASES OR AGREEMENTS OF SALE FOR ANY RESIDENTIAL LOT OR DWELLING UNIT THE FOLLOWING NOTICE: "THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES."**




LOCATION MAP SCALE 1 INCH = 1000 FEET

SCALE
40 0 15 40 80
( IN FEET )
1 INCH = 40 FEET

LEGEND:

- CORNER NOT MARKED
- CAPPED IRON PIN SET
- IRON PIPE FOUND
- CONCRETE MONUMENT FOUND
- UTILITY POLE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- ADJOINING PROPERTY LINE
- BUILDING RESTRICTION LINE
- ROAD EDGE
- ROAD SEAM
- TOP OF DITCH BANK

| PARCEL LINE TABLE | | |
|---|---|---|
| LINE # | LENGTH | DIRECTION |
| L1 | 20.14 | S41° 17' 57"E |
| L2 | 20.10 | S41° 17' 57"E |
| L3 | 119.86 | S40° 34' 11"E |
| L4 | 119.94 | S40° 34' 11"E |
| L5 | 5.00 | N48° 42' 03"E |
| L6 | 5.00 | S48° 04' 30"W |
| L7 | 43.29 | N34° 50' 00"W |
| L8 | 26.68 | N78° 25' 16"W |
| L9 | 50.59 | N21° 08' 51"W |
| L10 | 43.61 | N47° 42' 52"W |
| L11 | 44.44 | S77° 32' 31"W |
| L12 | 55.28 | S25° 29' 40"W |
| L13 | 93.25 | N55° 58' 59"W |
| L14 | 30.00 | N41° 55' 30"W |
| L15 | 30.00 | N48° 04' 30"E |
| L16 | 40.00 | N41° 55' 30"W |
| L17 | 40.00 | N48° 04' 30"E |
| L18 | 50.00 | N41° 55' 30"W |
| L19 | 50.00 | N48° 04' 30"E |

## SITE DATA

1. TAX PARCEL (ALL): 133-11.00-10.01, DB 5799, PG 7.
   OWNER'S NAME: JOSEPH COSTA
   PROPERTY ADDRESS: 26820 BETHESDA ROAD, MILLSBORO, DE 19966

2. TABLE OF AREAS:
   AREA PRIOR TO SUBDIVISION: 165,198±SQ.FT. OR 4.298±ACRES

| LOT 1 | SQUARE FEET | ACRE(S) |
|---|---|---|
| TOTAL AREA | 44,279±SQ.FT. | 1.017±ACRE |
| DELDOT DEDICATION | 700±SQ.FT. | 0.017±ACRE |
| REMAINING AREA | 43,579±SQ.FT. | 1.000±ACRE |
| LOT 2 | SQUARE FEET | ACRE(S) |
| TOTAL AREA | 99,341±SQ.FT. | 2.281±ACRE |
| RESIDUAL LANDS | SQUARE FEET | ACRE(S) |
| AREA POST SUBDIVISION | 43,578±SQ.FT. | 1.000±ACRES |

3. ZONING: "GR"
   PRESENT USE: RESIDENTIAL
   PROPOSED USE: RESIDENTIAL
   SEWER: ON SITE PRIVATE SEPTIC
   WATER: ON SITE PRIVATE WELL

   BUILDING SETBACKS:
   FRONT (NUMBERED ROAD): 40FT
   FRONT (SUBDIVISION ROAD): 30FT
   SIDE: 10FT
   REAR: 10FT

4. EXISTING NUMBER OF LOTS: 1
   PROPOSED NUMBER OF LOTS: 3 INCLUDING RESIDUAL LANDS

5. THIS PROPERTY IS LOCATED 8.20± MILES OUTSIDE OF THE HENLOPEN TRANSPORTATION IMPROVEMENT DISTRICT.

6. ACCORDING TO FEMA FIRM MAP 10005C0452K, DATED 06/20/2018, PORTIONS OF THE PROPERTY HEREIN LIES IN ZONE X AND ZONE AE.

7. NO BUILDING STRUCTURE OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.

8. PROPOSED LOT 1, LOT 2, AND RESIDUAL LANDS WILL HAVE SHARED MAINTENANCE AND USE OF THE PROPOSED 30FT WIDE INGRESS/EGRESS AND TURNAROUND EASEMENT.

9. NO TITLE SEARCH PERFORMED OR PROVIDED IN PREPARATION OF THIS PLAN.

10. THIS PLAN DOES NOT CERTIFY THE EXISTENCE OR NON-EXISTENCE OF EASEMENTS OR RIGHTS OF WAY AS A FULL AND COMPLETE SEARCH MAY REVEAL IN THE SUSSEX COUNTY RECORDER OF DEEDS.

### OWNER OF RECORD

I HEREBY CERTIFY TO THE OWNERSHIP OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, AND THAT I ACKNOWLEDGE THE SAME TO BE OUR ACT AND THAT I DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

2-19-26
DATE

JOSEPH COSTA
1208 WOODLAND AVENUE, SHARON HILL, PA 19079
484-368-9461

### SURVEYOR'S CERTIFICATION

I, ALAN O'DALE KENT REGISTERED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF DELAWARE, HEREBY STATE THAT THE INFORMATION SHOWN ON THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS ESTABLISHED BY THE STATE OF DELAWARE BOARD OF PROFESSIONAL LAND SURVEYORS. ANY CHANGES TO THE PROPERTY CONDITIONS, IMPROVEMENTS, BOUNDARY OR PROPERTY CORNERS AFTER THE DATE SHOWN HEREON SHALL NECESSITATE A NEW REVIEW AND CERTIFICATION FOR ANY OFFICIAL OR LEGAL USE.

LAND SURVEYOR
NO. 738
DELAWARE
ALAN O'DALE KENT

20FEB2026
DATE

ALAN O'DALE KENT, PLS#738
ALAN O KENT LAND SURVEYING LLC
9505 SUSSEX STREET
SEAFORD, DE 19973
PHONE:(302) 745-1735
EMAIL: aokilslc@outlook.com

JOB # 2024270 THIS IS A SUBURBAN CLASS SURVEY

| | |
|---|---|
| DATE OF PLAN<br>10 DEC 2024 | MINOR SUBDIVISION PLAN<br>OF THE LANDS NOW OR FORMERLY OF<br>JOSEPH COSTA<br><br>SCR 326, MILLSBORO, DE<br>DAGSBORO HUNDRED, SUSSEX COUNTY |
| DATE OF LAST FIELD WORK<br>10 OCT 2024 | PREPARED BY<br>ALAN O KENT LAND SURVEYING, LLC<br>SEAFORD, DE 19973<br>(302) 745-1735 |

RECEIVED
FEB 27 2025
SUSSEX COUNTY
PLANNING & ZONING

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

SHANTÉ A. HASTINGS
SECRETARY

February 26, 2025

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning Commission
Sussex County Administration Building
P.O. Box 417
Georgetown, Delaware 19947

**SUBJECT: Minor Subdivision - Letter of No Objection to Recordation**
**2024270 COSTA MIN SUB**
Tax Parcel # 133-11.00-10.01
BETHESDA ROAD (SCR 326)
Dagsboro Hundred, Sussex County

Dear Mr. Whitehouse:

The Department of Transportation has reviewed the Minor Subdivision Plan dated November 10, 2024 (Signed and Sealed February 20, 2025), for the above referenced site, and has no objection to its recordation as shown on the enclosed drawing. This "No Objection to Recordation" approval shall be valid for a period of **five (5) years**. If the Minor Subdivision Plan is not recorded and/or an entrance permit is not issued for the lot(s) prior to the expiration of the "No Objection to Recordation", then the plan must be updated to meet current requirements and resubmitted for review and approval.

Entrances(s) must be installed prior to the sale of the lot(s). All entrances shall conform to DelDOT's Development Coordination Manual and shall be subject to its approval. **This letter does not authorize the commencement of entrance construction.**

This "No Objection to Recordation" letter is not a DelDOT endorsement of the project discussed above. Rather, it is a recitation of the transportation improvements, which the applicant may be required to make as a pre-condition to recordation steps and deed restrictions as required by the respective county/municipality in which the project is located. If transportation investments are necessary, they are based on an analysis of the proposed project, its location, and its estimated impact on traffic movements and densities. The required improvements conform to DelDOT's published rules, regulations and standards. Ultimate responsibility for the approval of any project rests with the local government in which the land use decisions are authorized. There may be other

DelDOT

reasons (environmental, historic, neighborhood composition, etc.) which compel that jurisdiction to modify or reject this proposed plan even though DelDOT has established that these enumerated transportation improvements are acceptable.

The owner shall be responsible to submit a copy of the **recorded Minor Subdivision Plan** showing all appropriate signatures, seals, plot book and page number to the South District Public Works office (302) 853-1341 in order to obtain the entrance permit(s) for the proposed minor subdivision.

Sincerely,

John Pietrobono
Sussex County Review Coordinator
Development Coordination

cc: Alan Kent, Alan O Kent Land Surveying LLC
Sussex County Planning & Zoning
Jessica L. Watson, Sussex Conservation District
Matt Schlitter, South District Public Works Engineer
Travis Schirmer, South District Public Works Supervisor
James Argo, South District Project Reviewer
James Smith, South District Entrance Permit Supervisor
Wendy L. Polasko, P.E., Subdivision Engineer
Thomas Gagnon, Sussex County Reviewer

# OFFICE OF THE STATE FIRE MARSHAL
## Technical Services

22705 Park Avenue
Georgetown, DE 19947

## SFMO PERMIT – SHALL BE POSTED ON JOBSITE UNTIL FINAL INSPECTION

**Plan Review Number:** 2025-04-219635-MJS-01
**Status:** Approved as Submitted

**Tax Parcel Number:** 133-11.00-10.01
**Date:** 02/07/2025

### Project

Costa Mini Subdivision Millsboro

Costa Millsboro

26820 Bethesda Road
Millsboro DE 19966

### Scope of Project

**Number of Stories:**
**Square Footage:**
**Construction Class:**
**Fire District:**

**Occupant Load Inside:**
**Occupancy Code:**

### Applicant

Alan Kent
9505 Sussex Street
Seaford, DE 19973

This office has reviewed the plans and specifications of the above described project for compliance with the Delaware State Fire Prevention Regulations, in effect as of the date of this review.

A Review Status of "Approved as Submitted" or "Not Approved as Submitted" must comply with the provisions of the attached Plan Review Comments.

Any Conditional Approval does not relieve the Applicant, Owner, Engineer, Contractor, nor their representatives from their responsibility to comply with the plan review comments and the applicable provisions of the Delaware State Fire Prevention Regulations in the construction, installation and/or completion of the project as reviewed by this Agency.

A final inspection is required.

This Plan Review Project was prepared by:

William Kelly
Fire Protection Specialist III

RECEIVED

FEB 2 7 2025

SUSSEX COUNTY
PLANNING & ZONING

# FIRE PROTECTION PLAN REVIEW COMMENTS

**Plan Review Number:** 2025-04-219635-MJS-01 **Tax Parcel Number:** 133-11.00-10.01
**Status:** Approved as Submitted **Date:** 02/07/2025

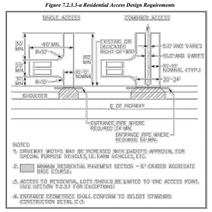
## PROJECT COMMENTS

| | |
|---|---|
| 1002 A | This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) ADOPTED September 1, 2021. The Delaware State Fire Prevention Regulations are available on our website at www.statefiremarshal.delaware.gov.These plans were not reviewed for compliance with the Americans with Disabilities Act (ADA). These plans were not reviewed for compliance with any Local, Municipal, nor County Building Codes. The Office of the State Fire Marshal recommends theinstallation of fire sprinkler systems in all residential occupancies, including one- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here:https://statefiremarshal.delaware.gov /wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf |
| 1011 A | Per Fire Flow Table 1, the following occupancies: One and Two Family Detached Dwellings, Multi Family & Other Residential, Rowhouses & Townhouses Shall not exceed 10,000 aggregate gross square footage; shall not exceed 35"" or three stories; and Shallhave a minimum setback of 15"" from all property lines and 10"" setback from exposure hazards on the same property. Additionally, Rowhouses & Townhouses shall have an internal fire separation of two hour fire rated walls per SFPR Reg 702, Chapter 2. |
| 2500 A | A final inspection is required for this project prior to occupancy (DSFPR Part I, Section 4-7). Contact this Agency to schedule this inspection. Please have the plan review number available. A MINIMUM OF FIVE (5) WORKING DAYS NOTICE IS REQUIRED. |
| 2710 A | The following items will be field verified by this Agency at the time of final inspection: |
| 1408 A | All premises where emergency personnel may be called upon to provide emergency services, which are not readily accessible from streets, shall be provided with suitable gates, access roads, and fire lanes so that all buildings on thepremises are accessible to emergency apparatus. (DSFPR Regulation 705, Chapter 5, Section 2). |
| 1171 A | Any dead end road more than 300 feet in length shall be provided with a turn |

around or cul-de-sac arranged such that emergency apparatus will be able to turn around by making not more than one backing maneuver.Any turn-arounds and cul-de-sacs shall be designed in accordance with DSFPR Regulation 705, Chapter 2, Sections 2.3, 2.3.1, and 2.3.

*DelDOT Development Coordination Manual*

***Figure 7.2.3.5-a Residential Access Design Requirements***




**7.2.3.4 Entrance Profile**

Profiles of entrances shall be designed in accordance with this *Development Coordination Manual* and manuals, guidelines and policies of the Delaware Department of Transportation, *American Association of State Highway and Transportation Officials* (AASHTO) or other Nationally Accepted Standard (NAS). Maximum grades shall not exceed 10% and maximum algebraic difference in grade shall not exceed 12% to prevent vehicles from "bottoming out". Vertical curve transition should be provided at the intersection of the driveway profile and the cross slope of roadway shoulder extended.

**7.2.3.5 Entrance Drainage**

Pipes are manufactured in various sizes, shapes, and materials. Entrance pipes commonly used in Delaware include:

A. Reinforced concrete pipe (RCP) or elliptical (ERCP).



## NOTES:

THIS DRAWING DOES NOT VERIFY THE LOCATION, EXISTENCE, AND/OR NON-EXISTENCE OF RIGHT-OF-WAYS OR EASEMENTS CROSSING THE SUBJECT PROPERTY.

THIS DRAWING DOES NOT VERIFY THE EXISTENCE AND/OR NON-EXISTENCE OF WETLANDS OR PLANT SPECIES.

THIS DRAWING DOES NOT VERIFY UTILITIES, OR ANY OTHER SUBSURFACE OBJECTS.

ALL SETBACKS MUST BE VERIFIED BY THE HOME OWNER, CONTRACTOR, AND HOMEOWNER'S ASSOCIATION PRIOR TO ANY CONSTRUCTION. FRONT, SIDE AND REAR SETBACKS SHOWN PER THE TOWN OF SOUTH BETHANY. HOME OWNER ASSOCIATION AND COMMUNITY BYLAWS MAY MANDATE MORE RESTRICTIVE SETBACKS AND SHALL BE THE RESPONSIBILITY OF THE OWNER, CONTRACTOR, AND HOMEOWNER'S ASSOCIATION TO VERIFY CONFORMANCE TO SUCH RESTRICTIONS.

NO TITLE SEARCH WAS PROVIDED NOR STIPULATED.

THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY PERFORMED ON 12-4-2024 & 12-6-2024, BY SCALED ENGINEERING, INC. BOUNDARY INFORMATION WAS TAKEN FROM DEED BOOK 1651 PAGE 251 (THE CURRENT DEED OF RECORD) AND OTHER DOCUMENTS OF PUBLIC RECORD AND HAS BEEN ROTATED TO DELAWARE STATE PLANE COORDINATE SYSTEM (NAD83, NAVD88).

ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.

NO BUILDING STRUCTURE OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.

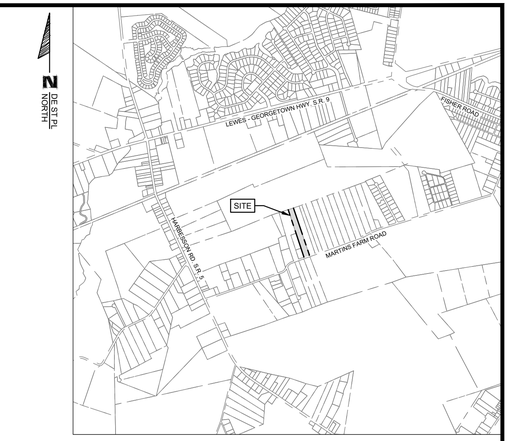
A SHARED USE MAINTENANCE AGREEMENT SHALL BE ESTABLISHED FOR THE USE OF THE SHARED ACCESS ROAD.

## DELDOT NOTES:

1. IF EXISTING ENTRANCES ARE ALTERED, THEY SHALL CONFORM TO DELDOTS DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL. NO CONSTRUCTION ACTIVITY SHALL OCCUR IN THE RIGHT-OF-WAY (ROW) WITHOUT A DELDOT PERMIT.
2. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNERS LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
3. REFER TO DELDOT STANDARD DETAIL M-2 FOR RIGHT-OF-WAY MONUMENTS.
4. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
5. LOTS 1, 2, 3, AND 4 SHALL HAVE DIRECT ACCESS TO SCR 291 VIA PROPOSED EASEMENT AND MODIFIED EXISTING ENTRANCE. RESIDUAL LANDS SHALL HAVE DIRECT ACCESS TO SCR 291 VIA PROPOSED MODIFIED COMBINED ENTRANCE.
6. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET. THE DEVELOPER OF THE MAJOR SUBDIVISION MAY ALSO BE REQUIRED TO UPGRADE THE FRONTAGE ROAD OF THE ORIGINAL UNSUBDIVIDED PARCEL TO THE CURRENT ROADWAY FUNCTIONAL CLASSIFICATION STANDARDS AT THAT TIME.

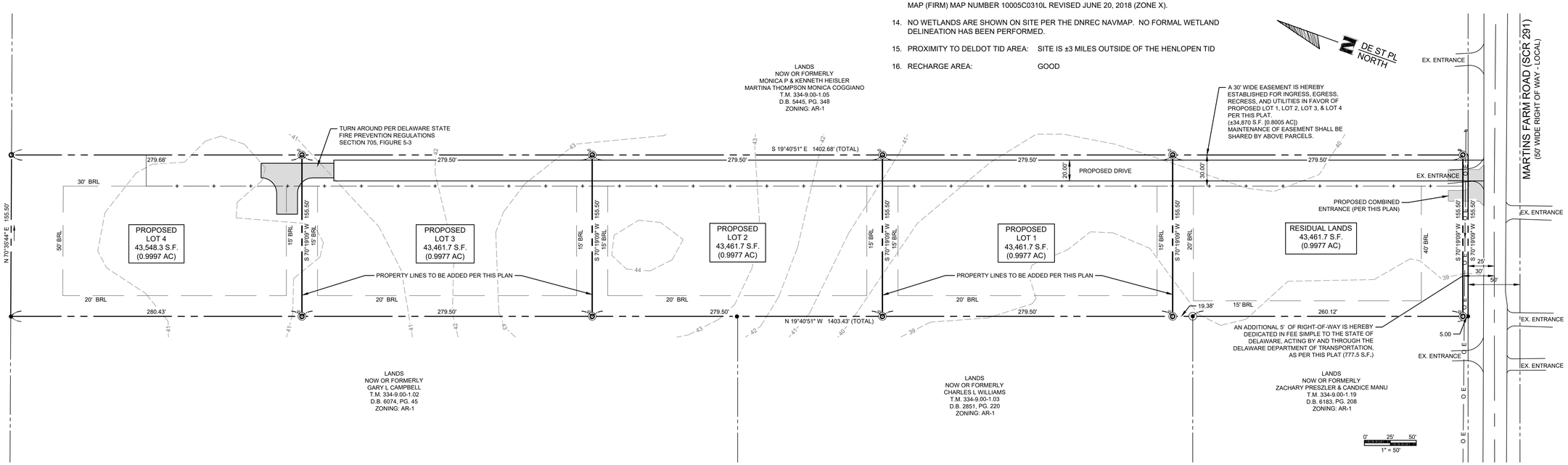
## SITE DATA:

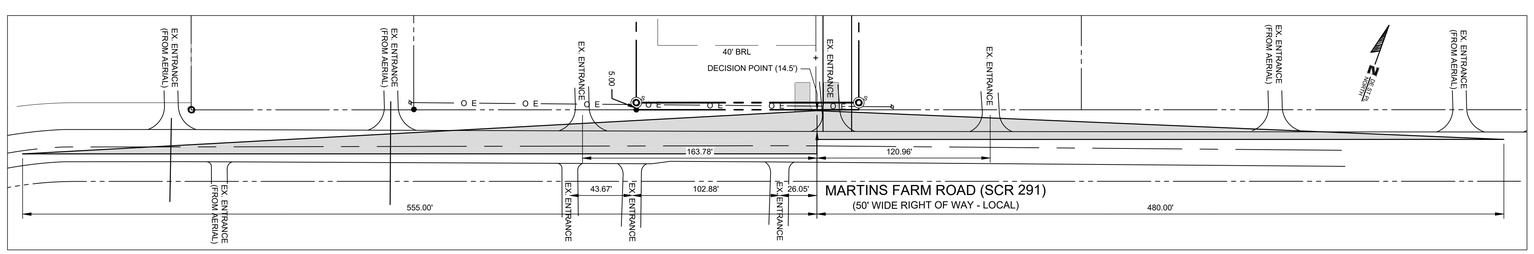
1. TAX MAP NUMBER: 334-9.00-1.06 DB 6229 PG 110
2. OWNER: JK INVESTMENT PROPERTIES
   32 BLACKPOOL ROAD
   REHOBOTH BEACH, DE 19971
3. ZONING: EXISTING: AR-1 (AGRICULTURAL RESIDENTIAL)
   PROPOSED: AR-1 (AGRICULTURAL RESIDENTIAL)
4. USE: EXISTING: RESIDENTIAL
   PROPOSED: RESIDENTIAL
5. BUILDING SETBACKS:
   FRONT 40' (RESIDUAL) 30' (PROPOSED)
   SIDE 15'
   REAR 20'
6. LOT REQUIREMENTS: AREA 32,670 S.F. (0.75 ACRE)
   WIDTH 100'
   DEPTH 100'
7. TOTAL NUMBER OF LOTS: EXISTING: 1
   PROPOSED: 5 (4 NEW + 1 RESIDUAL)
8. AREA:
   EXISTING 334-9.00-1.06: 218,172.6 S.F. (5.0083 AC)
   DELDOT DEDICATION: 777.5 S.F. (0.0178 AC)
   PROPOSED LOT 1: 43,461.7 S.F. (0.9977 AC)
   PROPOSED LOT 2: 43,461.7 S.F. (0.9977 AC)
   PROPOSED LOT 3: 43,461.7 S.F. (0.9977 AC)
   PROPOSED LOT 4: 43,548.3 S.F. (0.9997 AC)
   RESIDUAL LANDS: 43,461.7 S.F. (0.9977 AC)
9. AREA AFFECTED BY ADJUSTMENT: 5.0083 AC
10. POSTED SPEED LIMIT: 45 MPH (POSTED)
11. SEWER PROVIDER: ON-SITE SEPTIC
12. WATER PROVIDER: ON-SITE WELL
13. THIS PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOOD ZONE, DELINEATED BY THE NATIONAL FLOOD INSURANCE PROGRAM AS SHOWN AS ON FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 10005C0310L REVISED JUNE 20, 2018 (ZONE X).
14. NO WETLANDS ARE SHOWN ON SITE PER THE DNREC NAVMAP. NO FORMAL WETLAND DELINEATION HAS BEEN PERFORMED.
15. PROXIMITY TO DELDOT TID AREA: SITE IS ±3 MILES OUTSIDE OF THE HENLOPEN TID
16. RECHARGE AREA: GOOD




## LOCATION MAP

SCALE: 1" = 2,000'




## SIGHT DISTANCE TRIANGLE (ACCESS EASEMENT)

1" = 50'

## LEGEND:

- IRON REBAR FOUND
- CAPPED IRON REBAR FOUND
- CAPPED IRON REBAR SET
- IRON PIPE FOUND
- SUBJECT BOUNDARY LINE
- ADJOINER BOUNDARY LINE
- PROPOSED BOUNDARY LINE
- BUILDING RESTRICTION LINE
- EXISTING CONTOUR

## OWNER CERTIFICATION:

I, THE UNDERSIGNED, HEREBY CERTIFY TO THE OWNERSHIP OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, AND THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND THAT I DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

PRINTED NAME TITLE

OWNER SIGNATURE DATE

## ENGINEERS CERTIFICATION

I, CARLTON R. SAVAGE, JR, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

CARLTON R. SAVAGE, JR., P.E. (LICENSE #16457) DATE

SCALED. ENGINEERING
Sealed Engineering Inc.
20246 Coastal Highway
Rehoboth Beach, DE 19971
Phone: (302) 227-7808

MINOR SUBDIVISION PLAN

# 27361 MARTINS FARM ROAD

TAX MAP 334-9.00-1.06

BROADKILL / LEWES & REHOBOTH HUNDREDS, MILTON, DELAWARE

| | |
|---|---|
| DATE: | 2-26-25 |
| SCALE: | 1" = 50' |
| DRAWN BY: | GME |
| PROJECT NO. | BGYR004 |

1 OF 1

THIS DRAWING INCLUDING DESIGN AND CONSTRUCTION FEATURES ARE PROPRIETARY TO SCALED ENGINEERING INC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. COPYRIGHT © 2025

S:\SURVEY\GETER\BGYR004 - 27361 MARTINS FARM ROAD\DESIGN\BGYR004 - MINOR SUBDIVISION PLAN.dwg PLOTTED: 2/26/2025 9:10 AM, BY: Jeff PLOTSTYLE: A-SCALED-Co.ctb

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

January 16, 2025

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning Commission
Sussex County Administration Building
P.O. Box 417
Georgetown, Delaware 19947

**SUBJECT: Minor Subdivision - Letter of No Objection to Recordation**
**27361 Martins Farm Road**
Tax Parcel # 334-9.00-1.06
MARTIN FARM ROAD (SCR 291)
Lewes & Rehoboth Hundred, Sussex County

Dear Mr. Whitehouse:

The Department of Transportation has reviewed the Minor Subdivision Plan dated December 18, 2024 (Signed and Sealed January 13, 2025), for the above referenced site, and has no objection to its recordation as shown on the enclosed drawing. This "No Objection to Recordation" approval shall be valid for a period of **five (5) years**. If the Minor Subdivision Plan is not recorded and/or an entrance permit is not issued for the lot(s) prior to the expiration of the "No Objection to Recordation", then the plan must be updated to meet current requirements and resubmitted for review and approval.

Entrances(s) must be installed prior to the sale of the lot(s). All entrances shall conform to DelDOT's Development Coordination Manual and shall be subject to its approval. **This letter does not authorize the commencement of entrance construction.**

This "No Objection to Recordation" letter is not a DelDOT endorsement of the project discussed above. Rather, it is a recitation of the transportation improvements, which the applicant may be required to make as a pre-condition to recordation steps and deed restrictions as required by the respective county/municipality in which the project is located. If transportation investments are necessary, they are based on an analysis of the proposed project, its location, and its estimated impact on traffic movements and densities. The required improvements conform to DelDOT's published rules, regulations and standards. Ultimate responsibility for the approval of any project rests with the local government in which the land use decisions are authorized. There may be other

reasons (environmental, historic, neighborhood composition, etc.) which compel that jurisdiction to modify or reject this proposed plan even though DelDOT has established that these enumerated transportation improvements are acceptable.

The owner shall be responsible to submit a copy of the **recorded Minor Subdivision Plan** showing all appropriate signatures, seals, plot book and page number to the South District Public Works office (302) 853-1341 in order to obtain the entrance permit(s) for the proposed minor subdivision.

Sincerely,

John Pietrobono
Sussex County Review Coordinator
Development Coordination

cc: Carlton Savage, Scaled Engineering, Inc.
Sussex County Planning & Zoning
Jessica L. Watson, Sussex Conservation District
Matt Schlitter, South District Public Works Engineer
Travis Schirmer, South District Public Works Supervisor
James Argo, South District Project Reviewer
James Smith, South District Entrance Permit Supervisor
Wendy L. Polasko, P.E., Subdivision Engineer
Thomas Gagnon, Sussex County Reviewer

# OFFICE OF THE STATE FIRE MARSHAL
## Technical Services

22705 Park Avenue
Georgetown, DE 19947

## SFMO PERMIT – SHALL BE POSTED ON JOBSITE UNTIL FINAL INSPECTION

**Plan Review Number:** 2025-04-219581-MIS-02
**Status:** Approved as Submitted

**Tax Parcel Number:** 334-9.00-1.06
**Date:** 02/18/2025

### Project

Martins Farm Road Minor Subdivision

JK Investment Milton Property - 27361 Martins Farm Road

27361 Martins Farm Road
Milton DE 19968

### Scope of Project

**Number of Stories:**
**Square Footage:**
**Construction Class:**
**Fire District:** 85 - Milton Fire Dept

**Occupant Load Inside:**
**Occupancy Code:** 9601

### Applicant

Carlton Savage
20246 Coastal Hwy
Rehoboth, DE 19971

This office has reviewed the plans and specifications of the above described project for compliance with the Delaware State Fire Prevention Regulations, in effect as of the date of this review.

A Review Status of "Approved as Submitted" or "Not Approved as Submitted" must comply with the provisions of the attached Plan Review Comments.

Any Conditional Approval does not relieve the Applicant, Owner, Engineer, Contractor, nor their representatives from their responsibility to comply with the plan review comments and the applicable provisions of the Delaware State Fire Prevention Regulations in the construction, installation and/or completion of the project as reviewed by this Agency.

A final inspection is required.

This Plan Review Project was prepared by:

William Kelly
Fire Protection Specialist III

# FIRE PROTECTION PLAN REVIEW COMMENTS

**Plan Review Number:** 2025-04-219581-MIS-02
**Tax Parcel Number:** 334-9.00-1.06
**Status:** Approved as Submitted
**Date:** 02/18/2025

## PROJECT COMMENTS

| | |
|---|---|
| **1002 A** | **This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) ADOPTED September 1, 2021. The Delaware State Fire Prevention Regulations are available on our website at www.statefiremarshal.delaware.gov.These plans were not reviewed for compliance with the Americans with Disabilities Act (ADA). These plans were not reviewed for compliance with any Local, Municipal, nor County Building Codes. The Office of the State Fire Marshal recommends theinstallation of fire sprinkler systems in all residential occupancies, including one- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here:https://statefiremarshal.delaware.gov /wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf** |
| **1010 A** | **The following water for fire protection requirements apply: NONE. On-Site Wells Proposed. this site meets Water Flow Table 1. therefore the provisions of NFPA 1142 shall apply to this site (DSFPR Regulation 702, Chapter 6, Section 3).Since wells are proposed for this site, no additional requirements will be made by this Agency for water for fire protection.** |
| **2500 A** | **A final inspection is required for this project prior to occupancy (DSFPR Part I, Section 4-7). Contact this Agency to schedule this inspection. Please have the plan review number available. A MINIMUM OF FIVE (5) WORKING DAYS NOTICE IS REQUIRED.** |
| **2710 A** | **The following items will be field verified by this Agency at the time of final inspection:** |
| **1408 A** | **All premises where emergency personnel may be called upon to provide emergency services, which are not readily accessible from streets, shall be provided with suitable gates, access roads, and fire lanes so that all buildings on thepremises are accessible to emergency apparatus. (DSFPR Regulation 705, Chapter 5, Section 2).** |
| **1171 A** | **Any dead end road more than 300 feet in length shall be provided with a turn around or cul-de-sac arranged such that emergency apparatus will be able to turn around by making not more than one backing maneuver.Any turn-arounds** |

| | |
|---|---|
| | **and cul-de-sacs shall be designed in accordance with DSFPR Regulation 705, Chapter 2, Sections 2.3, 2.3.1, and 2.3.** |
| **1160 A** | **Provide note on plan that this site shall meet the provisions of NFPA 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities. NOTE: When revised plans are required to be resubmitted, a narrative letter doesnot suffice.** |

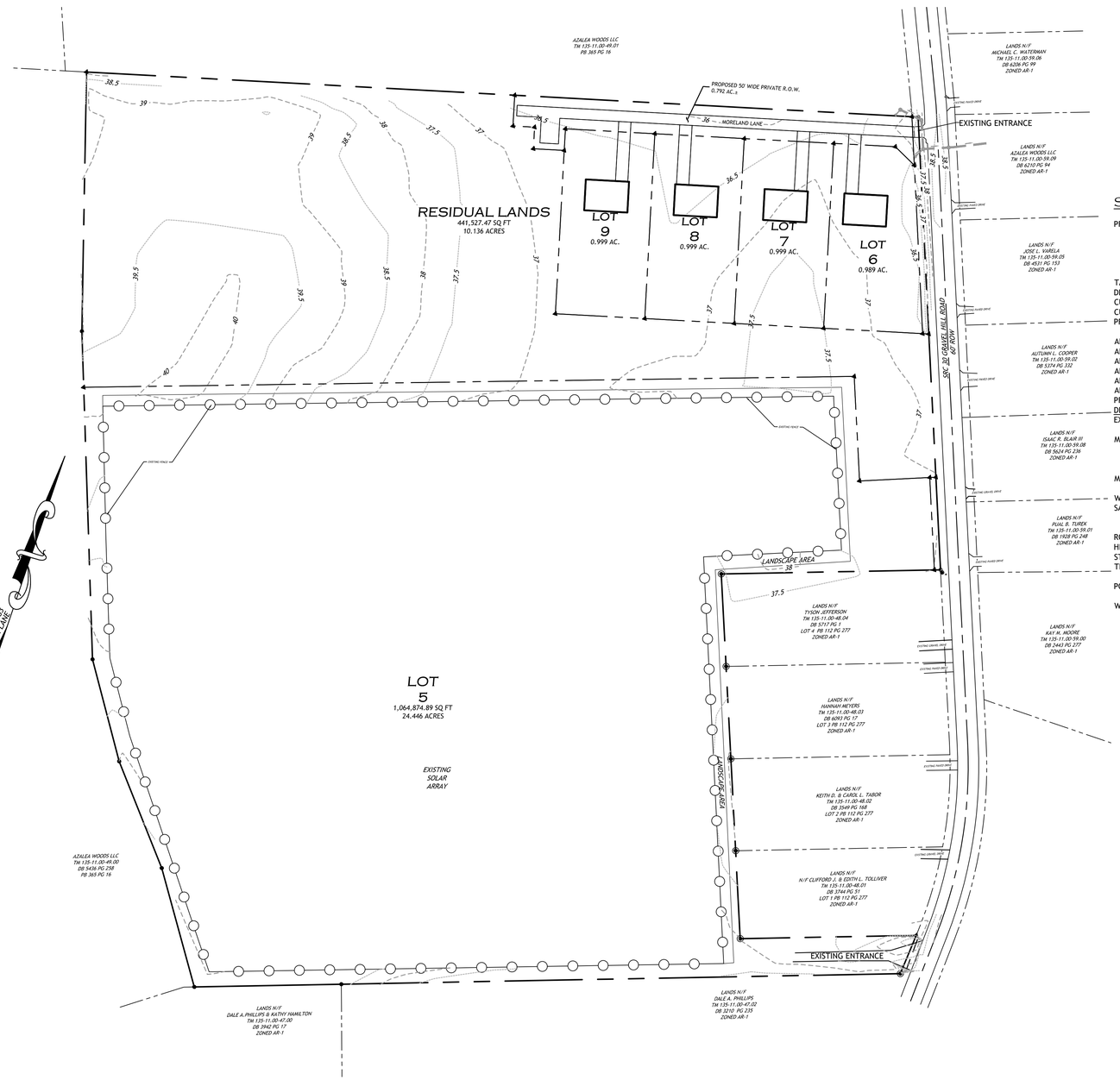
# LANDS OF LISA JESTER
# MORELAND MINOR SUBDIVISION
## GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

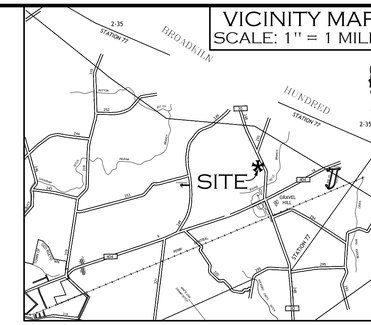
## NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAT WAS TAKEN FROM A FIELD SURVEY PREPARED BY AXIOM ENGINEERING, LLC IN OCTOBER 2024. HORIZONTAL CONTROL IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, DELAWARE STATE PLANE GRID (U.S. SURVEY FEET), VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
2. THIS PLAN DOES NOT VERIFY TO THE LOCATION AND/OR EXISTENCE OF EASEMENTS OR RIGHT-OF-WAYS CROSSING SUBJECT PROPERTY AS NO TITLE SEARCH WAS PROVIDED.
3. WATERSHED ECO, LLC. INVESTIGATED THE PROPERTY IN FEBRUARY 2025 TO DETERMINE THE PRESENCE OR ABSENCE OF REGULATED WETLANDS. THE FEBRUARY 13, 2025 REPORT INDICATED "THERE ARE NO FEDERAL OR STATE REGULATED WETLANDS OR WATERWAYS ARE LOCATED WITHIN THE SUBJECT PROPERTY.
4. BASED UPON FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0325 L, DATED JUNE 20, 2018; THE ENTIRE PROPERTY IS LOCATED IN AN AREA DESIGNATED AS ZONE "X" (UNSHADED), WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN.
5. THE PRIVATE ROAD, SANITARY SEWER FORCE MAINS AND OTHER FACILITIES SHALL BE MAINTAINED BY THE PROPERTY OWNER. A LOT OWNER'S AGREEMENT SHALL BE RECORDED AND REFERENCED FOR ALL PROPERTIES USING THE SHARED ROAD, SPECIFICALLY LOTS 6, 7, 8, 9 AND THE RESIDUAL LANDS. SUSSEX COUNTY AND THE STATE OF DELAWARE ASSUME NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THESE FACILITIES WITHIN THE SITE.
6. NO BUILDINGS OR STRUCTURES ARE PERMITTED IN THE PRIVATE R.O.W. EXCEPT UTILITIES, MAILBOXES, AND DRAINAGE IMPROVEMENTS.
7. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.

## DELDOT NOTES:

1. WITH THE PROPOSED MINOR SUBDIVISION PLAN, DELDOT SHALL REQUIRE A COPY OF THE RECORDED RECORD PLAT SHOWING ALL APPROPRIATE SIGNATURES, SEALS, PLAT BOOK AND PAGE NUMBER, PRIOR TO ISSUING THE ENTRANCE PERMIT- THE OWNER SHALL SUBMIT THIS INFORMATION TO THE SOUTH DISTRICT ENTRANCE PERMIT SUPERVISOR (302-853-1340), TO OBTAIN THE ENTRANCE PERMITS. ENTRANCES MUST BE INSTALLED PRIOR TO SALES OF THE LOTS.
2. PER PLAT BOOK 112 - PG 277, LOTS 1-4 WERE PREVIOUSLY SUBDIVIDED ON APRIL 17, 2007 AND ARE NOT AFFECTED BY THIS PLAT.
3. LOT 5 HAS A PREVIOUSLY APPROVED ACCESS FROM SCR 248/RT.30 (GRAVEL HILL RD.)
4. LOTS 6, 7, 8, 9 & THE RESIDUAL LANDS SHALL HAVE A SINGLE ACCESS FROM SCR 248/RT.30 (GRAVEL HILL RD.), IN WHICH THE ENTRANCE SHALL BE ALONG THE NORTHERN PROPERTY LINE.
5. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
6. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
7. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO IT'S APPROVAL.




## SITE DATA:

| | | |
|---|---|---|
| PROPERTY OWNER | LISA A. JESTER<br>19004 GRAVEL HILL ROAD<br>GEORGETOWN, DE 19947<br>302-381-2614<br>LUCY2484@GMAIL.COM | |
| TAX MAP REFERENCE | 135-11.00-48.00 | |
| DEED REFERENCE | DB 3452 - PG 279 | |
| CURRENT ZONING | AR-1 | |
| CURRENT LAND USE | VACANT | |
| PROPOSED LAND USE | RESIDENTIAL | |
| AREA OF PROPOSED LOT 5 (SOLAR ARRAY) | 1,064,874.89 SQ. FT. | 24.446 AC.± |
| AREA OF PROPOSED LOT 6 | 43,602.66 SQ. FT. | 0.989 AC.± |
| AREA OF PROPOSED LOT 7 | 43,508.53 SQ. FT. | 0.999 AC.± |
| AREA OF PROPOSED LOT 8 | 43,509.00 SQ. FT. | 0.999 AC.± |
| AREA OF PROPOSED LOT 9 | 43,509.00 SQ. FT. | 0.999 AC.± |
| AREA OF RESIDUAL LANDS | 441,527.47 SQ. FT. | 10.136 AC.± |
| PRIVATE R.O.W. | 34,503.26 SQ. FT. | 0.792 AC.± |
| DEDICATION TO STATE OF DELAWARE | 5,020.39 SQ. FT. | 0.115 AC.± |
| EXISTING TOTAL SITE AREA | 1,719,515.21 SQ. FT. | 39.475 AC.± |
| MINIMUM BUILDING SETBACKS- | FRONT 40'<br>SIDE 15'<br>REAR 20' | |
| MINIMUM AREA= 32,670sf or 0.75 acres | | |
| WATER | ON-SITE WELLS | |
| SANITARY | ON-SITE SEPTIC FOR RESIDUAL LOTS 6-9 ARTESIAN WASTE WATER | |
| ROAD NAME/ROUTE NUMBER | GRAVEL HILL RD (SCR 248/ROUTE 30), | |
| HIGHWAY FUNCTIONAL CLASSIFICATION | MAJOR COLLECTOR | |
| STATE STRATEGIES INVESTMENT LEVEL | IV | |
| TID | THE PROPERTY IS NOT LOCATED WITHIN AN ADOPTED TRANSPORTATION IMPROVEMENT DISTRICT | |
| POSTED SPEED LIMIT | 50MPH | |
| WETLANDS | NONE (SEE NOTE 3) | |

## LEGEND

| | FOUND | SET | BOUNDARY MONUMENT |
|---|---|---|---|
| CMF | ■ | ⊠ CMS | CONCRETE MONUMENT |
| RBF | • | ▲ RBS | REBAR |
| MNF | ◘ | ✪ MNS | MAGNETIC NAIL |
| SPF | | | SPIKE |
| IPF | ◉ | | IRON PIPE |
| | ⊙ | | POST |
| BENCHMARK | | ○ | UNMARKED CORNER |

EX. PROPERTY LINE
PROPOSED SUBDIVISION LINE
EX. ADJACENT PROPERTY LINES
EX. MINOR CONTOUR — 22 —
EX. MAJOR CONTOUR — 20 —
EX. 404 WETLANDS
FEMA FLOODPLAIN BOUNDARY — ZONE X / ZONE AE (ELEV. 7)
STATE (TIDAL) WETLANDS
EX. BUILDING RESTRICTION LINES
EX. ROAD CENTERLINE
EX. EASEMENT
EX. BUILDING — EX. SHED
EX. SWALE
EX. SIDEWALK
EX. CURB
EX. STORM SEWER — EX. DRAINAGE MANHOLE — EX. CATCH BASIN
EX. SANITARY SEWER — EX. SANITARY MANHOLE
EX. WOODS LINE
EX. WATER LINE — EX. REDUCER — EX. METER — EX. VALVE
EX. WELL
TRAFFIC SIGN
EX. ZONING BOUNDARY
EX. ELECTRIC LINES UTILITIES
EX. UTILITY POLES/LIGHT POLES
EX. FENCE
EX. SPOT ELEVATION — X 25.21
SOIL BORING — SB-1
TEST PIT — TP-1
EX. STREAM

## SHEET LIST TABLE

| SHEET NUMBER | SHEET TITLE | REVISION DATE |
|---|---|---|
| S-1 | COVER SHEET | 2/26/2025 |
| S-2 | SITE PLAN | 2/26/2025 |
| S-3 | SIGHT DISTANCE TRIANGLE | 2/26/2025 |
| S-4 | GRADING PLAN | * |
| S-5 | SANITARY FORCEMAIN PLAN | * |
| S-6 | SANITARY FORCEMAIN PROFILE & DETAILS | * |

## ENGINEER'S CERTIFICATION:

I, THE UNDERSIGNED, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE AND THAT THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED PROFESSIONAL STANDARDS AND PRACTICES AND BY THE SUSSEX COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

KENNETH R. CHRISTENBURY, P.E. DATE
DE. LICENSE No. 11553, EXPIRES JUNE 30, 2026

## OWNER'S CERTIFICATION:

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

LISA A. JESTER DATE
19004 GRAVEL HILL ROAD
GEORGETOWN, DE 19947
302-381-2614

| REV | DESCRIPTION OF REVISION | DRAWN BY | CHECKED BY |
|---|---|---|---|
| 1 | REVISED PER AGENCY COMMENTS | EJW | KRC |

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SUITABLE. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS STRICTLY AND APPROPRIATELY.

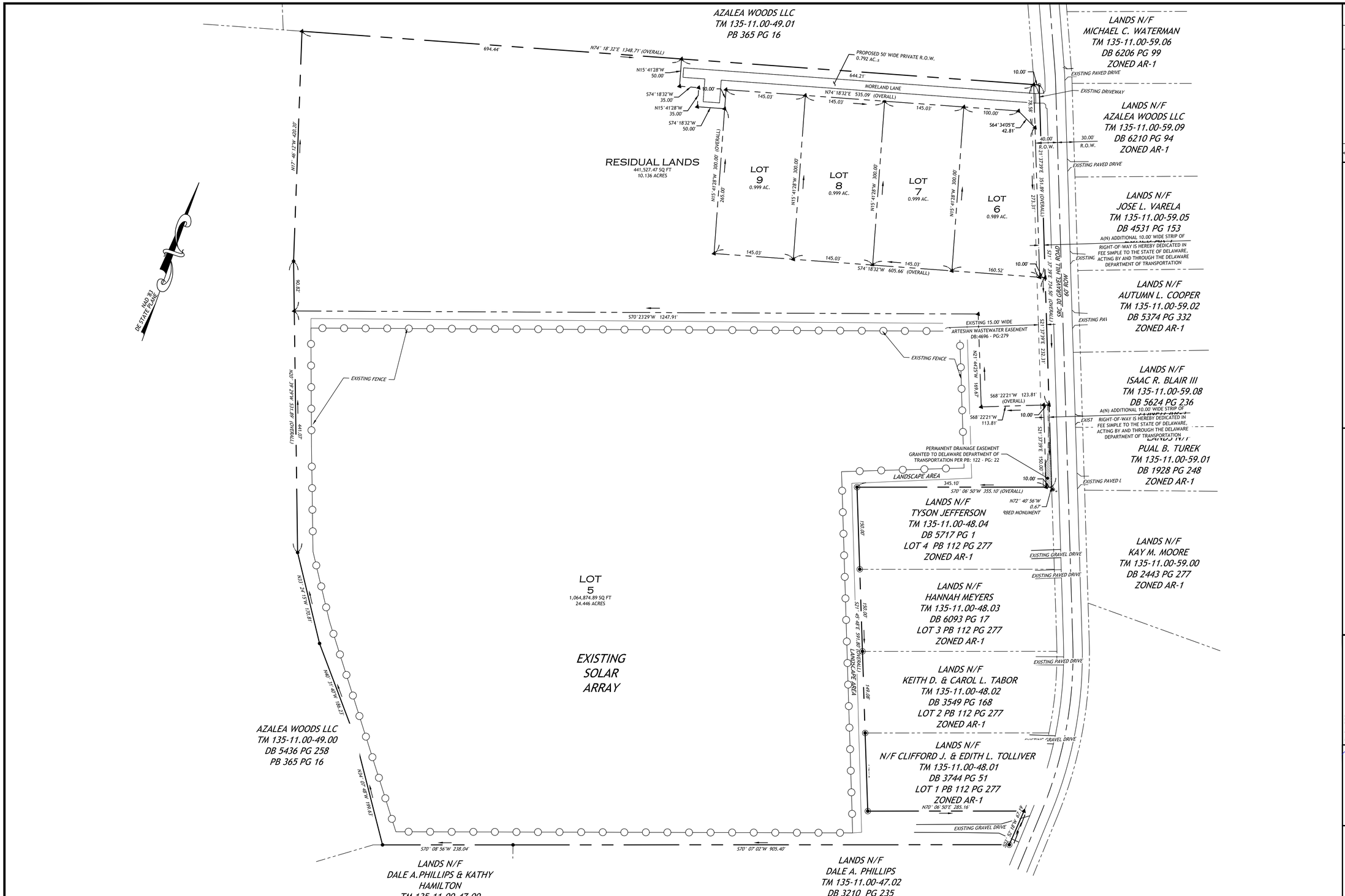
COVER SHEET
LANDS OF LISA JESTER
MORELAND MINOR SUBDIVISION
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

AXIOM ENGINEERING L.L.C.
18 CHESTNUT STREET
GEORGETOWN, DE 19947
(302) 855-0810
FAX: (302) 855-0811
EMAIL: AXIOM@AXENG.COM
WEB: WWW.AXENG.COM

ENGINEER: KRC
DESIGNER: KRC
DRAFTER: EJW
CHECKED BY: KRC
DATE: 1/29/2025
TAX MAP: 135-11.00-48.00
0 100' 200'
24" X 36" 1 inch = 100 ft.
11" X 17" 1 inch = 200 ft.

KENNETH R. CHRISTENBURY
No. 11553
2/26/25
SEAL

PROJECT NO: 0655-2401
DRAWING: S-1
SHEET: 1 OF 6




| REV | DESCRIPTION OF REVISION | DRAWN BY | CHECKED BY |
|---|---|---|---|
| 1 | REVISED PER AGENCY COMMENTS | EJW | KRC |
| | | 01/29/25 | 01/29/25 |

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SUITABLE. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS STRICTLY AND APPROPRIATE.

# SITE PLAN

LANDS OF LISA JESTER

# MORELAND MINOR SUBDIVISION

GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

AXIOM ENGINEERING L.L.C.
18 CHESTNUT STREET
GEORGETOWN, DE 19947
(302) 855-0810
FAX: 855-0811
E-MAIL: AXIOM@AXENG.COM
WEB: WWW.AXENG.COM

| | |
|---|---|
| ENGINEER: | KRC |
| DESIGNER: | KRC |
| DRAFTER: | EJW |
| CHECKED BY: | KRC |
| DATE: | 1/29/2025 |
| TAX MAP: | 135-11.00-48.00 |

0 80' 160'
24" X 36" 1 inch = 80 ft.
11" X 17" 1 inch = 160 ft.

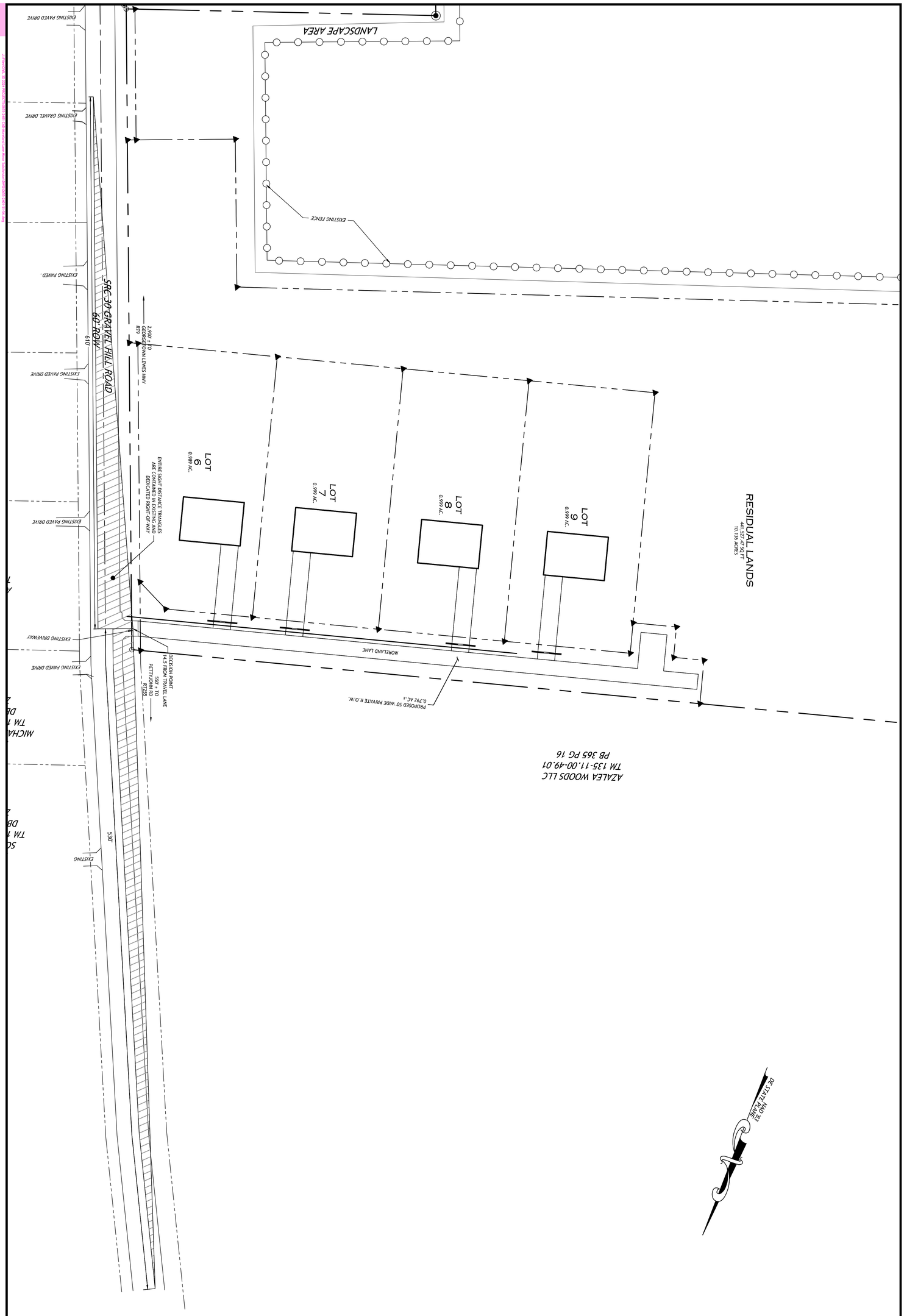
SEAL

PROJECT NO: 0655-2401

DRAWING: S-2

SHEET: 2 OF 6

J:\Files\CIVIL 3D 2024 PROJECTS\0655-2401 CAD-Moreland Lane Minor Subdivision\DWG\0655-2401-S1-S4.dwg

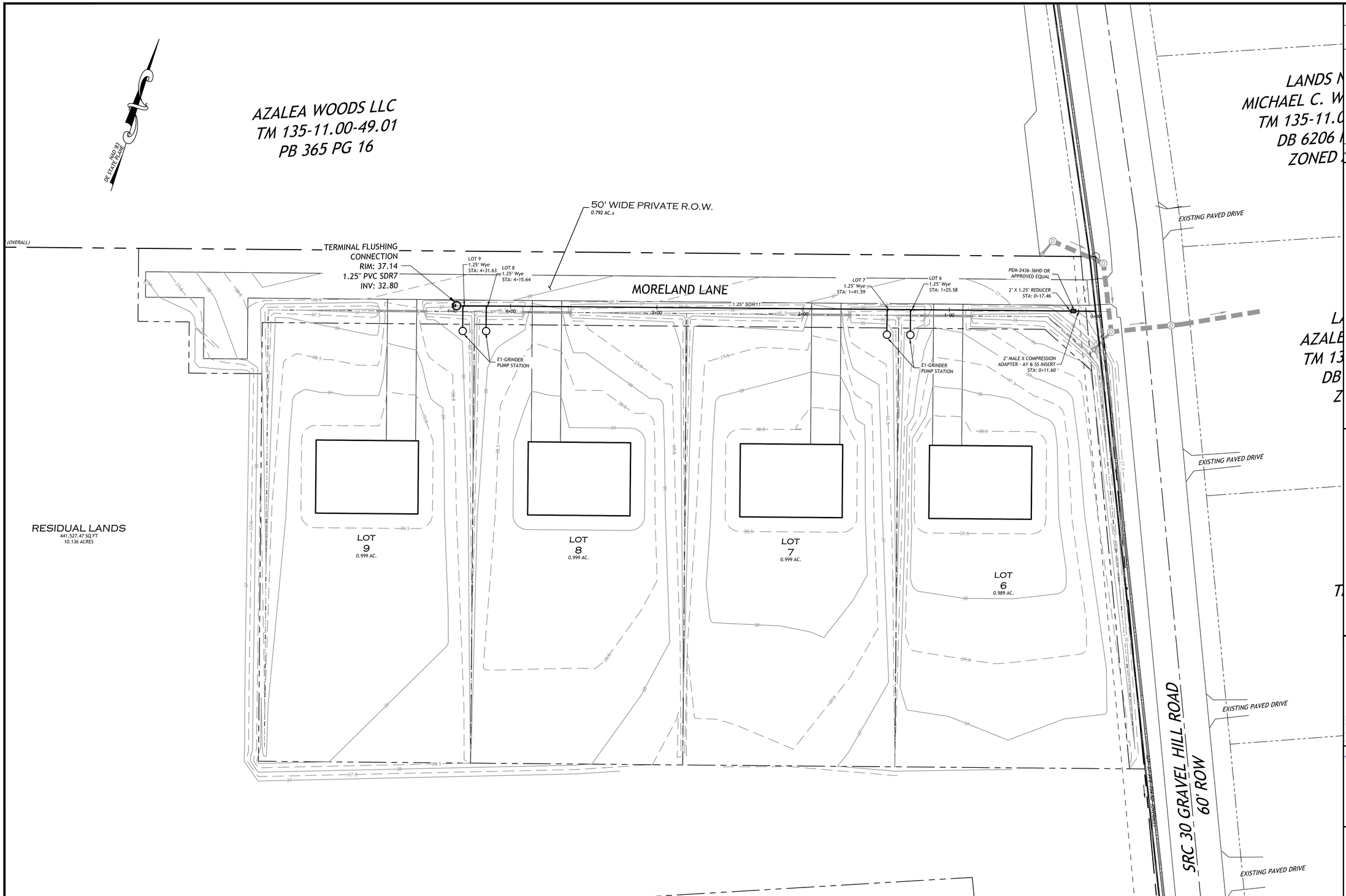



| | | | |
|---|---|---|---|
| PROJECT NO: 0655-2401 | ENGINEER: KRC | AXIOM ENGINEERING L.L.C. | SIGHT DISTANCE TRIANGLE |
| DRAWING: S-3 | DESIGNER: KRC | 18 CHESTNUT STREET<br>GEORGETOWN, DE 19947<br>(302) 855-0810<br>FAX: 855-0812<br>E-MAIL: AXIOM@AXENG.COM<br>WEB: WWW.AXENG.COM | LANDS OF LISA JESTER |
| SHEET: 3 OF 6 | DRAFTER: EJW | | MORELAND MINOR SUBDIVISION |
| SEAL | CHECKED BY: KRC | | GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE |
| | DATE: 1/29/2025 | | |
| | TAX MAP: 135-11.00-48.00 | | |
| | 0 50' 100' | | |
| | 24" X 36" 1 inch = 50 ft. | | |
| | 11" X 17" 1 inch = 100 ft. | | |

| REV | DESCRIPTION OF REVISION | REVISED BY/DATE | CHECKED BY/DATE |
|---|---|---|---|
| 1 | REVISED PER AGENCY COMMENTS | EJW 2/24/2025 | KRC 2/26/2025 |

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO AND APPURTENANT.

J:\Files\CIVIL 3D 2024 PROJECTS\0655-2401 CAD-Moreland Lane Minor Subdivision\DWG\0655-2401-S1-S4.dwg




| REV | DESCRIPTION OF REVISION | REVISED BY | CHECKED BY |
|---|---|---|---|
| | | | |

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS STRICT IN ANY JURISDICTION.

# SANITARY FORCEMAIN PLAN

LANDS OF LISA JESTER

# MORELAND MINOR SUBDIVISION

GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

AXIOM ENGINEERING L.L.C.
18 CHESTNUT STREET
GEORGETOWN, DE 19947
(302) 855-0810
FAX: 855-0811
EMAIL: AXIOM@AXENG.COM
WEB: WWW.AXENG.COM

| | |
|---|---|
| ENGINEER: | KRC |
| DESIGNER: | KRC |
| DRAFTER: | EJW |
| CHECKED BY: | KRC |
| DATE: | 1/29/2025 |
| TAX MAP: | 135-11.00-48.00 |

0 30' 60'
24" X 36" 1 inch = 30 ft.
11" X 17" 1 inch = 60 ft.

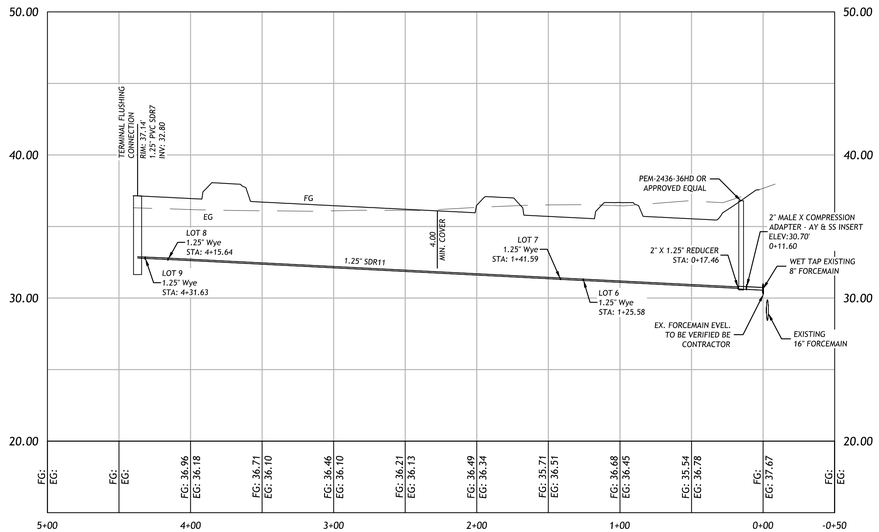
SEAL

PROJECT NO: 0655-2401

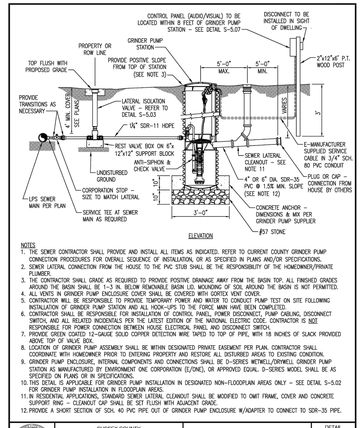
DRAWING: S-5

SHEET: 5 OF 6

J:\Files\CIVIL 3D 2024 PROJECTS\0655-2401 CAD-Moreland Lane Minor Subdivision\DWG\0655-2401-S1-S4.dwg

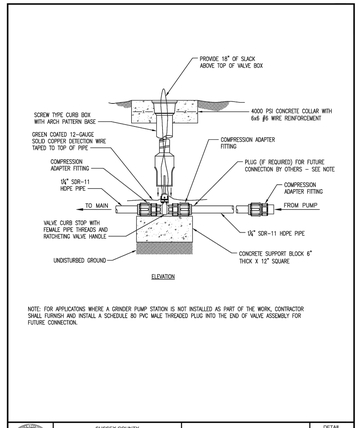



PROPOSED 1.25" FORCEMAIN
HORIZONTAL SCALE 1"=50
VERTICAL SCALE 1"=5.00



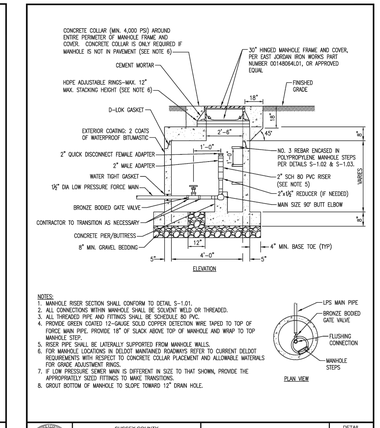

NOTES:
1. THE SEWER CONTRACTOR SHALL PROVIDE AND INSTALL ALL ITEMS AS INDICATED. REFER TO CURRENT COUNTY GRINDER PUMP CONNECTION PROCEDURES FOR OVERALL SEQUENCE OF INSTALLATION, OR AS SPECIFIED IN PLANS AND/OR SPECIFICATIONS.
2. SEWER LATERAL CONNECTION FROM THE HOUSE TO THE PVC STUB SHALL BE THE RESPONSIBILITY OF THE HOMEOWNER/PRIVATE PLUMBER.
3. THE CONTRACTOR SHALL GRADE AS REQUIRED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BASIN TOP. ALL FINISHED GRADES AROUND THE BASIN SHALL BE 1–3 IN. BELOW REMOVABLE BASIN LID. MOUNDING OF SOIL AROUND THE BASIN IS NOT PERMITTED.
4. ALL VENTS IN GRINDER PUMP ENCLOSURE COVER SHALL BE COVERED WITH CORTEX VENT COVER.
5. CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE TEMPORARY POWER AND WATER TO CONDUCT PUMP TEST ON SITE FOLLOWING INSTALLATION OF GRINDER PUMP STATION AND ALL HOOK–UPS TO THE FORCE MAIN HAVE BEEN COMPLETED.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONTROL PANEL, POWER DISCONNECT, PUMP CABLING, DISCONNECT SWITCH, AND ALL RELATED INCIDENTALS PER THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. CONTRACTOR IS NOT RESPONSIBLE FOR POWER CONNECTION BETWEEN HOUSE ELECTRICAL PANEL AND DISCONNECT SWITCH.
7. PROVIDE GREEN COATED 12–GAUGE SOLID COPPER DETECTION WIRE TAPED TO TOP OF PIPE, WITH 18 INCHES OF SLACK PROVIDED ABOVE TOP OF VALVE BOX.
8. LOCATION OF GRINDER PUMP ASSEMBLY SHALL BE WITHIN DESIGNATED PRIVATE EASEMENT PER PLAN. CONTRACTOR SHALL COORDINATE WITH HOMEOWNER PRIOR TO ENTERING PROPERTY AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITION.
9. GRINDER PUMP ENCLOSURE, INTERNAL COMPONENTS AND CONNECTIONS SHALL BE D–SERIES WETWELL/DRYWELL GRINDER PUMP STATION AS MANUFACTURED BY ENVIRONMENT ONE CORPORATION (E/ONE), OR APPROVED EQUAL. D–SERIES MODEL SHALL BE AS SPECIFIED ON PLANS OR IN SPECIFICATIONS.
10. THIS DETAIL IS APPLICABLE FOR GRINDER PUMP INSTALLATION IN DESIGNATED NON–FLOODPLAIN AREAS ONLY – SEE DETAIL S–5.02 FOR GRINDER PUMP INSTALLATION IN FLOODPLAIN AREAS.
11. IN RESIDENTIAL APPLICATIONS, STANDARD SEWER LATERAL CLEANOUT SHALL BE MODIFIED TO OMIT FRAME, COVER AND CONCRETE SUPPORT RING – CLEANOUT CAP SHALL BE SET FLUSH WITH ADJACENT GRADE.
12. PROVIDE A SHORT SECTION OF SCH. 40 PVC PIPE OUT OF GRINDER PUMP ENCLOSURE W/ADAPTER TO CONNECT TO SCH–35 PIPE.

| | | | |
|---|---|---|---|
| SUSSEX COUNTY ENGINEERING DEPARTMENT<br>APPROVED: SUSSEX COUNTY ENGINEER | STANDARD GRINDER PUMP ASSEMBLY | DETAIL S-5.01 | DATE ISSUED: 1/18/2023 |



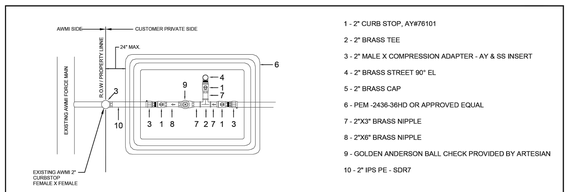

NOTE: FOR APPLICATIONS WHERE A GRINDER PUMP STATION IS NOT INSTALLED AS PART OF THE WORK, CONTRACTOR SHALL FURNISH AND INSTALL A SCHEDULE 80 PVC MALE THREADED PLUG INTO THE END OF VALVE ASSEMBLY FOR FUTURE CONNECTION.

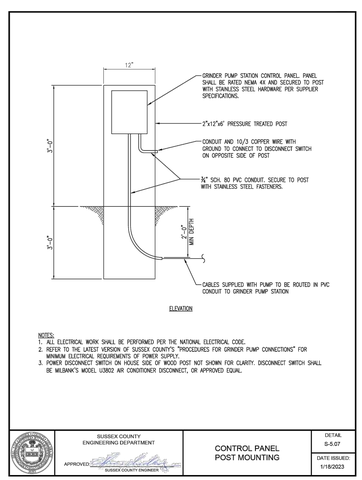
| | | | |
|---|---|---|---|
| SUSSEX COUNTY ENGINEERING DEPARTMENT<br>APPROVED: SUSSEX COUNTY ENGINEER | LATERAL ISOLATION VALVE | DETAIL S-5.03 | DATE ISSUED: 1/18/2023 |




NOTES:
1. MANHOLE RISER SECTION SHALL CONFORM TO DETAIL S–1.01.
2. ALL CONNECTIONS WITHIN MANHOLE SHALL BE SOLVENT WELD OR THREADED.
3. ALL THREADED PIPE AND FITTINGS SHALL BE SCHEDULE 80 PVC.
4. PROVIDE GREEN COATED 12–GAUGE SOLID COPPER DETECTION WIRE TAPED TO TOP OF FORCE MAIN PIPE. PROVIDE 18" OF SLACK ABOVE TOP OF MANHOLE AND WRAP TO TOP MANHOLE STEP.
5. RISER PIPE SHALL BE LATERALLY SUPPORTED FROM MANHOLE WALLS.
6. FOR MANHOLE LOCATIONS IN DELDOT MAINTAINED ROADWAYS REFER TO CURRENT DELDOT REQUIREMENTS WITH RESPECT TO CONCRETE COLLAR PLACEMENT AND ALLOWABLE MATERIALS FOR GRADE ADJUSTMENT RINGS.
7. IF LOW PRESSURE SEWER MAIN IS DIFFERENT IN SIZE TO THAT SHOWN, PROVIDE THE APPROPRIATELY SIZED FITTINGS TO MAKE TRANSITIONS.
8. GROUT BOTTOM OF MANHOLE TO SLOPE TOWARD 12" DRAIN HOLE.

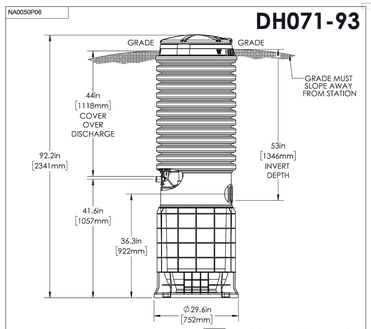
| | | | |
|---|---|---|---|
| SUSSEX COUNTY ENGINEERING DEPARTMENT<br>APPROVED: SUSSEX COUNTY ENGINEER | TERMINAL FLUSHING CONNECTION | DETAIL S-5.05 | DATE ISSUED: 09/09/2022 |




NOTES:
1. ALL ELECTRICAL WORK SHALL BE PERFORMED PER THE NATIONAL ELECTRICAL CODE.
2. REFER TO THE LATEST VERSION OF SUSSEX COUNTY'S "PROCEDURES FOR GRINDER PUMP CONNECTIONS" FOR MINIMUM ELECTRICAL REQUIREMENTS OF POWER SUPPLY.
3. POWER DISCONNECT SWITCH ON HOUSE SIDE OF WOOD POST NOT SHOWN FOR CLARITY. DISCONNECT SWITCH SHALL BE MILBANK'S MODEL U3802 AIR CONDITIONER DISCONNECT, OR APPROVED EQUAL.

| | | | |
|---|---|---|---|
| SUSSEX COUNTY ENGINEERING DEPARTMENT<br>APPROVED: SUSSEX COUNTY ENGINEER | CONTROL PANEL POST MOUNTING | DETAIL S-5.07 | DATE ISSUED: 1/18/2023 |




NOTE: DIMENSIONS ARE FOR REF ONLY

CONCRETE BALLAST NOT REQUIRED

DISCHARGE: 1-1/4in FEMALE PIPE THREAD

INLET: EPDM GROMMET FOR 4in DWV PIPE (STANDARD)

| DR. BY | JG | 10/13/2023 | D | 1:14 |
|---|---|---|---|---|
| DR. BY | CHKD | DATE | ISSUE | SCALE |

e/one SEWER SYSTEMS

MODEL DH071-93

CUT SHEET

NA0050P06

E/ONE EXTREME SERIES

# E/One Sentry™

***Alarm Panel — Basic Package***

NA0324P01 Rev. –

**Description**

The E/One Sentry panels are custom designed for use with Environment One grinder pump stations. They can be configured to meet the needs of your application, from basic alarm indication to advanced warning of pending service requirements.

E/One Sentry panels are supplied with audible and visual high level alarms. They are easily installed in accordance with relevant national and local codes. Standard panels are approved by UL, CSA, CE and NSF to ensure high quality and safety.

The panel features a corrosion-proof, NEMA 4X-rated, thermoplastic enclosure. A padlock is provided to prevent unauthorized entry (safety front).

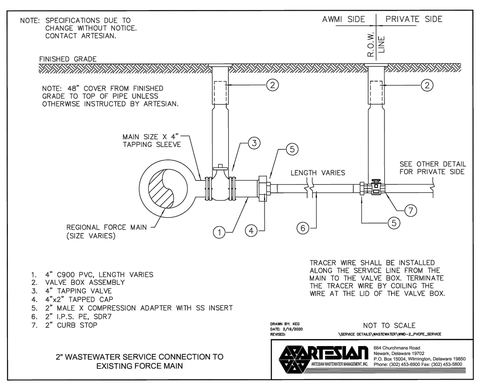
**Standard Features**

Circuit breakers, 240 or 120 VAC service
Terminal blocks and ground lugs
Audible alarm with manual silence
Manual run feature and run indicator
Redundant "Start" function with high level alarm
Conformal-coated alarm board (both sides)
Alarm board overload protection

**Optional Features**

Contact group (dry, powered and Remote Sentry)
Inner cover (dead front)
Hour meter
Generator receptacle with auto transfer
GFCI
Main service disconnect
Brownout protection

Please consult factory for special applications.




SANITARY FORCEMAIN PROFILE & DETAILS

LANDS OF LISA JESTER

# MORELAND MINOR SUBDIVISION

GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

| REV | DESCRIPTION OF REVISION | REVISED BY | CHECKED BY |
|---|---|---|---|
| | | | |

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS STRICT AND APPLICABLE.

AXIOM ENGINEERING L.L.C.
18 CHESTNUT STREET
GEORGETOWN, DE 19947
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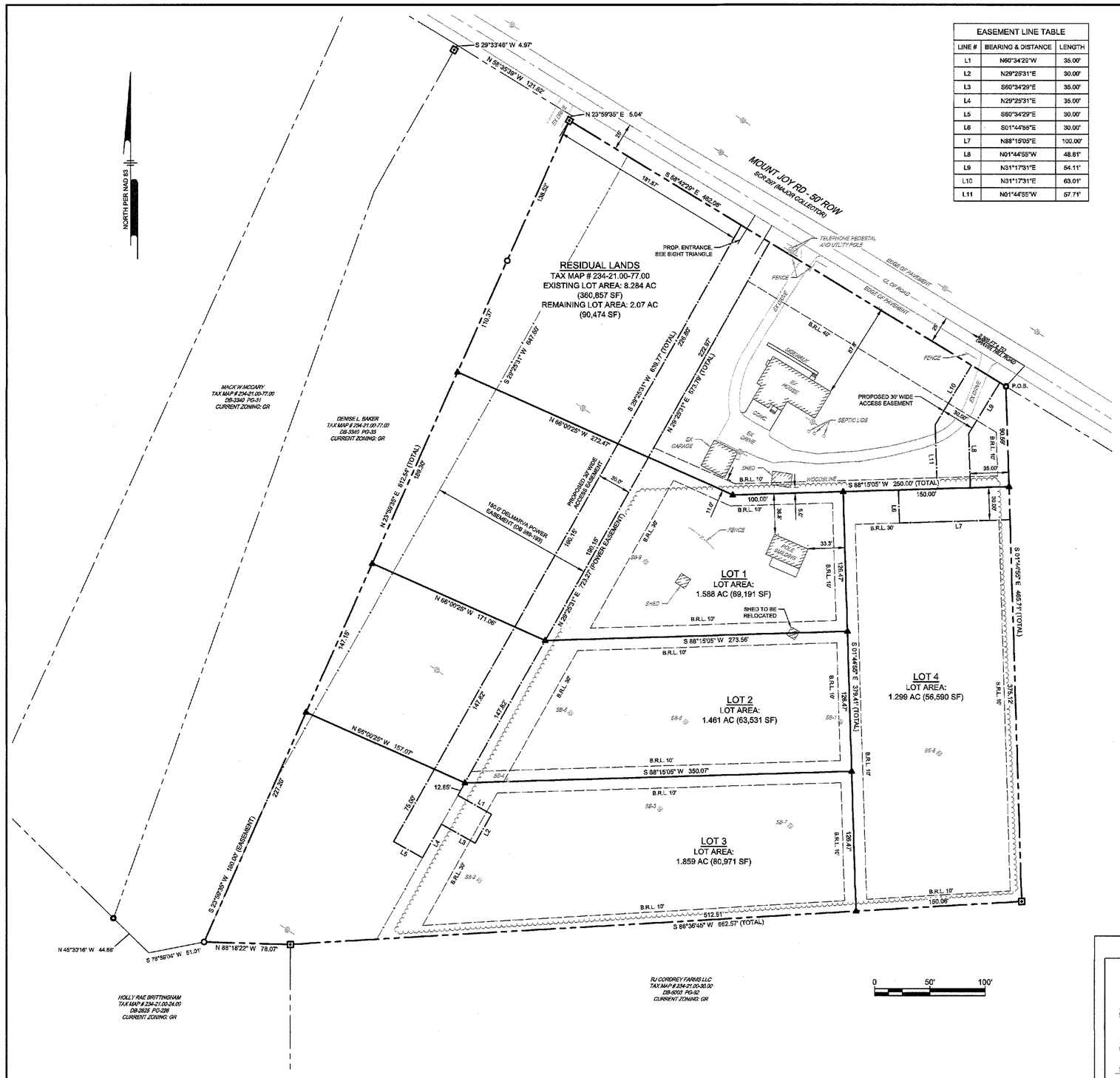
FAX: (302) 855-0812
E-MAIL: AXIOM@AXENG.COM
WEB: WWW.AXENG.COM

ENGINEER: KRC
DESIGNER: KRC
DRAFTER: EJW
CHECKED BY: KRC
DATE: 1/29/2025
TAX MAP: 135-11.00-48.00

0 50' 100'
24" X 36" 1 inch = 50 ft.
11" X 17" 1 inch = 100 ft.

SEAL: No. 11853

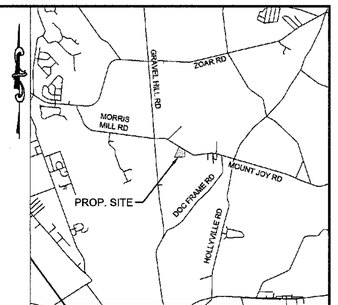
PROJECT NO: 0655-2401
DRAWING: S-6
SHEET: 6 OF 6




| EASEMENT LINE TABLE | | |
|---|---|---|
| LINE # | BEARING & DISTANCE | LENGTH |
| L1 | N60°34'29"W | 35.00' |
| L2 | N29°25'31"E | 30.00' |
| L3 | S60°34'29"E | 35.00' |
| L4 | N29°25'31"E | 35.00' |
| L5 | S60°34'29"E | 30.00' |
| L6 | S01°44'55"E | 30.00' |
| L7 | N88°15'05"E | 100.00' |
| L8 | N01°44'55"W | 48.81' |
| L9 | N31°17'31"E | 64.11' |
| L10 | N31°17'31"E | 63.01' |
| L11 | N01°44'55"W | 57.71' |

## FIRE MARSHAL NOTES

1. SITE ADDRESS: 26350 MOUNT JOY RD, MILLSBORO, DE 19966
2. OWNER: YODER PROPERTIES LLC
3. INTENDED USE: RESIDENTIAL
4. NO BUILDINGS WILL BE SPRINKLED
5. BUILDING CONSTRUCTION TYPE: NPPA TYPE V WOOD FRAME
6. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
7. WATER SUPPLIER: PRIVATE ON SITE WELL
8. SEWER PROVIDER: PRIVATE SEPTIC SYSTEM




## LOCATION MAP

SCALE: 1" = 1 MILE

## DELDOT GENERAL NOTES

REVISED MARCH 21, 2019

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
4. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
5. ENTRANCE NOTES
6. LOTS 1-3 SHALL HAVE ACCESS TO SCR 297 VIA THE PROPOSED 30' WIDE INGRESS/EGRESS EASEMENT ON THE WESTERN SIDE OF THE PROPERTY.
7. LOT 4 SHALL HAVE ACCESS TO SCR 297 VIA THE PROPOSED 30' WIDE INGRESS/EGRESS EASEMENT ON THE EASTERN SIDE OF THE PROPERTY
8. THE RESIDUAL LAND SHALL CONTINUE TO USE THE EXISTING ACCESSES TO SCR 297

## LEGEND

- CAPPED IRON REBAR FOUND
- IRON PIPE FOUND
- CONCRETE MONUMENT FOUND
- CAPPED IRON REBAR TO BE SET
- UTILITY POLE
- BUILDING SETBACK LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- ADJACENT PROPERTY LINE

## NOTES

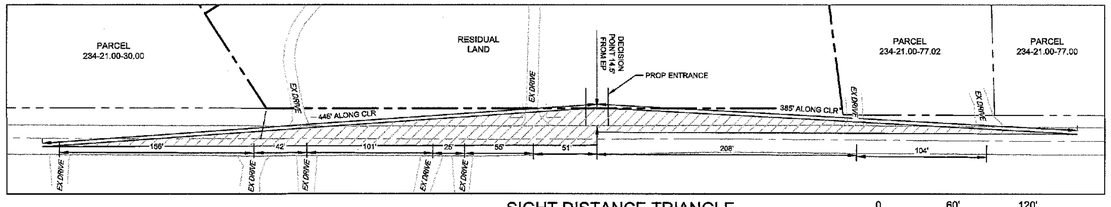
1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE PROPERTY AS SHOWN CREATING 4 ADDITIONAL LOTS.
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. SURVEY DATE: 2/18/25 & 3/3/25
4. HORIZONTAL DATUM: NAD 83
5. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
6. MAINTENANCE OF THE PROPOSED WESTERN INGRESS/EGRESS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNERS OF LOTS 1-3, & THE RESIDUAL PER THE MAINTENANCE AGREEMENT.
7. MAINTENANCE OF THE PROPOSED EASTERN INGRESS/EGRESS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNERS OF LOT 4, & THE RESIDUAL PER THE MAINTENANCE AGREEMENT.
8. THERE ARE NO WETLANDS PRESENT ON THIS PROPERTY
9. NO BUILDING, STRUCTURE, OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.

## SITE DATA:

1. TAX PARCELS AND OWNERS OF RECORD:
   PARCEL 234-21.00-29.00 - YODER PROPERTIES LLC
   SOURCE OF TITLE: DB 6261 PG 188

| 2. PARCEL AREA: | EXISTING | PROPOSED |
|---|---|---|
| PARCEL 234-21.00-29.00 | 8.284 AC (360,857 SF) | 2.077 AC (90,474 SF) |
| LOT 1 | N/A | 1.588 AC (69,191 SF) |
| LOT 2 | N/A | 1.461 AC (63,631 SF) |
| LOT 3 | N/A | 1.859 AC (80,971 SF) |
| LOT 4 | N/A | 1.299 AC (56,590 SF) |
| GROSS PROPERTY AREA: | 8.284 AC (360,857 SF) | 8.284 AC (360,857 SF) |

3. DENSITY: 1.857 ACRES PER LOT / .604 LOTS PER ACRE
4. SITE ADDRESS: 26350 MOUNT JOY RD, MILLSBORO, DE 19966
5. EXISTING & PROPOSED LOTS: EXISTING LOTS = 1; PROPOSED LOTS = 4 PLUS RESIDUAL
6. GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL: SUSSEX COUNTY
7. HUNDRED/COUNTY: INDIAN RIVER / SUSSEX COUNTY
8. CURRENT ZONING: GR
9. PRESENT USE: RESIDENTIAL
10. PROPOSED USE: RESIDENTIAL
11. MINIMUM AR-1 LOT SIZE: AREA = 32,670 SF; WIDTH = 75 FEET; DEPTH = 100 FEET
12. REQUIRED GR SETBACKS (B.R.L.): FRONT: 40-FEET (30' FOR PRIVATE STREET); SIDE: 10-FEET; REAR: 10-FEET
13. MAXIMUM HEIGHT REQUIREMENT: 42-FEET
14. WATER: PRIVATE ON-SITE WELL
15. SEWER: PRIVATE ON-SITE WASTE WATER DISPOSAL
16. PERMANENT MONUMENTS: 8 MONUMENTS FOUND; 11 MONUMENTS TO BE SET
17. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA FLOOD MAP PANEL NUMBER: 10005C0325L, EFFECTIVE JUNE 20, 2018.
18. POSTED SPEED LIMIT: MOUNT JOY RD (SCR297): 35 MPH
19. 2020 STATE INVESTMENT AREA: STATE STRATEGIES LEVEL 4
20. PROXIMITY TO T.I.D.: APPROXIMATELY 6.4 MILES NORTHEAST TO HENLOPEN T.I.D.

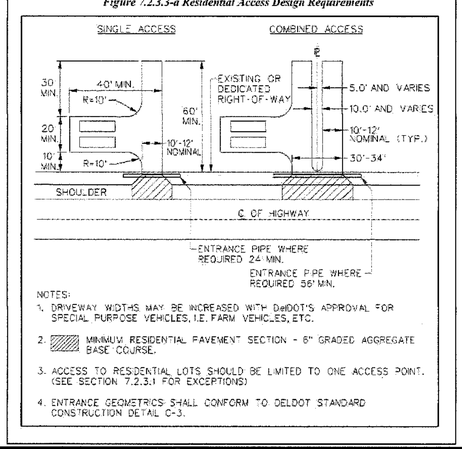



## SIGHT DISTANCE TRIANGLE

SCALE: 1" = 60'

0 60' 120'

*Figure 7.2.3.3-a Residential Access Design Requirements*




## OWNER(S) CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM THE LEGAL OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

YODER PROPERTIES LLC
10222 WOODYARD RD
GREENWOOD, DE 19950

## ENGINEERS CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

EDWIN TENNEFOSS, P.E. (DE LICENSE NO. #12895) DATE
39 COMMERCE STREET
HARRINGTON, DE 19952

SITEWORKS ENGINEERING LLC
PO BOX 2 | 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

# LANDS OF YODER PROPERTIES LLC
## TAX PARCEL NO. 234-21.00-29.00
## SCR 297 (MOUNT JOY RD) MAJOR COLLECTOR

ISSUE / REVISION BLOCK
3/7/25 - SUSSEX COUNTY

| SCALE | PROJECT # | DA |
|---|---|---|
| 1" = 50' | 25-595 | |

DRAWING NUMBER
1
SHEET 1 OF 1

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**PLANNING & ZONING COMMISSION**
ROBERT C. WHEATLEY, CHAIRMAN
HOLLY J. WINGATE, VICE-CHAIRMAN
SCOTT COLLINS
J. BRUCE MEARS
BRIAN BUTLER

**Sussex County**
DELAWARE
sussexcountyde.gov
302-855-7878

JAMIE WHITEHOUSE, MRTPI, AICP
DIRECTOR OF PLANNING & ZONING

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: February 5, 2025

| | |
|---|---|
| Application: | CU 2468 Richard H. Bell, III |
| Applicant: | Richard H. Bell, II<br>115 Savannah Road<br>Lewes, DE 19958 |
| Owner: | Richard H. Bell, II<br>115 Savannah Road<br>Lewes, DE 19958 |
| Site Location: | 22592 Lewes Georgetown Highway, Georgetown |
| Site Location: | Located on the southeast side of Lewes Georgetown Highway (Rt. 9), approximately 0.23 mile southwest of Park Avenue (S.C.R. 321). |
| Current Zoning: | Agricultural Residential (AR-1) Zoning District |
| Proposed Use: | A mobilization yard for the Park Avenue relocation project to include storage of soil and materials |
| Comprehensive Land Use Plan Reference: | Developing Area |
| Councilmanic District: | District 5 – Mr. Rieley |
| School District: | Indian River School District |
| Fire District: | Georgetown Fire Department |
| Sewer: | Private Septic |
| Water: | Private Well |
| Site Area: | 5.96-acre(s) +/- |
| Tax Map ID.: | 135-15.00-79.03 |

# Sussex County

January 9, 2025

layer43
- Red: Band_1
- Green: Band_2
- Blue: Band_3

polygonLayer
- Override 1
- Override 2
- Tax Parcels

- Streets
- County Boundaries
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations
- 1.2m Resolution Metadata

1:4,514

0 0.04 0.09 0.17 mi

0 0.05 0.1 0.2 km

Wetland mapping is supported with funding provided by the Environmental Protection Agency., DNREC, Division of Watershed Stewardship, Drainage Program, john.inkster@state.de.us, Sussex County, Sussex County Government, Maxar

# Sussex County

January 9, 2025

polygonLayer

Override 1

Override 2

Tax Parcels

Streets

County Boundaries

layer44

Red: Band_1

Green: Band_2

Blue: Band_3

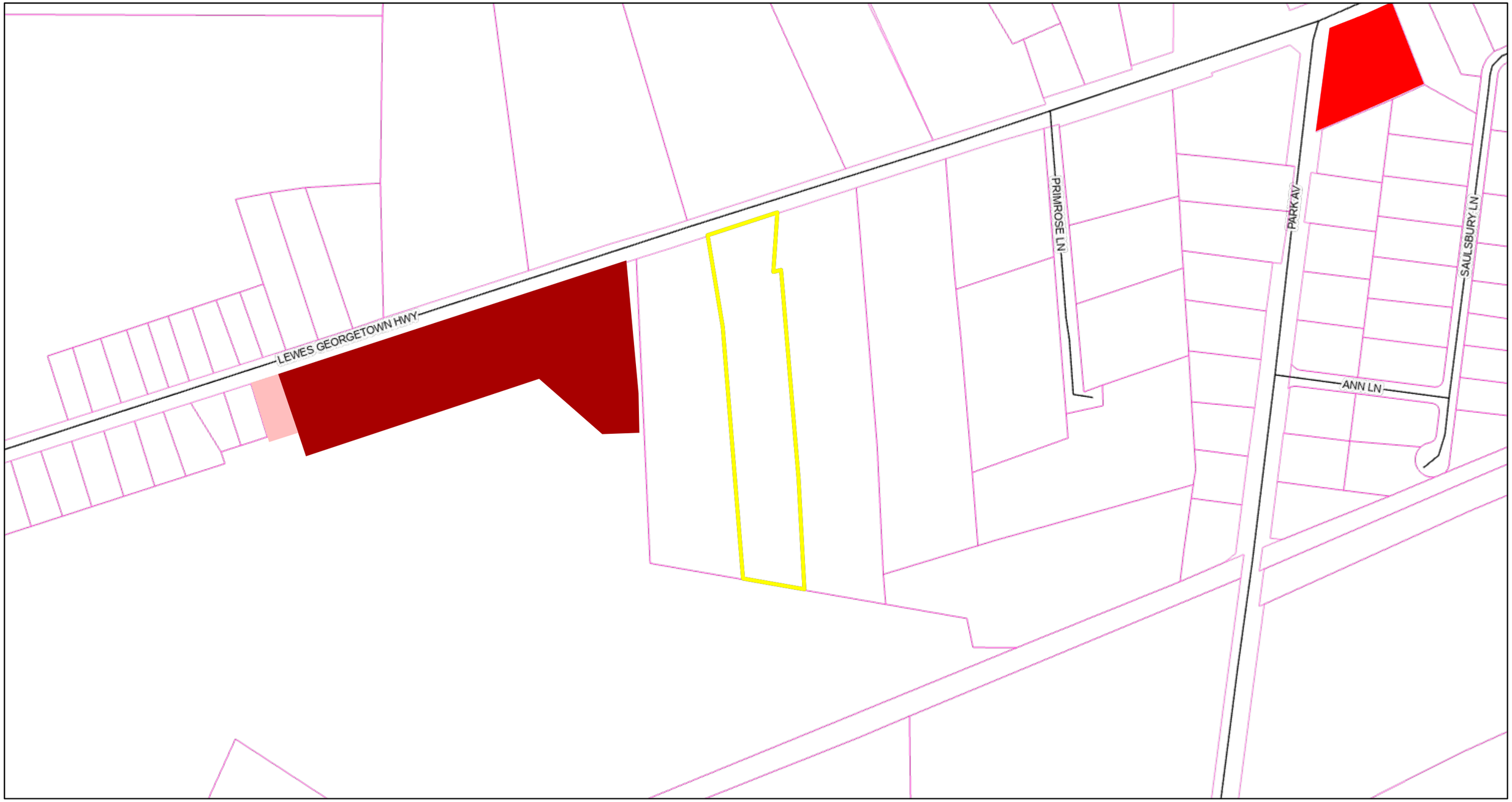
1:4,514

0 0.04 0.09 0.17 mi

0 0.05 0.1 0.2 km

Wetland mapping is supported with funding provided by the Environmental Protection Agency., DNREC, Division of Watershed Stewardship, Drainage Program, john.inkster@state.de.us, Sussex County, Sussex County Government

# Sussex County




January 9, 2025

1:4,514

0 0.04 0.09 0.17 mi

0 0.05 0.1 0.2 km

polygonLayer
- Override 1
- Override 2

Zoning
- Commercial Residential - CR-1
- C1: General Commercial
- B-1: Neighborhood Business

- Tax Parcels
- Streets
- County Boundaries

layer44
- Red: Band_1
- Green: Band_2
- Blue: Band_3

Wetland mapping is supported with funding provided by the Environmental Protection Agency., DNREC, Division of Watershed Stewardship, Drainage Program, john.inkster@state.de.us, Sussex County, Sussex County Government

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

# Memorandum

To: Sussex County Planning Commission Members
From: Mrs. Christin Scott, Planner II
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: February 11, 2025
RE: Staff Analysis for C/U 2468 Richard H. Bell, III

This memo is to provide background and analysis for the Planning Commission to consider as a part of Application C/U 2468 Richard H. Bell, III to be reviewed during the February 19th, 2025, Planning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

**Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.**

**Tax Parcel ID:** 135-15.00-79.03

**Proposal:** The request is for a Conditional Use for Tax Parcel 135-15.00-79.03 to allow for a mobilization yard for the Park Avenue relocation project to include the storage of soil and materials on a parcel lying on the southeast side of Lewes Georgetown Highway (Rt. 9), approximately 0.23 mile southwest of Park Avenue (S.C.R. 321) in Georgetown. The property is comprised of 16.4f acres +/-.

**Zoning:** The Parcel is zoned Agricultural Residential (AR-1) District. The surrounding parcels of the subject property are all Agricultural Residential (AR-1) District with parcels to the east and west being zoned Neighborhood Business (B-1) District, Commercial Residential (CR-1) District and General Commercial (C-1) District.

**Future Land Use Map Designation w/in Comprehensive Plan:** Developing Area

**Applicability to Comprehensive Plan:** The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property has land use designation of "Developing Area." All surrounding properties to the north, south, east, and west of the subject site contain a Growth Area Future Land Use Map designation of "Developing Area."

Developing Areas are newer, emerging growth areas that demonstrate the characteristics of developmental pressures and the Plan notes that "most of the proposed Developing Areas are adjacent to municipalities…or adjacent to Town Centers" (2018 Sussex County Comprehensive

Plan, 4-14). The Plan also notes guidelines for density in areas classified Developing Area, noting that a "density (4-12 units per acre) can be appropriate" where development can be supported by central water/sewer, a proximity to commercial and employment centers, or location along a main road or intersection (2018 Sussex County Comprehensive Plan, 4-14). Finally, the Plan notes that "a range of housing types should be permitted in Developing Areas, including single-family homes, townhouses, and multi-family units." (2018 Sussex County Comprehensive Plan, 4-14).

**Further Site Considerations:**

- **Density:** N/A
- **Open Space Provisions:** N/A
- **Agricultural Areas:** The site is located within the vicinity of active agricultural areas.
- **Interconnectivity:** N/A
- **Transportation Improvement District (TID):** The parcel is not within the Henlopen Transportation Improvement District.
- **Forested Areas:** The site is located within the vicinity of forested areas.
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The property is located within Flood Zone "X", within an area of "Fair" Groundwater Recharge Potential, and Staff note there are no Wellhead Protection Areas on the site. An existing Condition Use is located on the site, C/U 2083 for a contracting business with outdoor storage and concrete crushing that was approved by Sussex County Council on Tuesday, August 8, 2017, through Ordinance No. 2515.

Based on the analysis of the land use, surrounding zoning and uses, a Conditional Use Application to allow for a mobilization yard for the Park Avenue relocation project to include the storage of soil and materials, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

**Existing Conditional Uses within the Vicinity of the Subject Site:** A Data Table has been supplied which provides further background regarding the approval status of Applications in the area, including the location of all other Conditional Use Applications, since 2017, that are less than 1 mile distance from the subject site.

## Conditional Use Applications

**(Within a 1-mile radius of the subject site)**

| Application CU Number | Application Name | Zoning District | Proposed Use | CC Decision Date | CC Decision | Ordinance Number |
|---|---|---|---|---|---|---|
| 2083 | Richard H. Bell, III | AR-1 | contracting business with outdoor storage and crushing of concrete | 8/8/2017 | Approved | 2515 |
| 2119 | Chad Hayes | AR-1 | automotive sales with minor repair and contractor office with storage | 4/17/2018 | Approved | 2571 |
| 2182 | Samuel G. Thomas | AR-1 | automotive repair and dealer | 9/17/2019 | Approved | 2679 |
| 2228 | M.L. Joseph Heirs Farm Account, LLC | AR-1 | Campground | 11/17/2020 | Approved | 2755 |
| 2369 | Leeward Chase DE, LLC | AR-1 | Multi-Family (106) | <Null> | Deferred | <Null> |
| 2412 | Marco Morales | AR-1 | Professional Office for Construction | <Null> | <Null> | <Null> |

File #: _____

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ✓
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

22592 Lewes Georgetown Hwy, Georgetown, DE

**Type of Conditional Use Requested:**

Mobilization Yard for Park Avenue Relocation (storage of soil, etc.)

**Tax Map #:** 135-15.00-79.03 **Size of Parcel(s):** 5.96

**Current Zoning:** AR-1 **Proposed Zoning:** AR-1 **Size of Building:** not applicable

**Land Use Classification:** 2045 FLUM - Developing Area

**Water Provider:** not applicable **Sewer Provider:** not applicable

**Applicant Information**

Applicant Name: Richard H. Bell, III
Applicant Address: 115 Savannah Road
City: Lewes State: DE ZipCode: 19958
Phone #: (302) 645-1922 E-mail: rich@cleancutpavers.com

**Owner Information**

Owner Name: Richard H. Bell, III
Owner Address: 115 Savannah Road
City: Lewes State: DE Zip Code: 19958
Phone #: (302) 645-1922 E-mail: rich@cleancutpavers.com

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: David C. Hutt, Esquire | Morris James LLP
Agent/Attorney/Engineer Address: 107 West Market Street
City: Georgetown State: DE Zip Code: 19947
Phone #: (302) 856-0018 E-mail: dhutt@morrisjames.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

— **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

✓ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

— **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

*Signature of Applicant/Agent/Attorney* _____ Date: 7/13/2023

*Signature of Owner* _____ Date: 7/13/23

*For office use only:*

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

May 3, 2023

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Richard H Bell III** (22592 Lewes-Georgetown Highway, Georgetown, DE**)** proposed land use application, which we received on April 6, 2023. This application is for an approximate 5.96-acre parcel (Tax Parcel: 135-15.00-79.03). The parcel is located on the south side of Lewes-Georgetown Highway (US Route 9) and is 1700 feet west of the intersection of Lewes-Georgetown Highway and Park Avenue (US Truck Route 9). The parcel is currently zoned AR-1 (Agricultural Residential District). The applicant seeks a Conditional Use to place a Mobilization Yard and to store soil on the parcel.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volumes along Lewes-Georgetown Highway from Airport Road (Sussex Road 319) to Harbeson Road (Delaware Route 5) is 15,682 and 20,165 vehicles per day, respectively.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Mr. Philip Lindsey, at philip.lindsey@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:plm

cc: Richard H. Bell III, Applicant
David C. Hutt, Morris James LLP
Ann Lepore, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
Kevin Hickman, Acting Sussex County Review Coordinator, Development Coordination
Derek Sapp, Sussex County Subdivision Reviewer, Development Coordination
Brian Yates, Sussex County Subdivision Reviewer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Reviewer, Development Coordination
José Quixtan, Sussex County Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination
Philip Lindsey, TIS Group Project Engineer, Development Coordination

**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**UTILITY PLANNING & DESIGN REVIEW DIVISION**
**C/U & C/Z COMMENTS**

| | |
|---|---|
| TO: | **Jamie Whitehouse** |
| REVIEWER: | **Alex Kansak** |
| DATE: | **1/10/2025** |
| APPLICATION: | **CU 2468** |
| APPLICANT: | **Richard H. Bell, II** |
| FILE NO: | **NCPA-5.03** |
| TAX MAP & PARCEL(S): | **135-15.00-79.03** |
| LOCATION: | **Located on the southeast side of Lewes Georrgetown Highway (Rt. 9), approximately 0.23 miles southwest of Park Avenue (S.C.R. 321).** |
| NO. OF UNITS: | **Mobilization Yard** |
| GROSS ACREAGE: | **5.96 Acres** |

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **2**

**SEWER:**

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☐ No ☒

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Municipal Growth & annexation Area**

(3). Is wastewater capacity available for the project? **No** If not, what capacity is available? **N/A**.

(4). Is a Construction Agreement required? **No** If yes, contact Utility Engineering at (302) 855-7717.

(5). Are there any System Connection Charge (SCC) credits for the project? **No** If yes, how many? **N/A**. Is it likely that additional SCCs will be required? **N/A** If yes, the current System Connection Charge Rate is **Unified $7,700.00** per EDU. Please contact **N/A** at **302-855-7719** for additional information on charges.

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

☐ Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **The proposed Conditional Use is not located in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer service. The proposed conditional use is located in the Growth and Annexation area of the Town of Georgetown, please contact the municipality.**

(9). Is a Sewer System Concept Evaluation required? **Not at this time**

(10). Is a Use of Existing Infrastructure Agreement Required? **Not at this time**

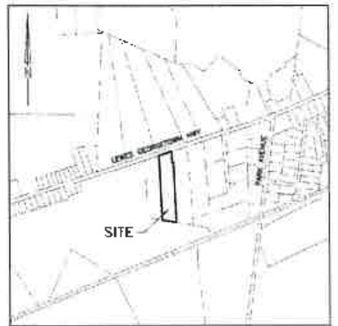
(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned

Document# 2022000007623 BK: 361 PG: 93
Recorder of Deeds, Scott Dailey On 2/11/2022 at 3:45:35 PM Sussex County, DE
Doc Surcharge Paid




LOCATION MAP SCALE 1" = 1/4 MILE

## LEGEND

| EXISTING | | PROPOSED |
|---|---|---|
| RW | RIGHT-OF-WAY | RW |
| PL | PROPERTY LINE | |
| | EASEMENT | PE |
| | FENCE | |
| | SWALE | |
| | ROAD SIGN, MAIL BOX | |
| | UTILITY POLE | |
| | SHRUB, TREE | |
| | TREE LINE | |
| | BUILDING | |

## CONDITIONAL USE (CU 2083) NOTES:

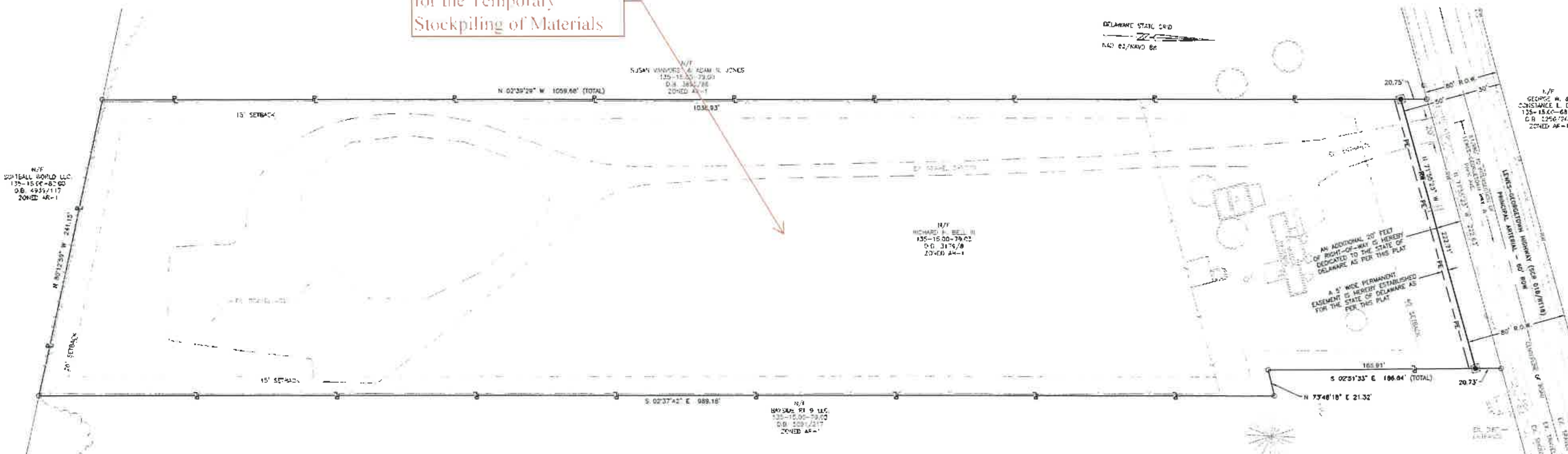
A. ALL UNCRUSHED/PRE-CRUSHED CONCRETE CURRENTLY LOCATED ON THE SITE SHALL BE REMOVED AND THE SITE SHALL BE CLEANED UP OF ALL EXISTING UNCRUSHED/PRE-CRUSHED CONCRETE WITHIN 45 DAYS. NO OTHER CONCRETE SHALL BE ACCEPTED ON THE SITE FOR CRUSHING. CONCRETE CURRENTLY EXISTING ON THE WAY BE CRUSHED ON-SITE DURING THIS 45-DAY PERIOD. UPON THE EXPIRATION OF THE 45-DAY PERIOD, ALL FURTHER CRUSHING SHALL CEASE. NO OTHER WOOD OR METAL CHIPPING OR GRINDING SHALL OCCUR AND NO OTHER MATERIALS, INCLUDING CONCRETE, WOOD, AND METAL SHALL BE ACCEPTED AT THE SITE FOR CRUSHING OR RECYCLING.
B. DURING THE INITIAL 45-DAY PERIOD ONLY CRUSHING OPERATIONS SHALL ONLY OCCUR BETWEEN THE HOURS OF 9AM THROUGH 4PM MONDAY THROUGH FRIDAY. CRUSHING OPERATIONS SHALL BE PROHIBITED AFTER THE EXPIRATION OF THE INITIAL 45-DAY PERIOD. IN ADDITION, THE OPERATOR SHALL COOPERATE WITH SPORTS AT THE BEACH SO THAT CRUSHING OPERATIONS DO NOT UNREASONABLY INTERFERE WITH EVENTS OCCURRING THERE.
C. APPLICANT SHALL BE PERMITTED TO STORE CRUSHED CONCRETE IN A 40' X 100' AREA WHICH SHALL BE SHOWN ON THE FINAL SITE PLAN AND THE OVERALL HEIGHT SHALL NOT EXCEED 30 FEET.
D. LANDSCAPING OR SOLID FENCING SHALL BE INSTALLED SUCH THAT ALL CONCRETE, STONE AND/OR POOL OR OTHER EQUIPMENT STORAGE SHALL BE COMPLETELY SCREENED FROM ADJACENT RESIDENTIAL DWELLINGS AND PUBLIC VIEW. THE LANDSCAPING OR SOLID FENCING SHALL BE SHOWN ON THE FINAL SITE PLAN.
E. ANY SECURITY LIGHTING SHALL BE DOWNWARD SCREENED SO THAT IT DOES NOT SHINE ON NEIGHBORING PROPERTIES OR ROADWAYS.
F. WATER SHALL BE AVAILABLE AT ALL TIMES TO CONTROL DUST WITHIN THE SITE.
G. ONE LIGHTED SIGN SHALL BE PERMITTED. IT SHALL NOT BE GREATER THAN 32 SF PER SIDE.
H. THE APPLICANT SHALL COMPLY WITH ALL ROADWAY AND ENTRANCE IMPROVEMENTS REQUIRED BY DELDOT. THE SITES ENTRANCE SHALL BE APPROVED BY DELDOT AS A COMMERCIAL ENTRANCE.
I. THE APPLICANT SHALL NOT ADVERTISE OR DISPLAY PRODUCTS WITHIN THE FRONT YARD AREA EXCEPT IN THE FORM OF LANDSCAPING BEDS AND PLANTERS.
J. THERE SHALL BE NO PARKING WITHIN THE FRONT YARD SETBACK.
K. THE LOCATION OF ALL STORAGE AREAS, INCLUDING CRUSHED CONCRETE, STONE AND POOL STORAGE SHALL BE DESIGNATED AND SHOWN ON THE FINAL SITE PLAN.
L. FAILURE TO COMPLY WITH ANY CONDITION CONTAINED HEREIN SHALL INVALIDATE THE CONDITIONAL USE.
M. THE FINAL SITE PLAN SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE PLANNING AND ZONING COMMISSION.

## RECORD PLAN RED - GENERAL NOTES (DELDOT)

REVISED: MARCH 21, 2019

1. THIS RECORD PLAN - RED SATISFIES THE DEPARTMENT'S RECORDATION REQUIREMENTS AND ARE BASED ON THE PARCEL'S LOCATION. NO COMMITMENTS ARE STATED OR IMPLIED BY DELDOT THROUGH THE ISSUANCE OF THIS LETTER WITH RESPECT TO: ENTRANCE LOCATION(S), ACCESS CONFIGURATIONS, AUXILIARY LANES AND/OR ROADWAY IMPROVEMENTS WHICH WILL BE EVALUATED AND REQUIRED AS NECESSARY AT THE TIME OF ENTRANCE CONSTRUCTION PLAN REVIEW OR APPROVAL FOR THE SITE.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
4. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS IN ACCORDANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
5. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MARKERS TO PROVIDE A PERMANENT REFERENCE FOR RE-ESTABLISHING THE RIGHT-OF-WAY AND PROPERTY CORNERS ON LOCAL AND HIGHER ORDER FRONTAGE ROADS. RIGHT-OF-WAY MARKERS SHALL BE SET AND/OR PLACED ALONG THE FRONTAGE ROAD RIGHT-OF-WAY AT PROPERTY CORNERS AND AT EACH CHANGE IN RIGHT-OF-WAY ALIGNMENT IN ACCORDANCE WITH SECTION 3.2.4.2 OF THE DEVELOPMENT COORDINATION MANUAL.
6. THIS COMMERCIAL PARCEL HAS DIRECT FRONTAGE ALONG LEWES-GEORGETOWN HIGHWAY (SCR 018), WHICH HAS A FUNCTIONAL CLASSIFICATION OF PRINCIPAL ARTERIAL/FREEWAY/INTERSTATE AS DEFINED BY THE STATE OF DELAWARE'S DEPARTMENT OF TRANSPORTATION. PER SECTION 3.6.1 OF THE DELDOT DEVELOPMENT COORDINATION MANUAL (DCM): IT IS THE DEVELOPER'S RESPONSIBILITY TO EVALUATE NOISE LEVELS AND THEIR IMPACTS ON PROPOSED DEVELOPMENT, FOR PROJECTS ADJACENT TO EXISTING TRANSPORTATION FACILITIES WITH THIS FUNCTIONAL CLASSIFICATION. ROADWAYS WITH THIS CLASSIFICATION CAN BE EXPECTED TO GENERATE ELEVATED LEVELS OF ROAD AND TRAFFIC RELATED NOISE, SIMILAR TO WHAT CAN BE EXPECTED IN URBAN AREAS. A DETAILED NOISE ANALYSIS PER DCM 3.6 IS TYPICALLY RECOMMENDED TO HELP GAUGE THE ACTUAL IMPACTS THAT ROADWAY RELATED NOISE MAY HAVE ON VARIOUS POTENTIAL LAND-USES (SUCH AS THOSE DESCRIBED IN DCM FIGURE 3.6.3-A: NOISE ABATEMENT CRITERIA). WITH THE INCLUSION OF THIS NOTE, THE DEVELOPER IS ACKNOWLEDGING THAT THE PROPOSED SITE AND/OR BUILDING LOCATION CAN BE EXPECTED TO EXCEED THE SPECIFIC MAXIMUM NOISE LEVELS FOR CERTAIN COMMERCIAL AND NON-RESIDENTIAL USES AS SHOWN IN DCM FIGURE 3.6.3-A. THE DEVELOPER'S WAIVER OF THE NOISE ANALYSIS AND REVIEW OF POTENTIAL NOISE MITIGATION MEASURES ARE SUPPORTED BY THE INFEASIBILITY OF APPLYING NOISE MITIGATION MEASURES, BASED ON ENGINEERING CONSIDERATIONS AND FACTORS THAT WOULD LIMIT THE ABILITY TO ACHIEVE SUBSTANTIAL NOISE REDUCTION. RELATED TO THE COMMERCIAL USE OF THE SITE AND/OR BUILDINGS, THIS WAIVER ACKNOWLEDGES THAT THE DECIBEL LEVEL FOR THIS PARCEL MAY EXCEED THE APPLICABLE LIMITS FOR SOME CURRENT OR FUTURE PROPOSED USES. THE USE OF THIS NOTE SIGNIFIES THE SUBDIVISION ENGINEER'S CONCURRENCE WITH WAIVING THE DEVELOPER'S COMPLETION OF A DETAILED NOISE STUDY AND SUBSEQUENT REVIEW OF RESULTING NOISE ABATEMENT FINDINGS OR MITIGATION MEASURES. ANY FUTURE COMPLAINTS RELATING TO EXISTING OR FUTURE NOISE LEVELS IMPACTING PROPOSED USES ON THIS SITE AND ALONG THIS EXISTING TRANSPORTATION FACILITY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR LAND OWNER OR BOTH.

Mobilization Yard Area for the Temporary Stockpiling of Materials




## DATA COLUMN

| | |
|---|---|
| PARCEL ID: | 135-15.00-79.03 |
| DEED REFERENCE: | DEED BOOK 3179, PAGE 8<br>PLAT BOOK 27, PAGE 13 |
| SITE LOCATION: | LON: W075° 20' 57.15"<br>LAT: N038° 42' 17.02" |
| **DATUM** | |
| VERTICAL: | NAVD 88 |
| HORIZONTAL: | NAD 83 (DE STATE PLANE) |
| **LAND USE** | |
| EXISTING: | RESIDENTIAL / COMMERCIAL |
| PROPOSED: | EQUIPMENT MAINTENANCE AND STORAGE MATERIAL STORAGE (SAND, GRAVEL & FIBERGLASS POOLS) |
| **ZONING** | |
| EXISTING ZONING: | AR-1 / CONDITIONAL USE (CONDITIONAL USE #2083, APPROVED AUGUST 8, 2017) |
| PROPOSED ZONING: | AR-1 / CONDITIONAL USE |
| **MINIMUM REQUIREMENTS** | |
| FRONT SETBACK: | 40 FT. |
| SIDE SETBACK: | 15 FT. |
| REAR SETBACK: | 20 FT. |
| LOT WIDTH: | 100 FT. |
| LOT DEPTH: | 100 FT. |
| LOT AREA: | 36,670 S.F. |
| PARKING: | (ARTICLE XXII: OFF-STREET PARKING, CODE SECTION 115-162) |
| SINGLE FAMILY DWELLING: | 2 SPACES |
| ~~WHOLESALING OR MANUFACTURING:~~ | ~~6 SPACES (12 EMPLOYEES)~~ |
| TOTAL | 8 SPACES |
| **MAXIMUM REQUIREMENTS** | |
| BUILDING HEIGHT: | 42 FT. |
| **PROPOSED PARKING:** | |
| OFFICE | 3 SPACES |
| WHOLESALING OR MANUFACTURING | 13 SPACES |
| TOTAL | 16 SPACES |
| **PROPOSED BUILDING** | |
| SQUARE FOOTAGE | 3,200 S.F. |
| **AREAS:** | |
| EXISTING SITE | |
| PARCEL - 79.03 | 5.96 AC. |
| R.O.W. DEDICATION | -0.10 AC. |
| TOTAL SITE AREA | 5.86 AC. |
| PROPOSED SITE | |
| SITE | 2.66 AC. |
| OPEN SPACE | 3.20 AC. |
| TOTAL SITE AREA | 5.86 AC. |
| NET DEVELOPMENT AREA: | 5.86 AC. |
| IMPERVIOUS EXISTING: | ±0.96 AC. (16%) |
| IMPERVIOUS PROPOSED: | ±2.66 AC. (45%) |
| PERVIOUS EXISTING: | ±5.00 AC. (84%) |
| PERVIOUS PROPOSED: | ±3.20 AC. (55%) |
| **UTILITIES** | |
| SEWER | PRIVATE ON-SITE SEPTIC |
| WATER | PRIVATE ON-SITE WELL (WATER IS SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DIVISION OF PUBLIC HEALTH) |
| PROPOSED BUILDING CONSTRUCTION: | WOOD CONSTRUCTION |
| FLOODPLAIN: | THIS PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOODPLAIN AS DETERMINED BY FEMA MAP 10005C0325L, DATED JUNE 20, 2018 |
| WETLANDS: | DO NOT EXIST ON SITE |
| THIS PARCEL IS NOT LOCATED WITHIN A WELLHEAD PROTECTION AREA. | |
| THIS PARCEL IS NOT LOCATED WITHIN A GROUNDWATER RECHARGE AREA. | |
| STATE INVESTMENT LEVEL: | LEVEL 2 |
| POSTED SPEED LIMIT: | 50 M.P.H. |

THIS PROPERTY IS LOCATED ±1,980' TO THE WEST OF THE INTERSECTION OF LEWES GEORGETOWN HWY. (SCR 018) AND PARK AVENUE.

**OWNER / DEVELOPER:**
RICHARD & JENNIFER BELL
115 SAVANNAH ROAD
LEWES, DE 19958

**ENGINEER:**
DAVIS, BOWEN & FRIEDEL, INC.
W. ZACHARY CROUCH, P.E.
1 PARK AVENUE
MILFORD, DE 19963
(302) 424-1441

## MONUMENT LEGEND

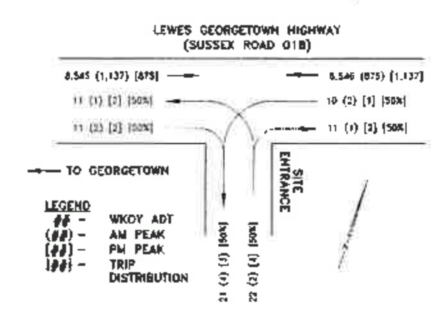
- ○ IRON PIPE FOUND
- ▣ CONCRETE MONUMENT SET

OUTPUT Record Plan
APPROVED
of 1 page
SUSSEX COUNTY
PLANNING & ZONING COMMISSION

## OWNER'S STATEMENT

I, THE UNDERSIGNED, HEREBY STATE THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THE PLAN WAS MADE AT MY DIRECTION, I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN BE RECORDED ACCORDING TO LAW.

Richard H. Bell III 1/26/22
RICHARD BELL DATE
115 SAVANNAH ROAD
LEWES, DELAWARE 19958




## TRAFFIC DIAGRAM

NO SCALE

**ROAD DATA**
LEWES GEORGETOWN HIGHWAY (SUSSEX ROAD 018)
FUNCTIONAL CLASSIFICATION - PRINCIPAL ARTERIAL

| | |
|---|---|
| AADT (DELAWARE TRAFFIC SUMMARY 2019) | =18,128 |
| 10 YR PROJECTED AADT = 1.16 X 16,120 | =18,708 |
| 10 YR PROJECTED AADT + SITE ADT (43) | =18,751 |
| PEAK HOUR = 18,708 X 11.77% | =2,202 |
| DIRECTIONAL SPLIT = 56.51%/43.49% | =1,244/958 |
| 16.55% TRUCK = X 2,012 TRIPS | =232 |
| SPEED - POSTED - | 50 MPH |
| TRAFFIC PATTERN GROUP - | 8 |

SITE TRIPS GENERATED

EXISTING LAND USE

| TYPE OF DEVELOPMENT | CODE | UNITS | ADT | AM | PM |
|---|---|---|---|---|---|
| SINGLE FAMILY DETACHED HOMES | 210 | 1 | 10 | 1 | 1 |

PROPOSED LAND USE

| TYPE OF DEVELOPMENT | CODE | S.F. | ADT | AM | PM |
|---|---|---|---|---|---|
| SPECIALTY TRADE CONTRACTOR | 180 | 3,200 | 33 | 5 | 6 |

| TOTAL EXISTING & PROPOSED | ADT | AM | PM |
|---|---|---|---|
| | 43 | 6 | 7 |

NOTES:
1. TRIP GENERATION IS BASED ON THE ITE TRIP GENERATION 10TH EDITION.
2. DESIGN VEHICLE: SU-30, WB-40
3. TRIP DISTRIBUTION BASED ON OBSERVED VEHICLE COUNTS

## ENGINEER'S STATEMENT

I, W. ZACHARY CROUCH, P.E., HEREBY STATE THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

DAVIS, BOWEN & FRIEDEL, INC.
by W. ZACHARY CROUCH, P.E.
JAN 27 2022
DATE

0 40 80 120

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS ENGINEERS SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441
EASTON, MARYLAND (410) 770-4744

RECORD PLAN

# CLEAN CUT PAVERS & POOLS
GEORGETOWN HUNDRED
SUSSEX COUNTY, DELAWARE

REVISED:
2021-08-18: DELDOT
2021-09-08: DELDOT
2021-10-05: SCD
2021-12-14: SCD

| | |
|---|---|
| Date | APRIL, 2021 |
| Scale | 1" = 40' |
| Dwn.By | KJK |
| Proj.No. | 3826A001 |
| Dwg.No. | V-100 |

THIS DRAWING, THE DESIGN AND CONSTRUCTION FEATURES DISCLOSED ARE PROPRIETARY TO DAVIS, BOWEN & FRIEDEL, INC., AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. COPYRIGHT ©2021

39797 BK 03179 PG 008

TAX MAP AND PARCEL
#: 1-35 15.00 79.03
PREPARED BY:
Tunnell & Raysor, P.A.
30 East Pine Street
Georgetown, DE 19947
File No. LC430/LE

**THIS DEED**, made this 1st day of August, 2005,

- BETWEEN -

**RODNEY J. CAMPBELL, JR** and **VIRGINIA J. CAMPBELL**, of 30606 Beaver Dam Branch Rd., Laurel, DE 19956, parties of the first part,

- AND -

**RICHARD H. BELL, III**, of 31076 Buttonwood Dr., Lewes, DE 19958, as sole owner, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of **ONE DOLLAR ($1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and his heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

ALL THAT CERTAIN tract, piece or parcel of land, situate, lying and being in Georgetown Hundred, Sussex County, State of Delaware and being known and designated as Parcel "B" and being more particularly described on a Plot prepared by Coast Survey, Inc., Registered Surveyors, dated June 28, 2005, and being more particularly described as follows, to wit:

BEGINNING at an iron pipe set in the Southerly right of way of U.S. Route 9, also known as Delaware Road 18, 60 feet wide, said iron pipe being a corner for said lands herein described and Parcel A. The said point of beginning is further located Westerly from the intersection of said Southerly right of way of U.S. Route 9, also known as Delaware Road 18 and the centerline of Sussex County Road 321, 50 feet wide, 2,033 feet more or less. Thence from said point of beginning and running with said Southerly right of way of U.S. Route 9, also known as Delaware Road 18, North 75 degrees 37 minutes 00 seconds East, 222.68 feet to an iron pipe, said iron pipe being a corner for said lands herein described and Parcel C; thence thereby the three (3) following courses

TUNNELL & RAYSOR, P.A.
Georgetown, Delaware

Consideration: $342500.00 Exempt Code: A

| County | State | Total |
|---|---|---|
| 5137.50 | 5137.50 | 10275.00 |

counter Date: 08/03/2005

and distances: (1) South 00 degrees 51 minutes 06 seconds West, 186.70 feet to an iron pipe; (2) North 77 degrees 30 minutes 15 seconds East, 21.38 feet to an iron pipe; (3) South 01 degrees 04 minutes 26 seconds West, 989.11 feet to an iron pipe set in line of lands now or formerly of Softball World, LLC; thence, thereby, North 76 degrees 31 minutes 26 seconds West, 241.33 feet to an iron pipe, said iron pipe being another corner for said lands herein described and said Parcel A; thence thereby, North 01 degrees 03 minutes 02 seconds East, 1,059.62 feet to an iron pipe set in said Southerly right of way of U.S. Route 9, also known as Delaware Road 18, said point and place of beginning, containing within said metes and bounds 5.9650 acres of land be the same more or less and shown as PARCEL "B", on the Subdivision of lands of Andrew West Jones as prepared by Mann-Talley, Inc., Registered Surveyor, on September 13, 1982. Said plot of record in the Office of the Recorder of Deeds, in Georgetown, Delaware.

BEING the same lands conveyed to Rodney J. Campbell, Jr. and Virginia J. Campbell from Terry L. Messick and Virginia J. Campbell by deed dated September 11, 1991 recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware in Deed Book 1804, page 237.

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

TUNNELL & RAYSOR, P.A.
Georgetown, Delaware

BK 03179 PG 010

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

(SEAL)
**Rodney J. Campbell, Jr**

(SEAL)
**Virginia J. Campbell**

STATE OF DELAWARE :

: ss

COUNTY OF SUSSEX :

BE IT REMEMBERED, that on August 01, 2005, personally came before me, the subscriber, Rodney J. Campbell, Jr and Virginia J. Campbell, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

Given under my Hand and Seal of office the day and year aforesaid.

**HEIDI A. BALLIET**
ATTORNEY AT LAW WITH
POWER TO ACT AS NOTARY PUBLIC
PER 29 DEL. C SEC 4323 (A)3

Notary Public

Return to:
Richard H. Bell, III
31076 Buttonwood Drive
Lewes, DE 19958

**Received**
AUG 04 2005
**ASSESSMENT DIVISION OF SUSSEX CTY**

RECORDER OF DEEDS
JOHN F. BRADY
05 AUG -3 AM 9:55
SUSSEX COUNTY
DOC. SURCHARGE PAID

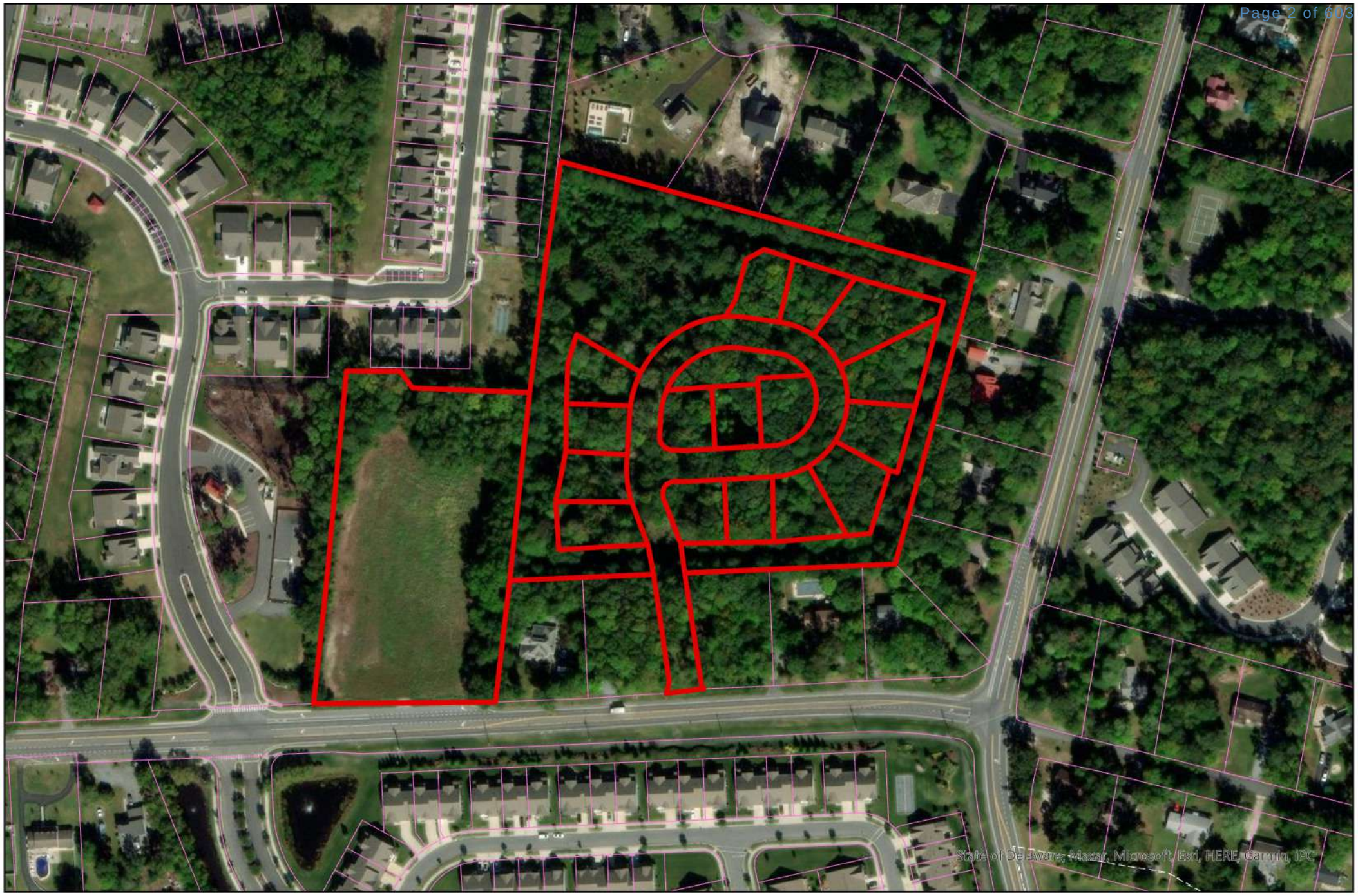
TUNNELL & RAYSOR, P.A.
Georgetown, Delaware

PLANNING & ZONING COMMISSION
ROBERT C. WHEATLEY, CHAIRMAN
BRIAN BUTLER
GREGORY SCOTT COLLINS
J. BRUCE MEARS
HOLLY WINGATE

Sussex County
DELAWARE
sussexcountyde.gov
(302) 855-7878 T
(302) 854-5079 F
JAMIE WHITEHOUSE
DIRECTOR

2462PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: March 5th, 2025
Sussex County Council Public Hearing Date: May 13th, 2025

| | |
|---|---|
| Application: | C/U 2462 Gulfstream Glen Cove |
| Applicant: | Gulfstream Glen Cove, LLC<br>27 Atlantic Avenue<br>Ocean View, DE 19970 |
| Owner: | Gulfstream Glen Cove, LLC<br>OT Collins Family Limited Partnership<br>27 Atlantic Avenue / 30782 Cedar Neck Road<br>Ocean View, DE 19970 |
| Site Location: | The Parcels are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352) |
| Current Zoning: | AR-1 (Agricultural Residential) |
| Proposed Use: | Multi-Family Dwellings (50 Units)<br>(Single-family detached condominiums) |
| Comprehensive Land Use Plan Reference: | Coastal Area |
| Councilmanic District: | Mr. Hudson |
| School District: | Indian River School District |
| Fire District: | Millville Fire Company |
| Sewer: | Public – Sussex County |
| Water: | Tidewater |
| Site Area: | 12.32 aces □/- |
| Tax Map ID(s): | 134-12.00-374.01, 374.02, 375.00, □ 3445.00 through 3460.00 |




**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Aerial Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, &**
**3445.00 through 3460.00**

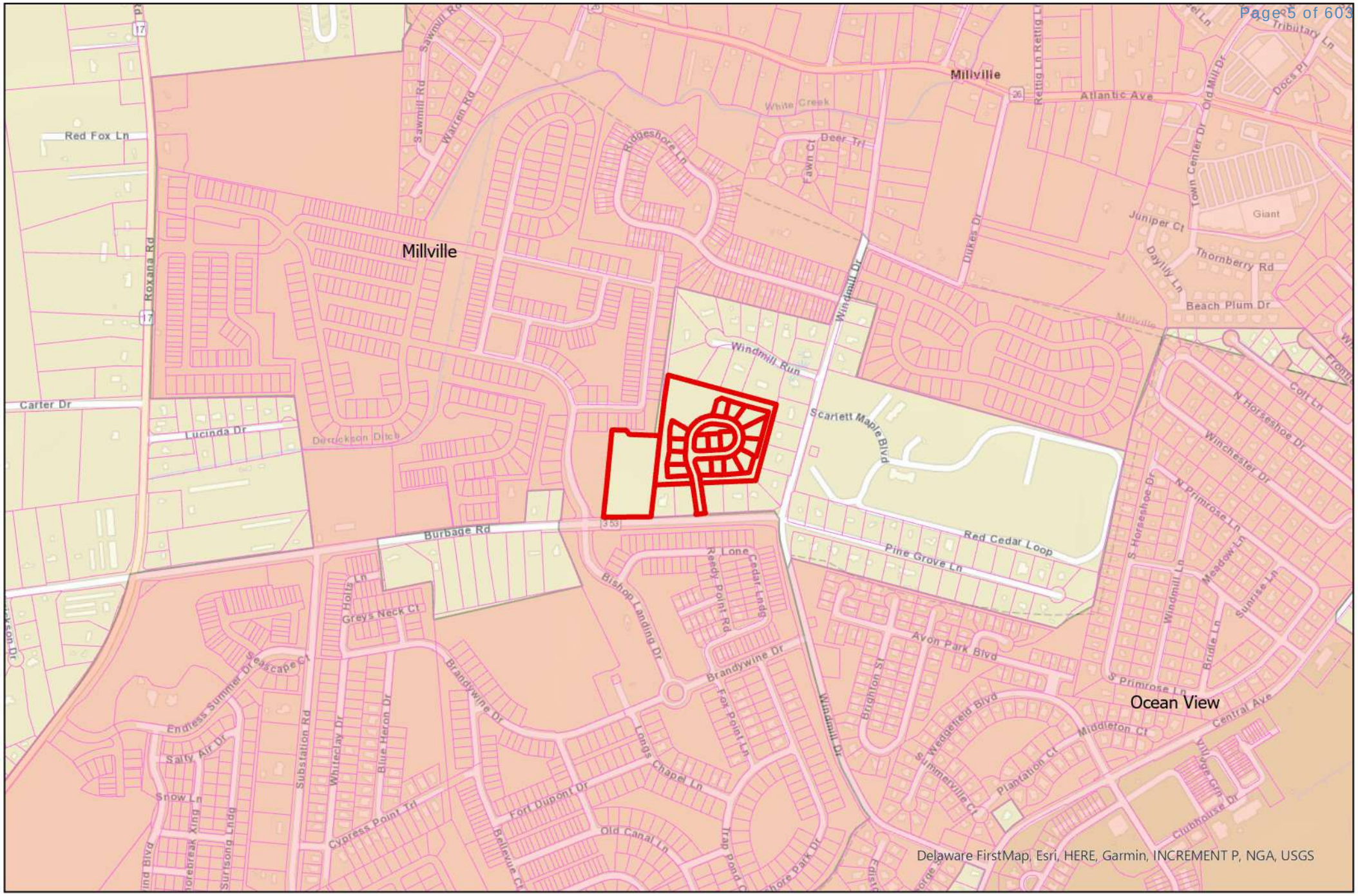
**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
0 150 300

N
© All EagleView

© All Eagleview techno

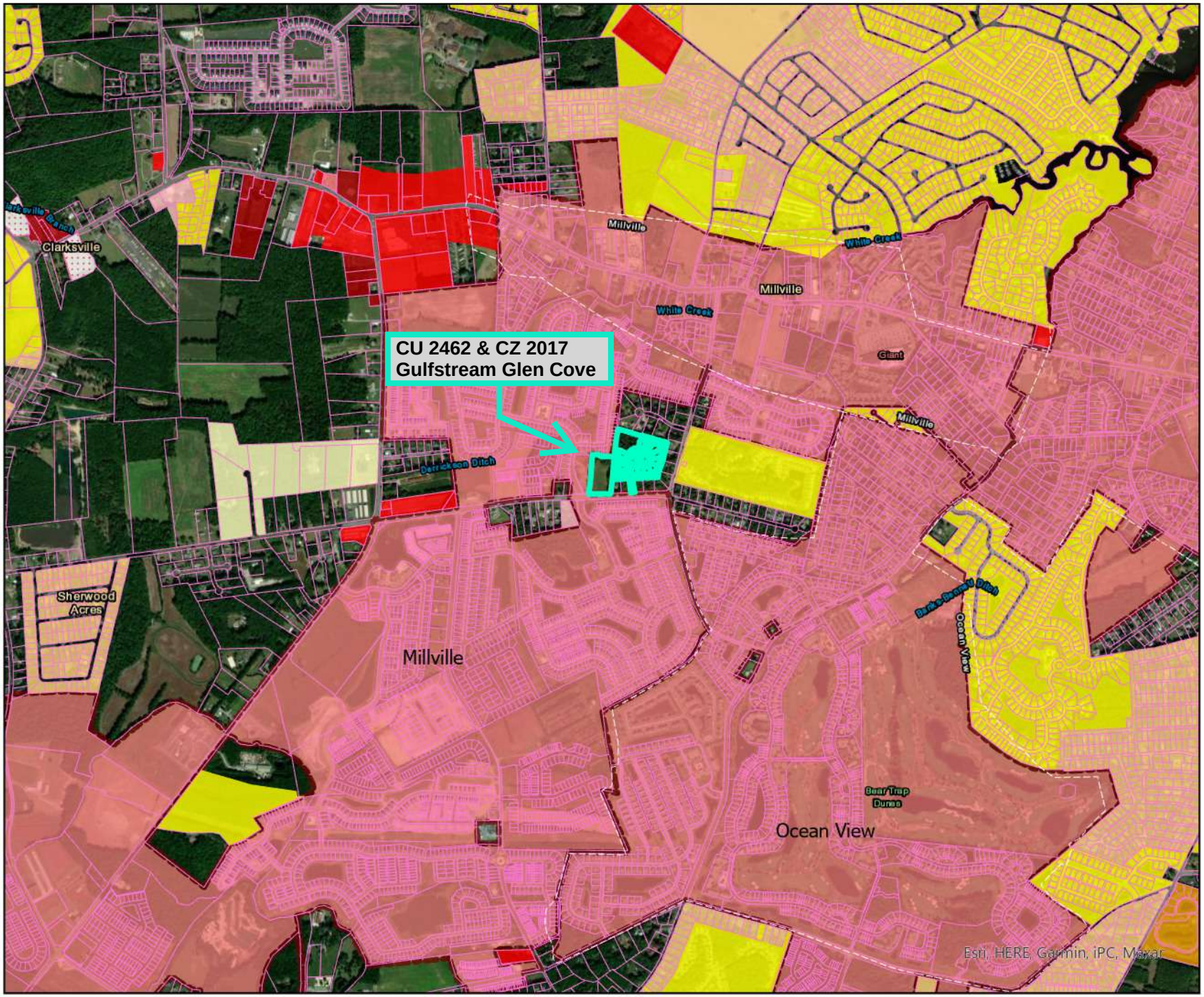



**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Street Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
0 500 1,000




## Zoning

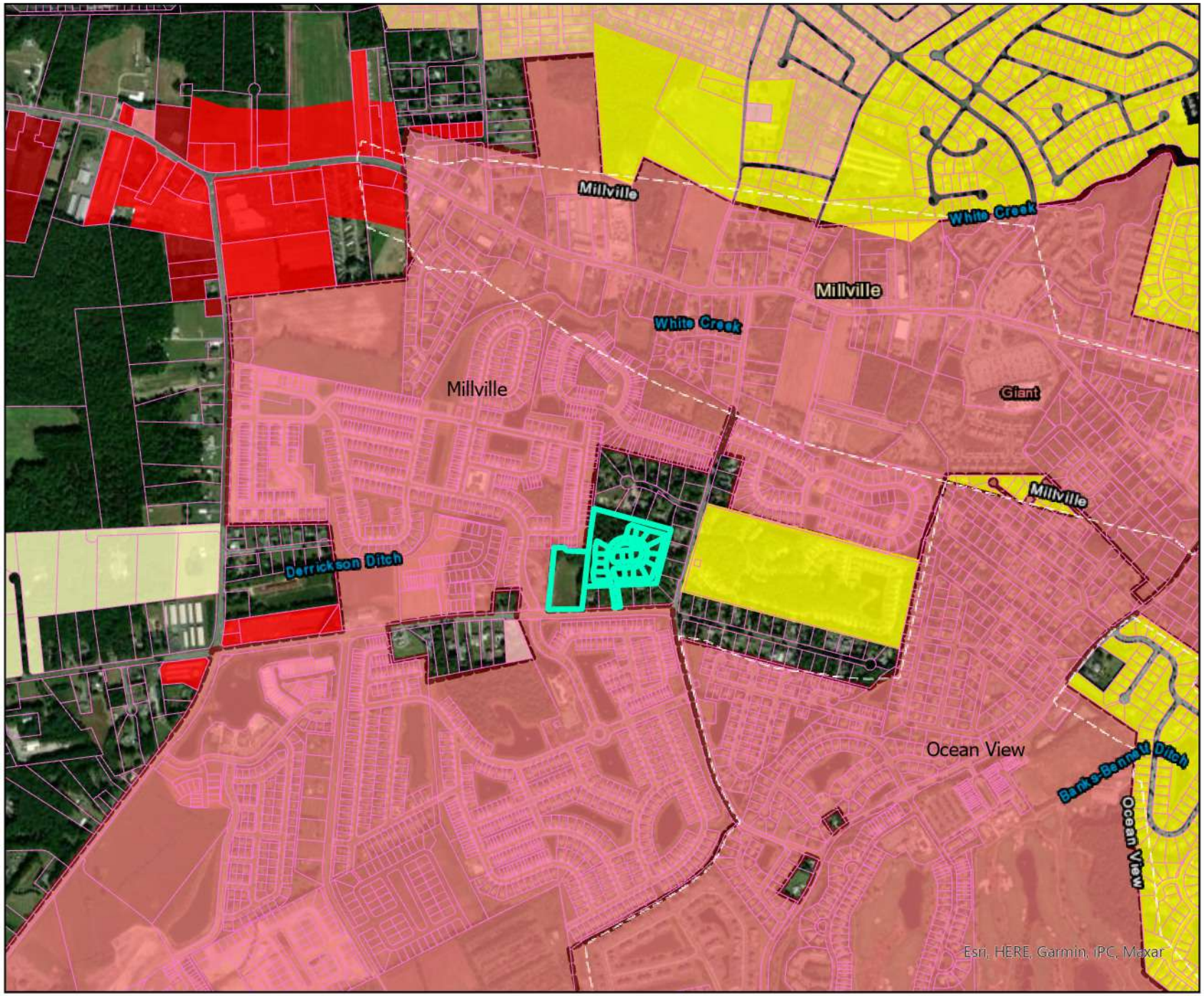
- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.25 0.5 1 Miles




## Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
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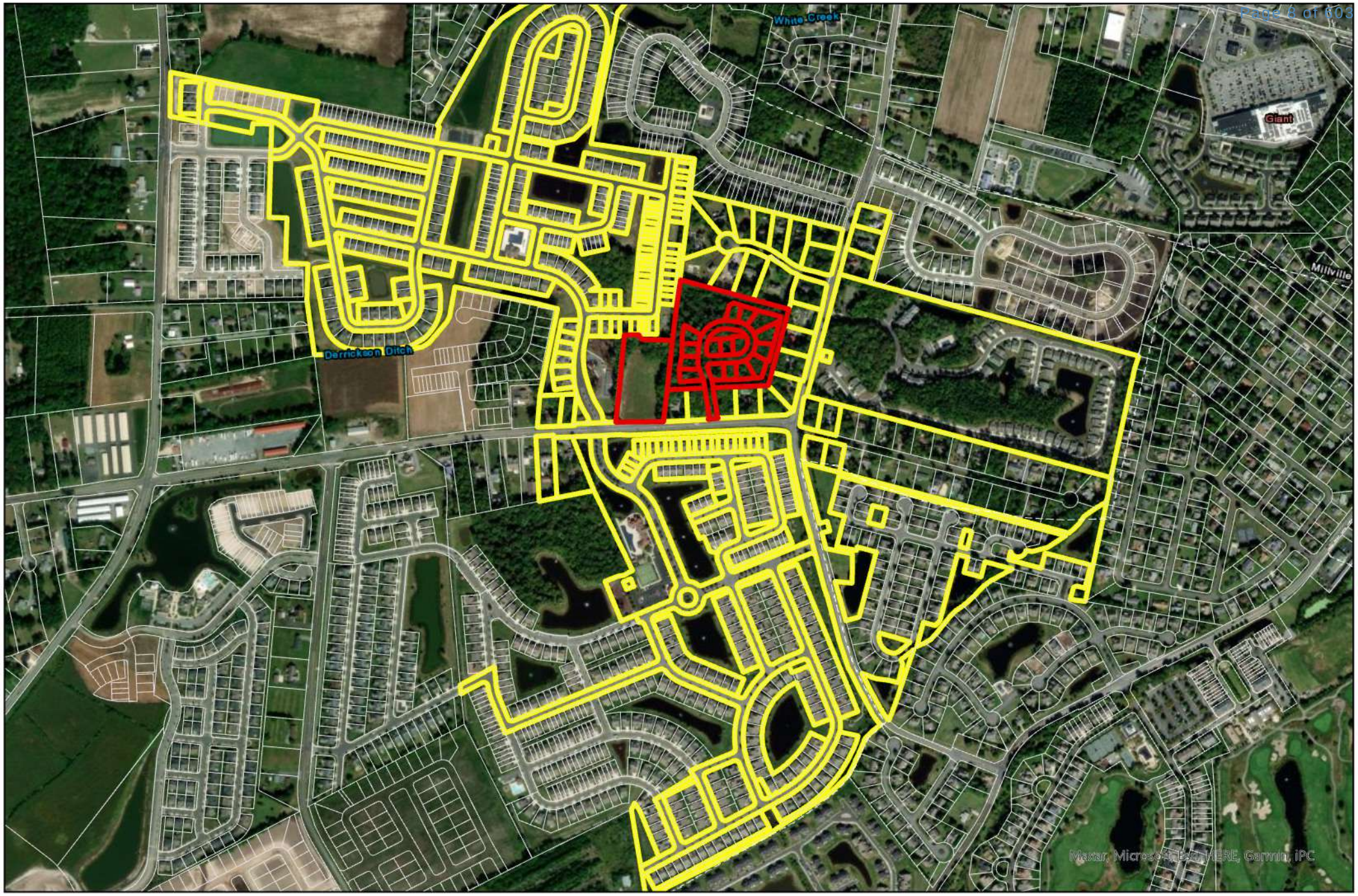
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.13 0.25 0.5 Miles




**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Mailing List Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, &**
**3445.00 through 3460.00**

CU 2462 & CZ 2017 Gulfstream

CU 2462 - CZ 2017 Mailing List

N

Feet
0 500 1,000

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

# Memorandum

To: Sussex County Planning Commission Members
From: Mr. Michael Lowrey, Planner III
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: February 14th, 2025
RE: Staff Analysis for C/Z 2017 Gulfstream Glen Cove

This memo is to provide background and analysis for the Planning & Zoning Commission to consider as a part of application C/Z 2017 Gulfstream Glen Cove to be reviewed during the March 5th, 2025 Planning & Zoning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

**Tax Parcel ID:** 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00

**Proposal:** The request is for a Change of Zone for Tax Parcels: 134-12.00-374.01, 374.02, 375.00, & 3445.00-3460.00 from Agricultural Residential (AR-1) Zoning District to Medium Density (MR) Zoning District. The Parcels are located on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352) and comprised of a total of 12.32 aces □/-

Staff note that a related Application (C/U 2462 Gulfstream Glen Cove) requesting a Conditional Use to allow for multifamily use (Single-family detached condominiums – 50 Units) accompanies this Application.

**Zoning:** The Parcels are zoned Agricultural Residential (AR-1) Zoning District with the boundary with the Town of Millville immediately adjacent to the north and west of the Parcels and just beyond the adjacent properties to the east and south as well.

In terms of permitted residential density, if this Change of Zone to Medium Density (MR) Zoning District and the accompanying (CU 2462) were to be approved, the proposed density of ≈ (4.1) dwelling units per acre would comply with the County Code requirements for multifamily improvement in an (MR) District which allows up to (12) multifamily dwelling units per acre when serviced by a central sewer system (§115-Attachment 2 – Table II)(§115-31).

**Future Land Use Map Designation - (Comprehensive Plan):** Coastal Area

**Applicability to Comprehensive Plan:** The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map in the plan indicates that the parcel has a designation of "Coastal Area" with all adjacent parcels also categorized under the Future Land Use Map designation of "Coastal Area" or "Municipalities" with the boundary of the jurisdiction of the Town of Millville bordering immediately to the west and south of the site.

As outlined within the 2018 Sussex County Comprehensive Plan, *Coastal Areas* are growth areas that the County encourages only the appropriate forms of concentrated new development, especially when environmental features are in play. The *Coastal Area* designation is intended to recognize the characteristics of both anticipated growth and ecologically important and sensitive characteristics. The Plan notes, "this region contains ecologically important and sensitive characteristics as well as other coastal lands which help to absorb floodwaters and provide extensive habitat for native flora and fauna. This area also has significant impact upon water quality within the adjacent bays and inlets as well as upon natural the region's various habitats. And, these factors are themselves part of the reason that this Area is so desirable - making the protection of them important to both the environment and the economy" (2018 Sussex County Comprehensive Plan, 4-15).

In terms or residential/dwelling improvements, the Plan notes, "A range of housing types should be permitted in *Coastal Areas,* including single-family homes, townhouses, and multi-family units" (2018 Sussex County Comprehensive Plan, 4-15). In terms of density the Plan notes:

Medium and higher density could be supported in areas:

- Where there is central water and sewer
- Near sufficient commercial uses and employment centers
- Where it is in keeping with the character of the area
- Where it is along a main road or at/or near a major intersection
- Where there is adequate Level of Service
- Or where other considerations exist that are relevant to the requested project and density (2018 Sussex County Comprehensive Plan, 4-16).

Table 4.5-2 "Zoning Districts Applicable to Future Land Use Categories" in the 2018 Sussex County Comprehensive Plan notes that the proposed zoning of Medium Commercial (MR) in an applicable Zoning Districts within the "Coastal Area" Future Land Use Map Designation.

**Site Considerations**

- **Density:** In terms of permitted residential density, if this Conditional Use for multifamily use and the accompanying Change of Zone (C/Z 2017 AR-1 to MR) were to be approved, the proposed density of ≈ (4.1) dwelling units per acre would comply with the County Code requirements for multifamily improvement in an (MR) District which allows up to (12) multifamily dwelling units per acre when serviced by a central sewer system (§115-Attachment 2 – Table II)(§115-31).

- **Open Space Provisions:** The proposed plan includes (8.13) acres +/- (out of a total of (12.32) acres) of open space which equates to approximately (65%) of the project site.

- **Agricultural Areas: N/A**

- **Interconnectivity: N/A**

- **Transportation Improvement District (TID): N/A**

- **Forested Areas:** Staff note that majority of the area within the Parcels contains trees with very little appearing to be unforested outside of TM# 134-12.00-375.00. Staff appreciate efforts to conserve as many mature trees as possible on the project site. Staff note that any buffers which may be required as part of this plan are required to be exclusive of "stormwater management areas or facilities, wastewater treatment and/or disposal facilities" (§99-5 FORESTED AND/OR LANDSCAPED BUFFER) & (§115-193(C)(18)). Staff note that any Plan submitted will require a design ensuring the location of stormwater management basins are exclusive of the required wetland resource buffers (if applicable) or any screening or vegetative buffers which may be required as part of any conditions of approval if approved.

- **Wetlands Buffers/Waterways:** County data indicates the presence of jurisdictional Nonidal Wetlands areas on a portion of the rear of Parcel #134-12.00-375.00 which ware required to meet the Resource Buffer Protection Section of the Zoning Code (§115-193). Staff note that the jurisdictional wetlands within the Tax Ditch ROWs on the other Parcels at the site are not required to meet the County Resource Protection Code as these resources are managed by DNREC. Staff have concerns regarding the wetland areas at the rear of TM#134-12.00-375.00 as the design may not meet the required (30) foot buffer required for Nontidal Wetlands (§ 115-193A(4) Table 1).

  Staff note that the Applicant submitted a Drainage Assessment Report (DAR) as required under (§115-193F) and the submission was reviewed by SCED, with all of SCED's comments addressed.

- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The Parcels are located within Flood Zones "X" and Staff note there are no Wellhead Protection Areas on the site. The Parcel is classified as within areas of "Good", "Fair" in terms of Groundwater Recharge Potential on the site per data from the State of Delaware. Staff note that any Tax Ditch crossing will require permitting through DNREC prior to Final Site Plan approval. Additionally, any revisions to the Tax Ditch ROWs will be required to show documentation of any Court Order Change (COC) which approves any revision to the Tax Ditch ROWs on the site.

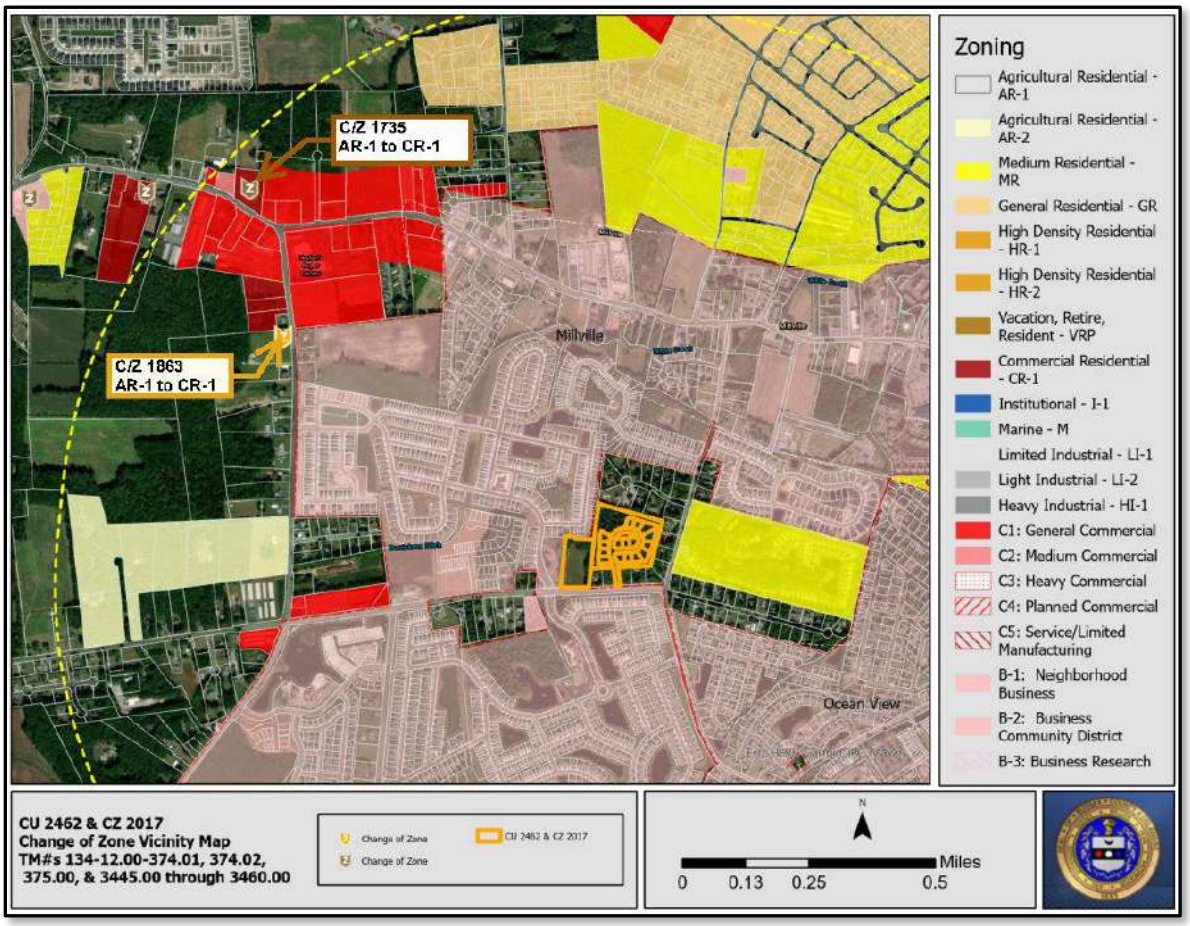
Based on the analysis provided, the application to allow for a change of zone from an Agricultural Residential (AR-1) zoning district to a Medium Density (MR) zoning district in this location could be considered as being consistent with the surrounding land use, zoning, and uses, subject to considerations of scale and impact.

**Existing Changes of Zone within the Vicinity of the Subject Site:** There have been (2) historic Changes of Zone within a 1-mile radius of the site.

## Change of Zone Applications

**(Within a 1-mile radius of the subject site – Since 2011)**

| Application CZ Number | Application Name | Zoning District | Proposed Zoning | CC Decision | CC Decision Date | Ordinance Number |
|---|---|---|---|---|---|---|
| #1735 | Holt's Dispensary, Inc. | AR-1 | CR-1 | APPROVED | 9/24/2013 | 2321 |
| #1863 | Triumf I, LLC c/o Fulton Jeffers | AR-1 | CR-1 | APPROVED | 1/8/2019 | 2624 |



File #: _____

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✓

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**

Change of zoning from AR-1 to MR-1

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302)732-9366
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7-17-24

***Signature of Owner***

_____ Date: 7-17-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ✓
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**
SINGLE-FAMILY CONDOMINIUMS

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302) 732-9364
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7/17/24

***Signature of Owner***

_____ Date: 7-12-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

File #: C2-2017
202309496

# Planning & Zoning Commission Application
## Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
**302-855-7878 ph. 302-854-5079 fax**

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**

Change of zoning from AR-1 to MR-1

**Tax Map #:** 1-34-12.00-374.01 **Size of Parcel(s):** 8.84 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** _____

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Same as above
Owner Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ E-mail: _____

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✔ **Completed Application**

✔ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✔ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✔ **DelDOT Service Level Evaluation Request Response**

✔ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 6-28-23

***Signature of Owner***

_____ Date: 6-30-23

*For office use only:*

Date Submitted: 7/5/23 Fee: Check #: 3172

Staff accepting application: AL Application & Case #: 202309496 CZ 2017

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

## Ashley Paugh

**From:** Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>
**Sent:** Wednesday, August 7, 2024 2:29 PM
**To:** Ashley Paugh
**Subject:** RE: [EXTERNAL]TAC Review - C/U 2462 & C/Z 2017 Glen Cove

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

**No comments.**

**Thank you.**

Lisa A. Savage
Sr. Real Estate Representative

delmarva power℠
AN EXELON COMPANY

Delmarva Power & Light Company
2530 N. Salisbury Boulevard
Salisbury, MD 21801
T 667-313-2682
lisa.savage@delmarva.com | delmarva.com

---

**From:** Ashley Paugh <ashley.paugh@sussexcountyde.gov>
**Sent:** Wednesday, August 7, 2024 1:44 PM
**To:** C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; Jennifer Cinelli <jennifer.cinelli@delaware.gov>; Jessica Watson <jessica.watson@state.de.us>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Robin Weinkam - DNREC Watershed <Robin.Weinkam@delaware.gov>; Mack, Stephanie T:(DPL) <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Troy Dickerson - DE Electric Coop <TDickerson@decoop.com>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
**Subject:** [EXTERNAL]TAC Review - C/U 2462 & C/Z 2017 Glen Cove

***EXTERNAL MAIL. Do not click links or open attachments from unknown senders or unexpected Email.***

Good Afternoon All,

Sussex County Planning & Zoning Department has received one (1) application that requires TAC review. Attached is a memo regarding the application and a pdf of the plans submitted.
Please provide comments on or before Monday, September 23, 2024.

Please send all comments to pandz@sussexcountyde.gov

Kind Regards,

*Ashley Paugh*
Planning Technician
Sussex County
Planning & Zoning Dept.
2 The Circle (PO Box 417)
Georgetown, DE 19947
(302)-855-7878

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STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

DRAINAGE PROGRAM

PHONE: (302) 855-1930
FAX: (302) 670-7059

August 14, 2024

Michael Lowrey
michael.lowrey@sussexcountyde.gov
Sussex County
Department of Planning and Zoning
2 The Circle
P.O. Box 417
Georgetown, DE 19947

RE: Parcel # 134-12.00-375.00, 134-12.00-374.01, 134-12.00-374.02, 134-12.00-3445.00, 13412.00-3446.00, 134-12.00-3447.00. 134-12.00-3448.00, 134-12.00-3449.00, 134-12.003450.00, 134-12.00-3451.00, 134-12.00-3452.00, 134-12.00-3453.00, 134-12.00-3454.00, 13412.00-3455.00, 134-12.00-3456.00, 134-12.00-3457.00. 134-12.00-3458.00, 134-12.003459.00, 134-12.00-3460.00, Glen Cove

The Delaware Department of Natural Resources and Environmental Control (DNREC), Drainage Program has reviewed the pre-application package submitted by Civil Engineering Associates, LLC for the above noted property within the Derrickson Canal Tax Ditch Watershed along Sub 2 Prong 2 and Prong 2.

- Please clearly delineate and label existing and proposed Tax Ditch [Prongs] and associated Right-of-Way (ROW) on all sheets where it appears, including on adjacent properties. The Delaware Tax Ditch FeatureServer is available on DE FirstMap and here: https://enterprise.firstmap.delaware.gov/arcgis/rest/services/Hydrology/DE_TaxDitch/FeatureServer

- Tax ditch channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during tax ditch maintenance activities. Tax Ditch ROWs vary by channel size and location.

- Permanent obstructions, including but not limited to; stormwater management facilities, buildings, sheds, streets, wells, landscape plantings, driveways and septic's are not allowed within the tax ditch ROW.

- Existing Tax Ditches on the property should be surveyed and compared to Tax Ditch design specifications for effective function. The channels should be cleared or excavated prior to the construction of the project if needed. Please contact the DNREC Drainage Program for tax ditch asbuilt information (DNREC Drainage@delaware.gov.)

- Stormwater Management Facilities and associated infrastructure are the responsibility of the private landowner or HOA even if located within the tax ditch channel.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

- Projects only have DNREC Tax Ditch Program approval if they have received a Letter of No Objection (LONO) from our office. Approvals from other entities do not guarantee that your project has no tax ditch impacts or has satisfied tax ditch comments. Projects and activities are subject to Del Code Title 7 Chapter 41.

**No Drainage Concerns have been reported to DNREC's Drainage Concern Database of Parcels within project scope.**

If you are a consultant working on behalf of a landowner, it is your responsibility to pass on this information to the landowner.

Please submit the Drainage Program's land development review request form for the above noted project when submitting revised plans to SCD. In addition, feel free to CC me in any email submissions to SCD. The form along with a tax ditches and land development guidance document can also be found at de.gov/taxditch.

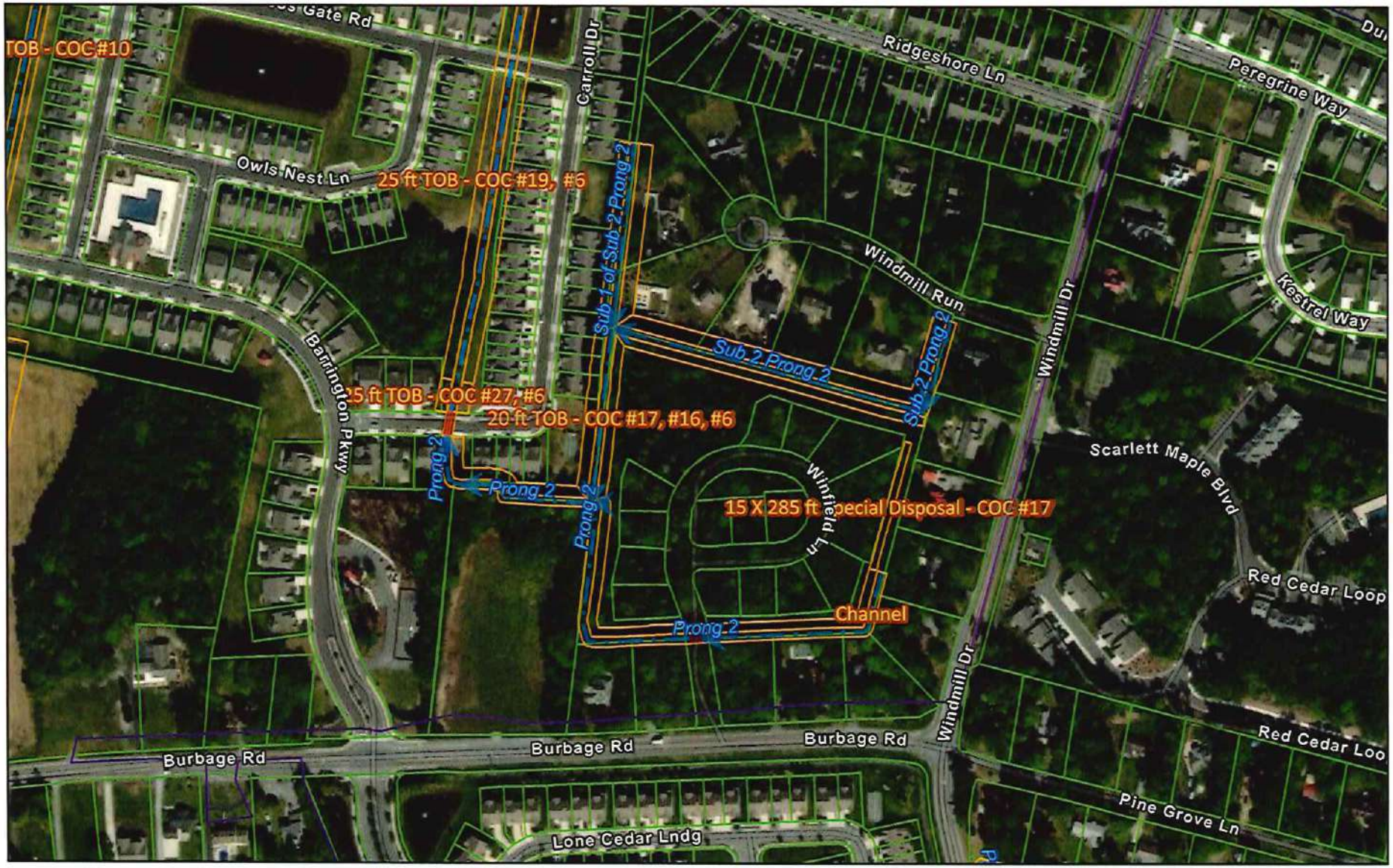
Once we have received both the request form from you and the stormwater management plans from the Sussex Conservation District, we can proceed with a more in-depth review along with processing of any necessary COC's followed by the issuance of our Letter of No Objection to the Sussex Conservation District.

Sincerely,

Karyssa Gortz
Planner II- Permit & Data Specialist

cc: Jordan Watson, Planner IV

# Aerial Map




8/13/2024, 3:34:39 PM

Tax Ditch Channels

Tax Ditch Channel

DITCHPIPEPRIV

Extent of Right-of-Way

Approx. Watershed Boundary

Parcels - Sussex

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

## Ashley Paugh

**From:** Gortz, Karyssa (DNREC) <karyssa.gortz@delaware.gov>
**Sent:** Wednesday, August 14, 2024 12:05 PM
**To:** Planning and Zoning
**Subject:** Glen Cove- TAC Review
**Attachments:** TAC Review Comments.docx; Aerial Map.pdf

**Categories:** Ashley

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Hi,

DNREC Drainage Program preliminary review comment letter for Glen Cove.

Thank you!

Karyssa Gortz
Planner II- Permit & Data Specialist
Drainage Program
DNREC Division of Watershed Stewardship
21309 Berlin Rd, Unit #6, Georgetown, DE 19947
Direct (302) 855-1943

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

June 16, 2023

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the Civil Engineering Associates (Burbage Road, Ocean View, DE) proposed land use application, which we received on May 18, 2023. This application is for an approximate 3.88-acre parcel (Tax Parcel: 134-12.00-374.01). The parcel is located on the north side of Burbage Road (Sussex Road 353) and 500 feet west from the intersection of Windmill Drive (Sussex Road 352) and Burbage Road. The parcel is currently zoned AR-1 (Agricultural Residential District) with a proposed zoning to MR-1 (Medium Density Residential District). The Applicant seeks to construct 31 single family attached units on the parcel.

Per the 2022 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road from Windmill Drive to Substation Road (Sussex Road 366) is 3,216 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Mr. Philip Lindsey, at philip.lindsey@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:plm
cc: Civil Engineering Associates, Applicant
Ann Lepore, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer
Tara Summers-Strong, South District Public Works Admin.
Todd Sammons, Assistant Director, Development Coordination, Planning
Kevin Hickman, Acting Sussex County Review Coordinator, Development Coordination
Derek Sapp, Sussex County Subdivision Reviewer, Development Coordination
Brian Yates, Sussex County Subdivision Reviewer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Reviewer, Development Coordination
Jose Quixtan, Sussex County Subdivision Reviewer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination
Philip Lindsey, TIS Group Project Engineer, Development Coordination

## Ashley Paugh

**From:** Dickerson, Troy <TDickerson@delaware.coop>
**Sent:** Friday, August 9, 2024 8:17 AM
**To:** Ashley Paugh
**Subject:** RE: TAC Review - C/U 2462 & C/Z 2017 Glen Cove

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Ashley,

This development is located within DEC's service territory, and we have facilities in the area to serve the proposed units.

Thanks!

DELAWARE ELECTRIC CO-OP
"We Keep the Lights On"

Troy W. Dickerson, P.E.
Vice President of Engineering
Delaware Electric Cooperative, Inc.
o: 302.349.3125 m: 302.535.9048
a: 14198 Sussex Highway, Greenwood, DE 19950
w: www.delaware.coop e: tdickerson@delaware.coop

---

**From:** Ashley Paugh <ashley.paugh@sussexcountyde.gov>
**Sent:** Wednesday, August 7, 2024 1:44 PM
**To:** C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; Jennifer Cinelli <jennifer.cinelli@delaware.gov>; Jessica Watson <jessica.watson@state.de.us>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Lisa Savage - Delmarva Power <lisa.savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Robin Weinkam - DNREC Watershed <Robin.Weinkam@delaware.gov>; Stephanie Mack - Delmarva Power <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Dickerson, Troy <TDickerson@delaware.coop>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
**Subject:** TAC Review - C/U 2462 & C/Z 2017 Glen Cove

Good Afternoon All,

Sussex County Planning & Zoning Department has received one (1) application that requires TAC review. Attached is a memo regarding the application and a pdf of the plans submitted.

Please provide comments on or before Monday, September 23, 2024.

Please send all comments to pandz@sussexcountyde.gov

Kind Regards,

*Ashley Paugh*

Planning Technician

Sussex County

Planning & Zoning Dept.

2 The Circle (PO Box 417)

Georgetown, DE 19947

(302)-855-7878

# Sussex County, Delaware
## Technical Advisory Committee

### Comment Sheet

DATE OF REVIEW: August 8, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
**Desiree B. McCall, CFI, Sr. Fire Protection Specialist**
**John A. Colpo, Sr. Fire Protection Specialist**
**Daniel E. Louder, Fire Protection Specialist**
**Walter L. Johnson, Fire Protection Specialist**

AGENCY PHONE NUMBERS: **302-856-5298, Fax: 302-856-5800**

RE: C/U 2462 □ C/Z 2017 Glen Cove

*The reasons and conditions applied to this project and their sources are itemized below:*

**********

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Industrial, Storage and Mercantile)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One □ Two- Family Dwelling)
  - One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Walker Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. Streets designed without parking need to develop a plan for enforcement once HOA takes charge. Fire apparatus still need to negotiate the streets.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The use of open bridge or covered bridge shall be designed to DEDOT standards and accessible by all fire department apparatus.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes**:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications, or brochures.

***THIS DOCUMENT IS INFORMATIONAL ONLY, AND DOES NOT CONSTITUTE ANY TYPE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE***

JAMIE WHITEHOUSE, AICP, MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

# Memorandum

To: Sussex County Technical Advisory Committee
From: Ashley Paugh, Planning Technician
Date: August 7, 2024
RE: Multi-Family Conditional Use & Change of Zone for TAC Review

**PLEASE NOTE: All e-mailed responses shall be directed to PANDZ@SUSSEXCOUNTYDE.GOV. Each application can be directed to the planner assigned.**

The Sussex County Planning and Zoning Office has received one (1) application for a Change of Zone from AR-1 (Agricultural Residential) to a MR (Medium-Density Residential) Zoning District and one (1) application for a Conditional Use for Multi-Family (50 Units) that requires review by the Sussex County Technical Advisory Committee. Please review the application and provide comments back to the Planning and Zoning Office on or before **September 23, 2024.**

**C/Z 2017 Gulfstream Glen Cove**
**AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR CERTAIN PARCELS OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.32 ACRES, MORE OR LESS. lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352).** 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885,30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View. Tax Map Parcels: 134-12.00-374.01, 374.02, 375.00, □ 3445.00 through 3460.00.

**C/U 2462 Gulfstream Glen Cove**
**AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM RESIDENTIAL DISTRICT FOR MULTI-FAMILY (50 UNITS) TO BE LOCATED ON CERTAIN PARCELS OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.32 ACRES, MORE OR LESS.** The properties are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352). 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885,30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View. Tax Map Parcels: 134-12.00-374.01, 374.02, 375.00, □ 3445.00 through 3460.00.

**Planner Assigned:** Michael Lowrey – Planner III
michael.lowrey@sussexcountyde.gov

Please feel free to contact the office with any questions at (302) 855-7878.

**ENGINEERING DEPARTMENT**

JOHN J. ASHMAN
SR. MANAGER OF UTILITY PLANNING
& DESIGN REVIEW

(302) 855-7370 T
(302) 854-5391 F
jashman@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

Date: **August 30, 2024**

REF: **T. A. C. COMMENTS**
**GLEN COVE II**
**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**SUSSEX COUNTY TAX MAP NUMBER**
**134-12.00 PARCEL 374.01, 34.02, 375.00, and 3445 through 3460.00**
**AGREEMENT NO. 999-1**

The following comments are the result of the Sussex County Engineering Department's review of the preliminary site plan for the above referenced project:

## DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.

2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.

3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.

4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.

5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.

6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

The plans shall show and address the following items at minimum:

7. The project requires professional land surveying services to accurately delineate, and show the following items but is not limited to the following: all property and right-of-

way lines, established at a minimum, survey monuments, easements, existing and proposed topographic contours at 1-foot vertical intervals and spot elevations as necessary to establish grades, the locations of all existing structures, highway and roadway pavements, shoulders, curbs, driveways, sidewalks, lighting structures, traffic control signs, and all public and private utilities, including, but not limited to, electric power and telephone lines, poles and boxes, underground electric, telephone, and communication lines, potable water lines, fire hydrants and valve boxes, gas lines, wells, sanitary sewers including septic systems, rim and invert elevations of manholes and cleanouts, and the rims and invert elevations and type of storm water structures, drainage ditches, ponds, streams and waterways, flood zones and flood zone boundaries and elevations, and State and Federal wetlands, trees, cemeteries and historic features, and the finished floor elevations of buildings.

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.

9. The plan requires a Certification Signature and/or a Certification Block for the following:

    a. Delaware Professional Engineer or Delaware Land Surveyor.
    b. Owner or Representative of the Owner.
    c. Professional Wetlands Delineator.

10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.

11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.

12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, geo-referenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.

13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.

14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.

15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Road, Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.

17. False berms shall not be utilized to create roadside drainage swale back slopes.

18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.

19. Provide and show the locations and details of all ADA pedestrian connections.

20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.

21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.

22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.

23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.

24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.

25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.

26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

## SEWER SPECIFIC COMMENTS

LOCATION: Approx 500' west of intersection of Windmill Dr. (Rd. 352) and Burbage Rd. (Rd. 353).

NO. OF UNITS: 50 Single family lots.

GROSS ACREAGE: 12.32 Acres

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

(2). Which County Tier Area is project in? Tier 1

(3). Is wastewater capacity available for the project? Yes If not, what capacity is available? N/A.

(4). Is a Construction Agreement required? Yes If yes, contact Utility Engineering at (302) 855-7370 / option 2.

(5). Are there any System Connection Charge (SCC) credits for the project? No

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Parcels located in Tier 1.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

If the above items, as applicable, are incorporated into the development plans, then preliminary approval is recommended. However, final plan approval should be withheld pending the approval of the construction plans by the Sussex County Engineering Department.

PARKOWSKI GUERKE & SWAYZE

**MEMORANDUM**

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

RE: C/Z 2017 Gulfstream Glen Cove and C/U 2462 Gulfstream Glen Cove

I am in receipt of your e-mails dated August 7 and 8, 2024, which included the Applications for a change of zone from AR-1 to MR and for a conditional use for multi-family for Gulfstream Glen Cove (hereinafter the "Applications") and the Preliminary Plan (hereinafter "Plan") for the project identified above. I have reviewed all the information for compliance with the requirements of the Sussex County Subdivision Code, including §§ 99-06 (General Requirements and Restrictions), 99-22 (General Requirements), 99-23 (Information to be Shown), 99-24 (Supporting Statements) and 99-27 (Supporting Statements).

My review specifically addressed the following areas:

(1) Private streets and road maintenance (9 *Del. C.* § 9623; 17 *Del. C.* § 131; Sussex County Code § 99-27).

(2) Storm water management, erosion, and sedimentation control facilities maintenance (Sussex County Code § 99-27).

(3) Water supply, sanitary sewer or other facilities maintenance (Sussex County Code § 99-27).

(4) Forested buffer strips maintenance (Sussex County Code §§ 99-16(D), 99-24(F)).

(5) Agricultural use protection notice (Sussex County Code § 99-6(G)).

(6) State or Federal wetlands disclosures and notice (Sussex County Code § 99-6(H)).

(7) Special restriction on mobile homes as a single family dwelling in AR-1 zones on lots of more than 3/4 acre (Sussex County Code § 115-20(A)).

As a result of the review described above, I offer the following comments:

- This is an application to amend the comprehensive zoning map of Sussex County from an AR-1 (Agricultural Residential) District to a to MR (Medium Density Residential) District and for a Conditional Use for Multi-Family.
- Proposed restrictive covenants were submitted with the Application.
- The proposed project is within a AR-1 (Agricultural Residential) District and is comprised of fifty condominiums. The Plan indicates that the lots will be served by Tidewater Utilities for water service and the Sussex County Unified Sanitary Sewer District for sanitary sewer service.
- The proposed project does not appear to be adjacent to agricultural farmland but does appear to provide a forested buffer strip in *all* areas of the perimeter. The proposed restrictions include a statement specifically providing for the perpetual maintenance of the buffer (Sussex County Code § 99-24(F)).
- The project also does not appear to be within fifty (50) feet of lands used for agricultural purposes; thus, additional setbacks established by Sussex County Code § 99-6(G)(2) may not apply.
- There is no agricultural use protection notice provided for in Sussex County Code § 99-6(G)(1) contained in the proposed restrictive covenants.
- The proposed restrictions provide for the maintenance of the streets and roadways.
- The proposed restrictions must address the maintenance of all common areas, including the maintenance of the storm water management areas, surface drainage facilities, erosion and sedimentation control facilities and buffer areas.
- It appears from the Plan that there are wetlands on this site. The proposed restrictive covenants do not contain a notice that the property contains regulated wetlands. Activities within these wetlands may require a permit from the U.S. Army Corps of Engineers and/or the State of Delaware.

Cc: Foxlane Homes Delaware

**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**UTILITY PLANNING & DESIGN REVIEW DIVISION**
**C/U & C/Z COMMENTS**

| | |
|---|---|
| TO: | **Jamie Whitehouse** |
| REVIEWER: | **Chris Calio** |
| DATE: | **2/18/2025** |
| APPLICATION: | **CZ 2017 Gulfstream Glen Cove** |
| APPLICANT: | **Gulfstream Glen Cove, LLC** |
| FILE NO: | **NM-1.03** |
| TAX MAP & PARCEL(S): | **134-12.00-374.01, 374.02, 375.00 & 3445.00 – 3460.00** |
| LOCATION: | **Lying on the north side of Burbage Road (SCR 353), approximately 475'+/- west of Windmill Drive (SCR 352).** |
| NO. OF UNITS: | **Upzone from AR-1 to MR** |
| GROSS ACREAGE: | **12.32** |

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **4**

**SEWER:**

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 1**

(3). Is wastewater capacity available for the project? **Yes** If not, what capacity is available? **N/A**.

(4). Is a Construction Agreement required? **Yes** If yes, contact Utility Engineering at (302) 855-7717.

(5). Are there any System Connection Charge (SCC) credits for the project? **No** If yes, how many? **N/A**. Is it likely that additional SCCs will be required? **Yes** If yes, the current System Connection Charge Rate is **Unified $7,700.00** per EDU. Please contact **Ashley Evans** at **302-855-7719** for additional information on charges.

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

☐ Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Click or tap here to enter text.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Ashley Evans

**PLANNING & ZONING COMMISSION**

ROBERT C. WHEATLEY, CHAIRMAN
BRIAN BUTLER
GREGORY SCOTT COLLINS
J. BRUCE MEARS
HOLLY WINGATE

**Sussex County**
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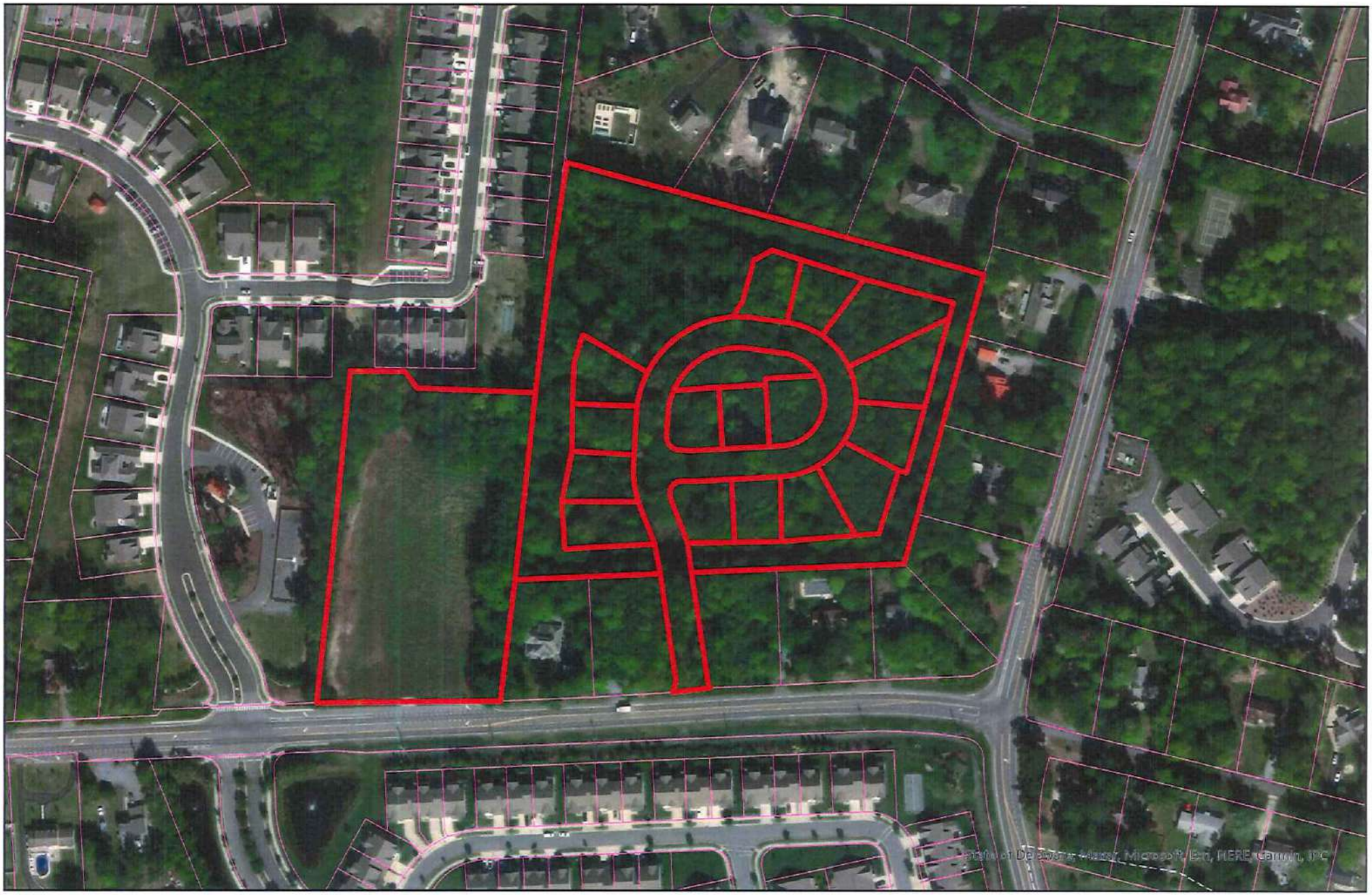
(302) 855-7878 T
(302) 854-5079 F

JAMIE WHITEHOUSE
DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: March 5th, 2025
Sussex County Council Public Hearing Date: May 13th, 2025

| | |
|---|---|
| Application: | C/Z 2017 Gulfstream Glen Cove |
| Applicant: | Gulfstream Glen Cove, LLC<br>27 Atlantic Avenue<br>Ocean View, DE 19970 |
| Owner: | Gulfstream Glen Cove, LLC<br>OT Collins Family Limited Partnership<br>27 Atlantic Avenue / 30782 Cedar Neck Road<br>Ocean View, DE 19970 |
| Site Location: | The Parcels are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352) |
| Current Zoning: | AR-1 (Agricultural Residential) |
| Proposed Zoning: | MR (Medium-Density Residential) |
| Comprehensive Land Use Plan Reference: | Coastal Area |
| Councilmanic District: | Mr. Hudson |
| School District: | Indian River School District |
| Fire District: | Millville Fire Company |
| Sewer: | Public – Sussex County |
| Water: | Tidewater |
| Site Area: | 12.32 aces +/- |
| Tax Map ID(s): | 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00 |

MUSSD
TIER 1
NM-1203




**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Aerial Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
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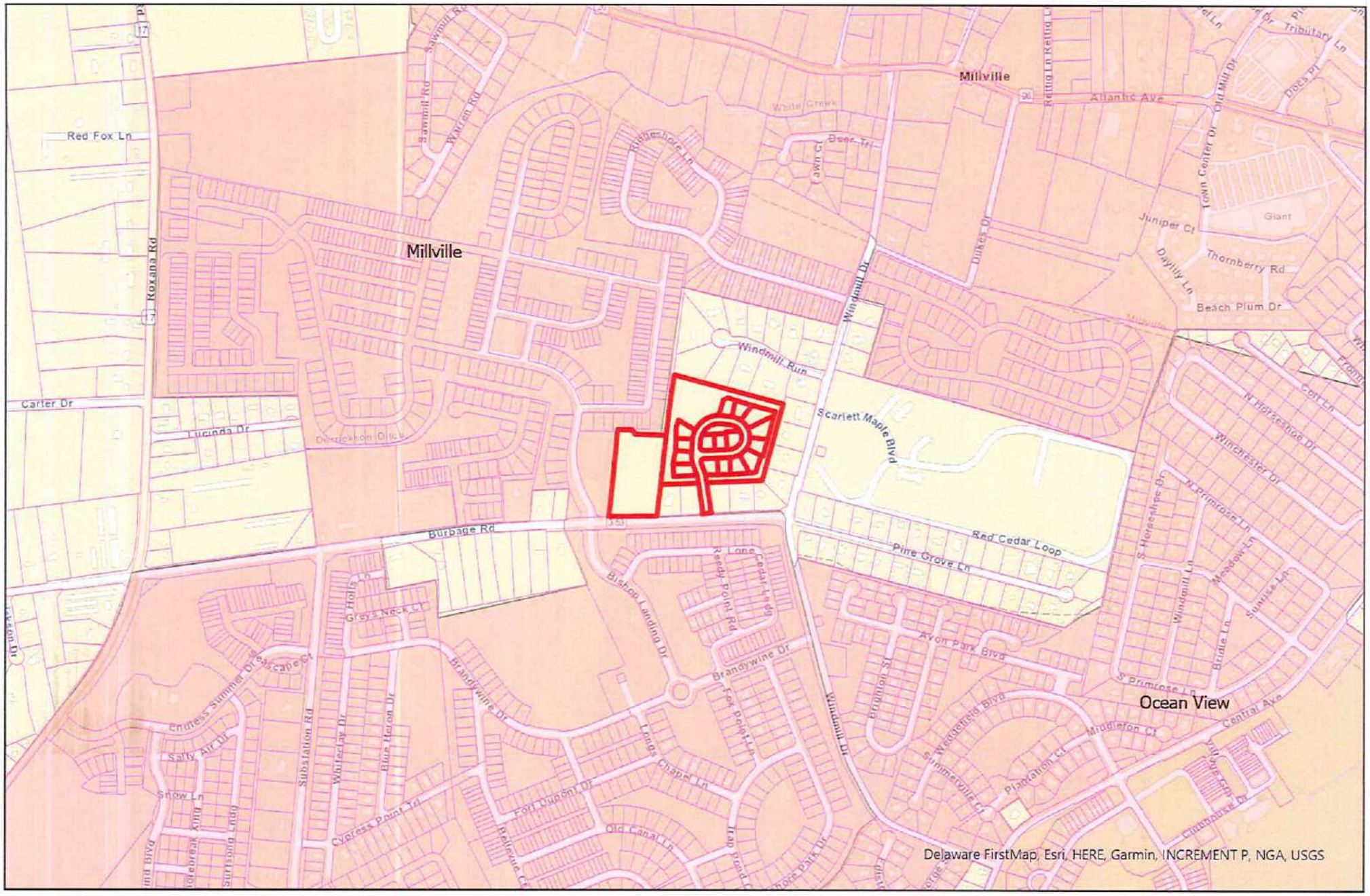


**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Street Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
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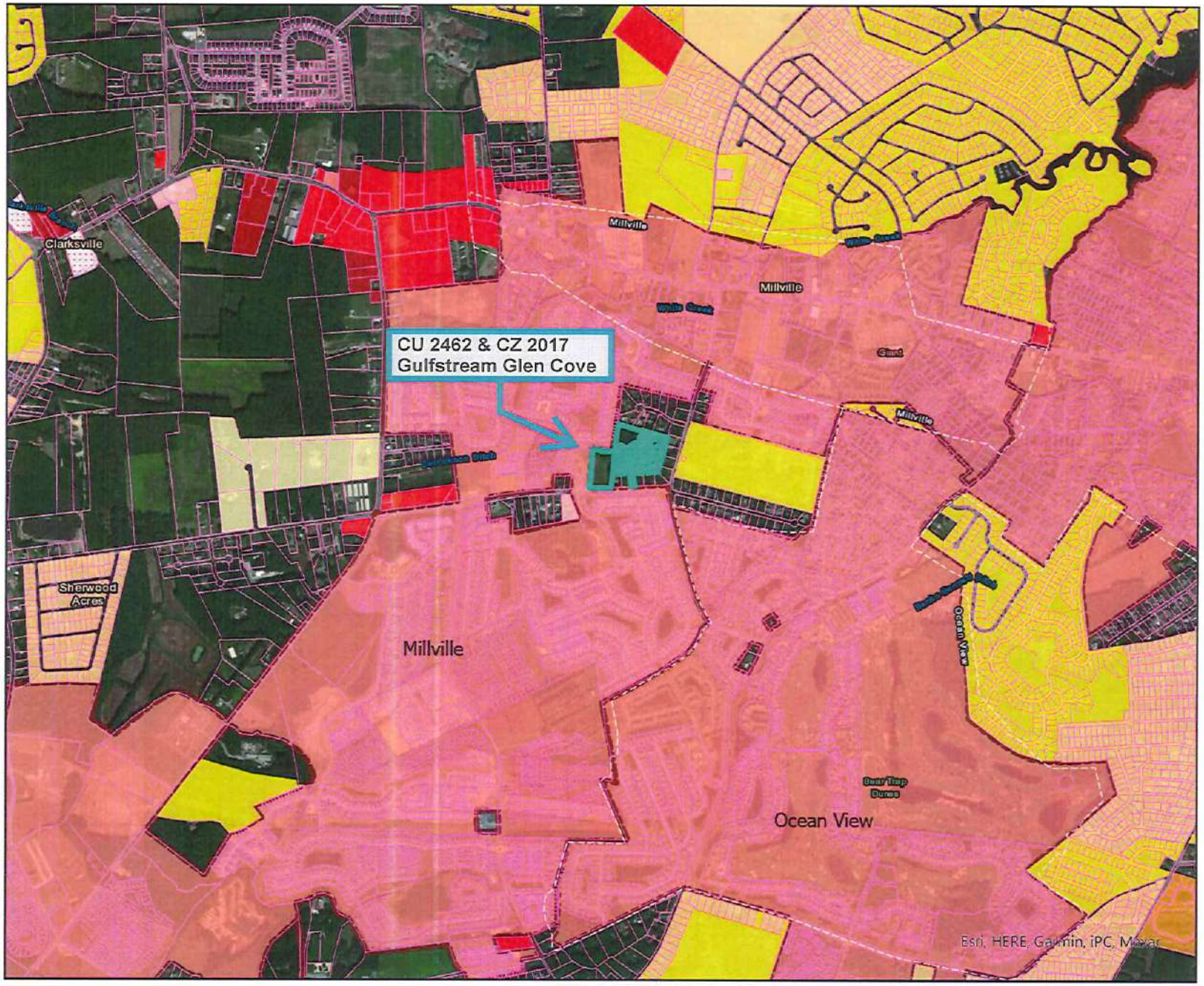



## Zoning

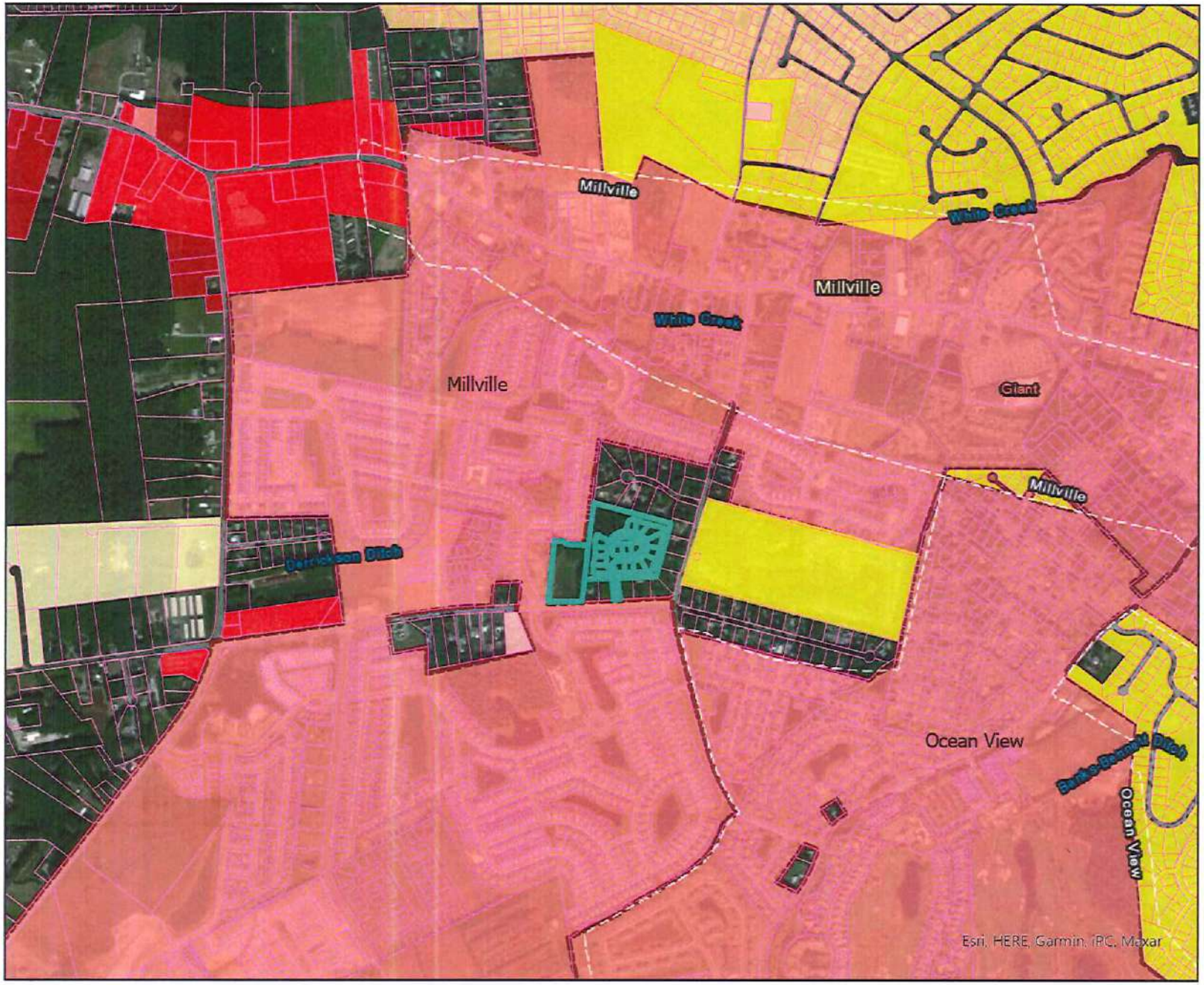
- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.25 0.5 1 Miles

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**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
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N

0 0.13 0.25 0.5 Miles

**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**UTILITY PLANNING & DESIGN REVIEW DIVISION**
**C/U & C/Z COMMENTS**

| | |
|---|---|
| TO: | **Jamie Whitehouse** |
| REVIEWER: | **Chris Calio** |
| DATE: | **2/18/2025** |
| APPLICATION: | **CZ 2017 Gulfstream Glen Cove** |
| APPLICANT: | **Gulfstream Glen Cove, LLC** |
| FILE NO: | **NM-1.03** |
| TAX MAP & PARCEL(S): | **134-12.00-374.01, 374.02, 375.00 & 3445.00 – 3460.00** |
| LOCATION: | **Lying on the north side of Burbage Road (SCR 353), approximately 475'+/- west of Windmill Drive (SCR 352).** |
| NO. OF UNITS: | **Upzone from AR-1 to MR** |
| GROSS ACREAGE: | **12.32** |

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **4**

**SEWER:**

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 1**

(3). Is wastewater capacity available for the project? **Yes** If not, what capacity is available? **N/A**.

(4). Is a Construction Agreement required? **Yes** If yes, contact Utility Engineering at (302) 855-7717.

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(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

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UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Ashley Evans

**PLANNING & ZONING COMMISSION**

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JAMIE WHITEHOUSE
DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: March 5th, 2025
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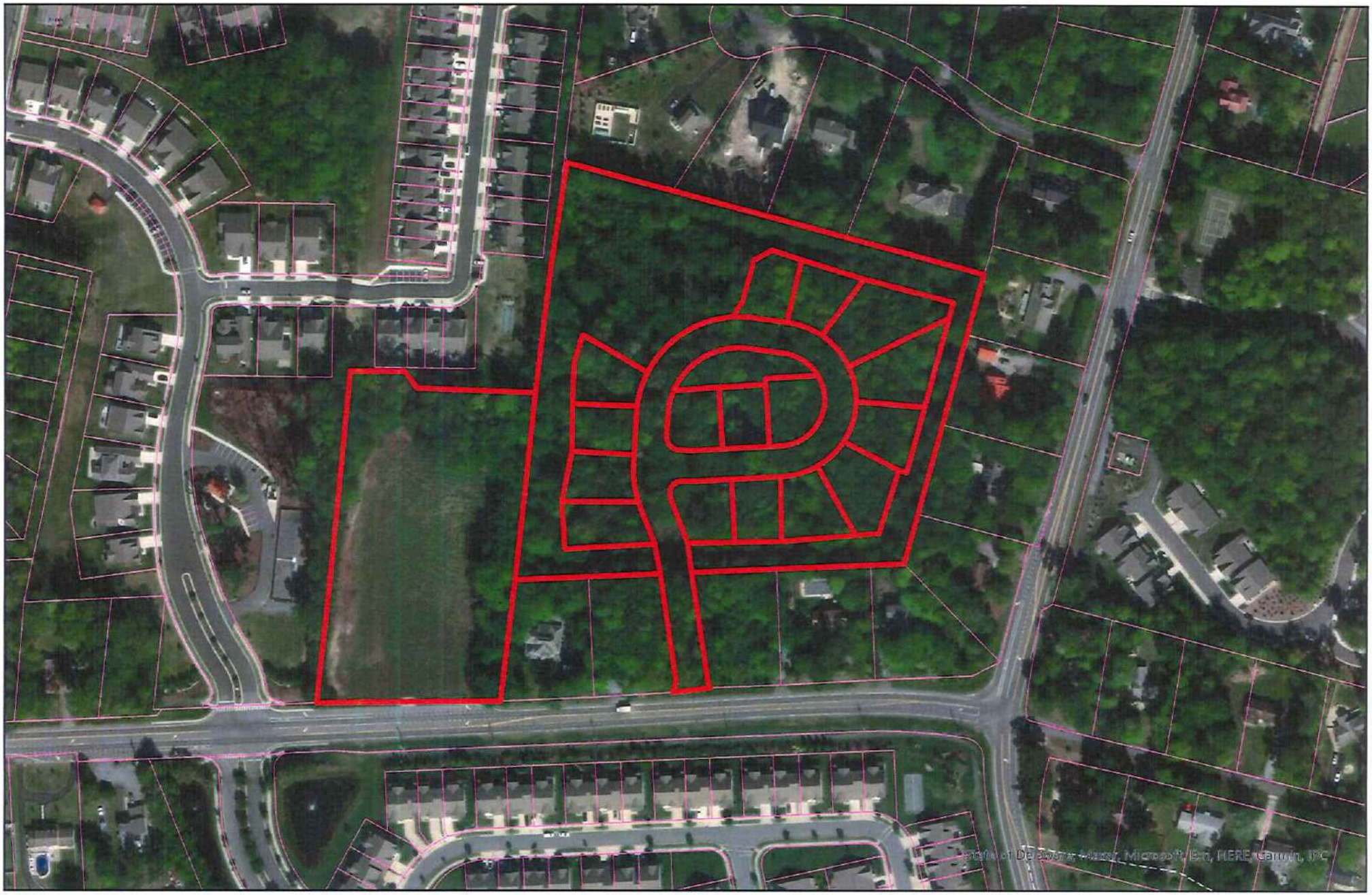
MUSSD
TIER 1
NM-1203




**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
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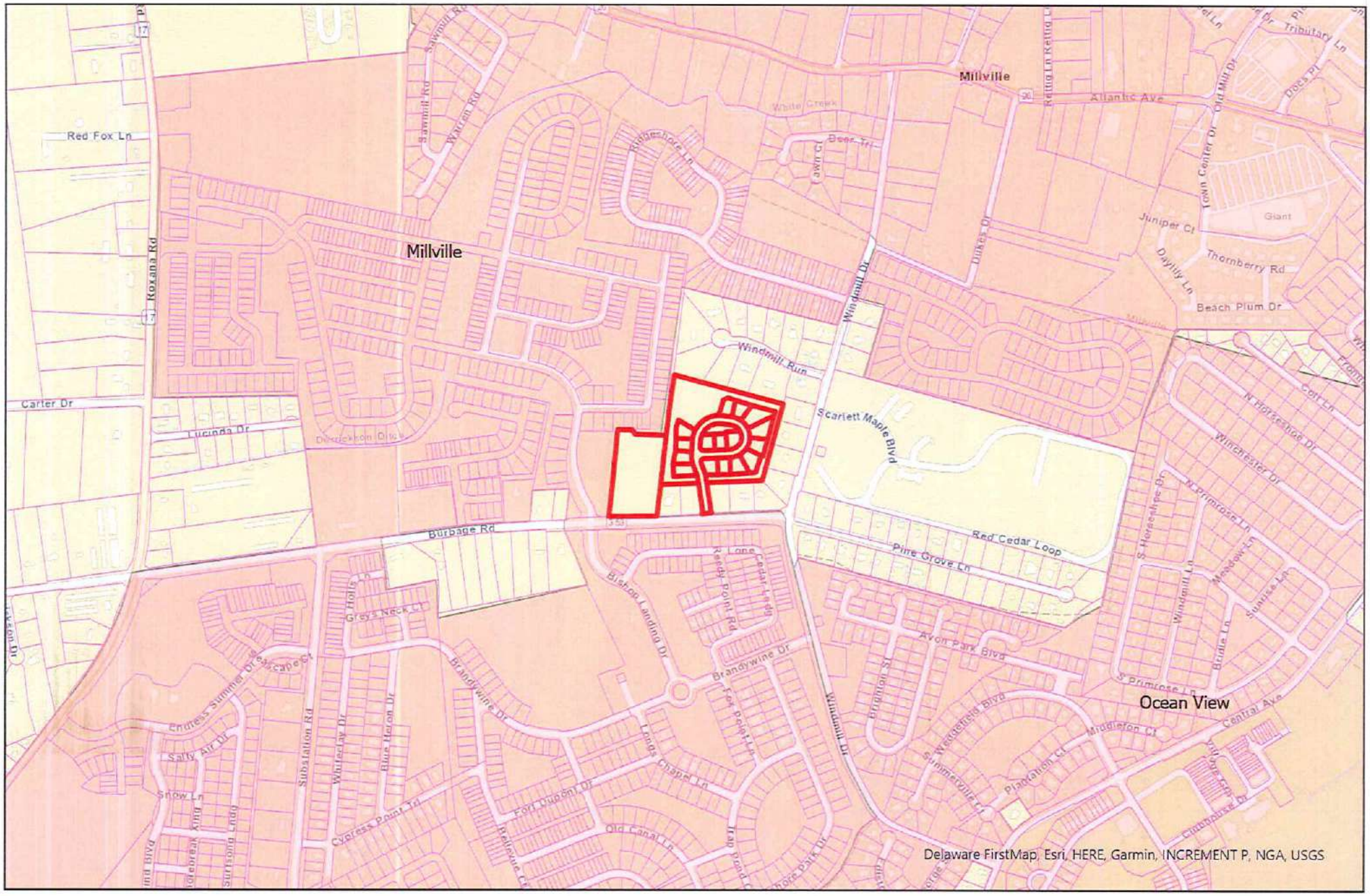
**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
0 150 300

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**Street Map**
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**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
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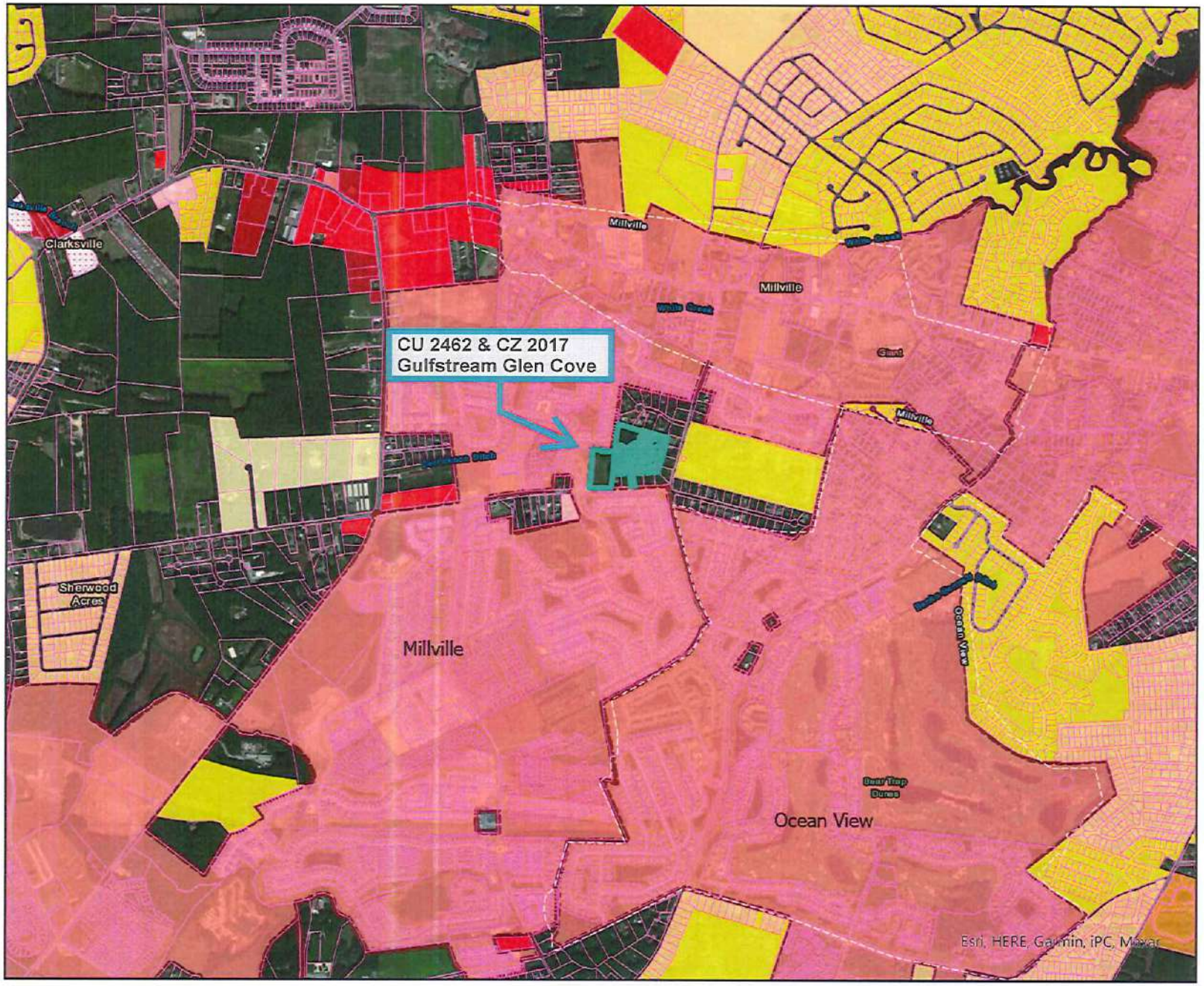


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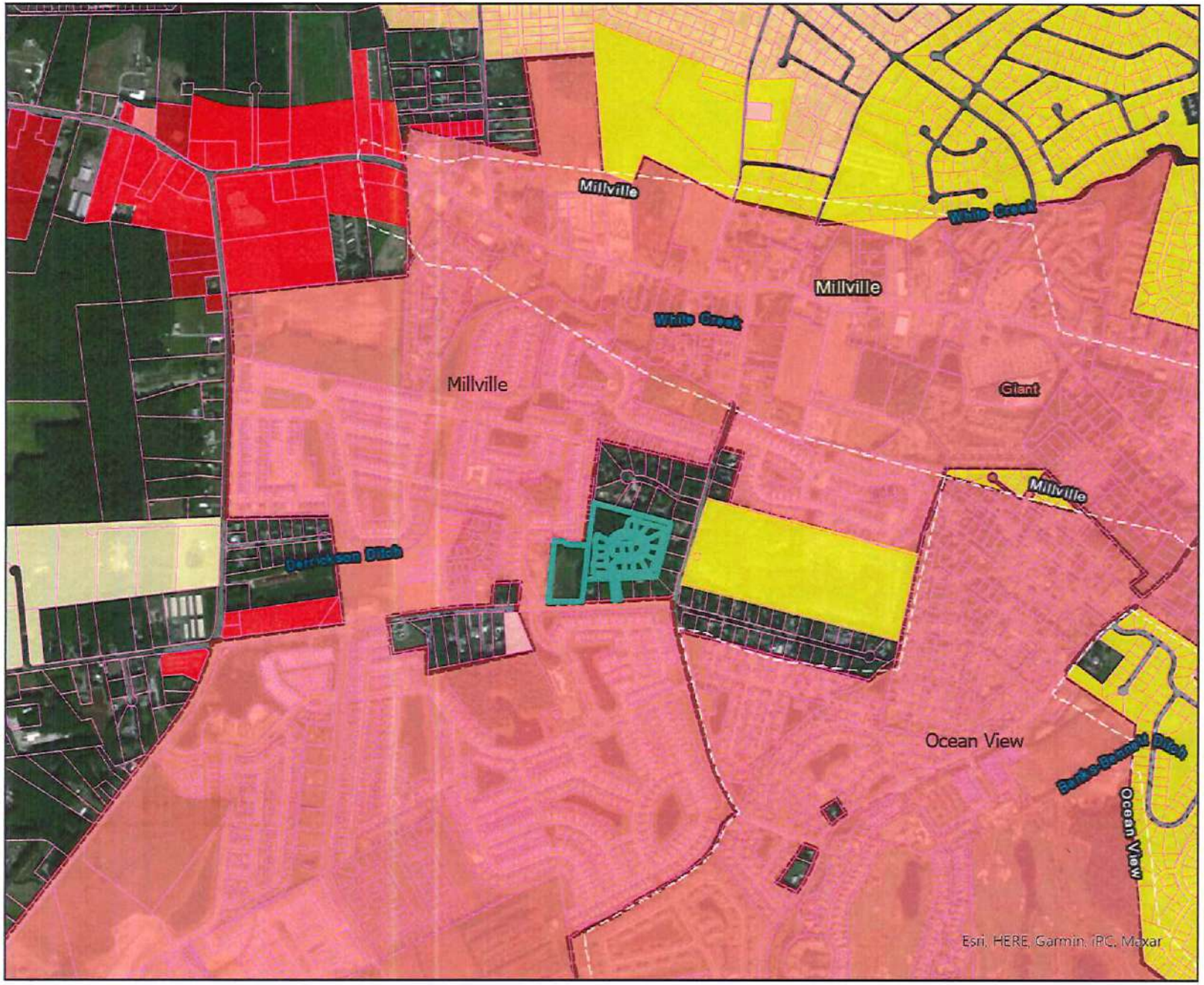
- B-3: Business Research

**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.25 0.5 1 Miles




## Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.13 0.25 0.5 Miles

## Ashley Paugh

**From:** Dickerson, Troy <TDickerson@delaware.coop>
**Sent:** Friday, August 9, 2024 8:17 AM
**To:** Ashley Paugh
**Subject:** RE: TAC Review - C/U 2462 & C/Z 2017 Glen Cove

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Ashley,

This development is located within DEC's service territory, and we have facilities in the area to serve the proposed units.

Thanks!

Troy W. Dickerson, P.E.
Vice President of Engineering
Delaware Electric Cooperative, Inc.
o: 302.349.3125 m: 302.535.9048
a: 14198 Sussex Highway, Greenwood, DE 19950
w: www.delaware.coop e: tdickerson@delaware.coop

---

**From:** Ashley Paugh <ashley.paugh@sussexcountyde.gov>
**Sent:** Wednesday, August 7, 2024 1:44 PM
**To:** C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; Jennifer Cinelli <jennifer.cinelli@delaware.gov>; Jessica Watson <jessica.watson@state.de.us>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Lisa Savage - Delmarva Power <lisa.savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Robin Weinkam - DNREC Watershed <Robin.Weinkam@delaware.gov>; Stephanie Mack - Delmarva Power <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Dickerson, Troy <TDickerson@delaware.coop>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
**Subject:** TAC Review - C/U 2462 & C/Z 2017 Glen Cove

Good Afternoon All,

Sussex County Planning & Zoning Department has received one (1) application that requires TAC review. Attached is a memo regarding the application and a pdf of the plans submitted.

Please provide comments on or before Monday, September 23, 2024.

Please send all comments to pandz@sussexcountyde.gov

Kind Regards,

*Ashley Paugh*

Planning Technician

Sussex County

Planning & Zoning Dept.

2 The Circle (PO Box 417)

Georgetown, DE 19947

(302)-855-7878

**MEMORANDUM**

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

RE: C/Z 2017 Gulfstream Glen Cove and C/U 2462 Gulfstream Glen Cove

I am in receipt of your e-mails dated August 7 and 8, 2024, which included the Applications for a change of zone from AR-1 to MR and for a conditional use for multi-family for Gulfstream Glen Cove (hereinafter the "Applications") and the Preliminary Plan (hereinafter "Plan") for the project identified above. I have reviewed all the information for compliance with the requirements of the Sussex County Subdivision Code, including §§ 99-06 (General Requirements and Restrictions), 99-22 (General Requirements), 99-23 (Information to be Shown), 99-24 (Supporting Statements) and 99-27 (Supporting Statements).

My review specifically addressed the following areas:

(1) Private streets and road maintenance (9 *Del. C.* § 9623; 17 *Del. C.* § 131; Sussex County Code § 99-27).

(2) Storm water management, erosion, and sedimentation control facilities maintenance (Sussex County Code § 99-27).

(3) Water supply, sanitary sewer or other facilities maintenance (Sussex County Code § 99-27).

(4) Forested buffer strips maintenance (Sussex County Code §§ 99-16(D), 99-24(F)).

(5) Agricultural use protection notice (Sussex County Code § 99-6(G)).

(6) State or Federal wetlands disclosures and notice (Sussex County Code § 99-6(H)).

(7) Special restriction on mobile homes as a single family dwelling in AR-1 zones on lots of more than 3/4 acre (Sussex County Code § 115-20(A)).

As a result of the review described above, I offer the following comments:

- This is an application to amend the comprehensive zoning map of Sussex County from an AR-1 (Agricultural Residential) District to a to MR (Medium Density Residential) District and for a Conditional Use for Multi-Family.
- Proposed restrictive covenants were submitted with the Application.
- The proposed project is within a AR-1 (Agricultural Residential) District and is comprised of fifty condominiums. The Plan indicates that the lots will be served by Tidewater Utilities for water service and the Sussex County Unified Sanitary Sewer District for sanitary sewer service.
- The proposed project does not appear to be adjacent to agricultural farmland but does appear to provide a forested buffer strip in *all* areas of the perimeter. The proposed restrictions include a statement specifically providing for the perpetual maintenance of the buffer (Sussex County Code § 99-24(F)).
- The project also does not appear to be within fifty (50) feet of lands used for agricultural purposes; thus, additional setbacks established by Sussex County Code § 99-6(G)(2) may not apply.
- There is no agricultural use protection notice provided for in Sussex County Code § 99-6(G)(1) contained in the proposed restrictive covenants.
- The proposed restrictions provide for the maintenance of the streets and roadways.
- The proposed restrictions must address the maintenance of all common areas, including the maintenance of the storm water management areas, surface drainage facilities, erosion and sedimentation control facilities and buffer areas.
- It appears from the Plan that there are wetlands on this site. The proposed restrictive covenants do not contain a notice that the property contains regulated wetlands. Activities within these wetlands may require a permit from the U.S. Army Corps of Engineers and/or the State of Delaware.

Cc: Foxlane Homes Delaware

PARKOWSKI GUERKE & SWAYZE

**MEMORANDUM**

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

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Cc: Foxlane Homes Delaware

STATE OF DELAWARE
DEPARTM ENT OF NATURAL RESOURCES AND
ENVIRONM ENTAL CONTRO L
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

DRAINAGE PROGRAM

PHONE: (302) 855-1930
FAX: (302) 670-7059

August 14, 2024

Michael Lowrey
michael.lowrey@sussexcountyde.gov
Sussex County
Department of Planning and Zoning
2 The Circle
P.O. Box 417
Georgetown, DE 19947

RE: Parcel # 134-12.00-375.00, 134-12.00-374.01, 134-12.00-374.02, 134-12.00-3445.00, 13412.00-3446.00, 134-12.00-3447.00. 134-12.00-3448.00, 134-12.00-3449.00, 134-12.003450.00, 134-12.00-3451.00, 134-12.00-3452.00, 134-12.00-3453.00, 134-12.00-3454.00, 13412.00-3455.00, 134-12.00-3456.00, 134-12.00-3457.00. 134-12.00-3458.00, 134-12.003459.00, 134-12.00-3460.00, Glen Cove

The Delaware Department of Natural Resources and Environmental Control (DNREC), Drainage Program has reviewed the pre-application package submitted by Civil Engineering Associates, LLC for the above noted property within the Derrickson Canal Tax Ditch Watershed along Sub 2 Prong 2 and Prong 2.

- Please clearly delineate and label existing and proposed Tax Ditch [Prongs] and associated Right-of-Way (ROW) on all sheets where it appears, including on adjacent properties. The Delaware Tax Ditch FeatureServer is available on DE FirstMap and here: https://enterprise.firstmap.delaware.gov/arcgis/rest/services/Hydrology/DE_TaxDitch/FeatureServer

- Tax ditch channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during tax ditch maintenance activities. Tax Ditch ROWs vary by channel size and location.

- Permanent obstructions, including but not limited to; stormwater management facilities, buildings, sheds, streets, wells, landscape plantings, driveways and septic's are not allowed within the tax ditch ROW.

- Existing Tax Ditches on the property should be surveyed and compared to Tax Ditch design specifications for effective function. The channels should be cleared or excavated prior to the construction of the project if needed. Please contact the DNREC Drainage Program for tax ditch asbuilt information (DNREC Drainage@delaware.gov.)

- Stormwater Management Facilities and associated infrastructure are the responsibility of the private landowner or HOA even if located within the tax ditch channel.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

- Projects only have DNREC Tax Ditch Program approval if they have received a Letter of No Objection (LONO) from our office. Approvals from other entities do not guarantee that your project has no tax ditch impacts or has satisfied tax ditch comments. Projects and activities are subject to Del Code Title 7 Chapter 41.

**No Drainage Concerns have been reported to DNREC's Drainage Concern Database of Parcels within project scope.**

If you are a consultant working on behalf of a landowner, it is your responsibility to pass on this information to the landowner.

Please submit the Drainage Program's land development review request form for the above noted project when submitting revised plans to SCD. In addition, feel free to CC me in any email submissions to SCD. The form along with a tax ditches and land development guidance document can also be found at de.gov/taxditch.

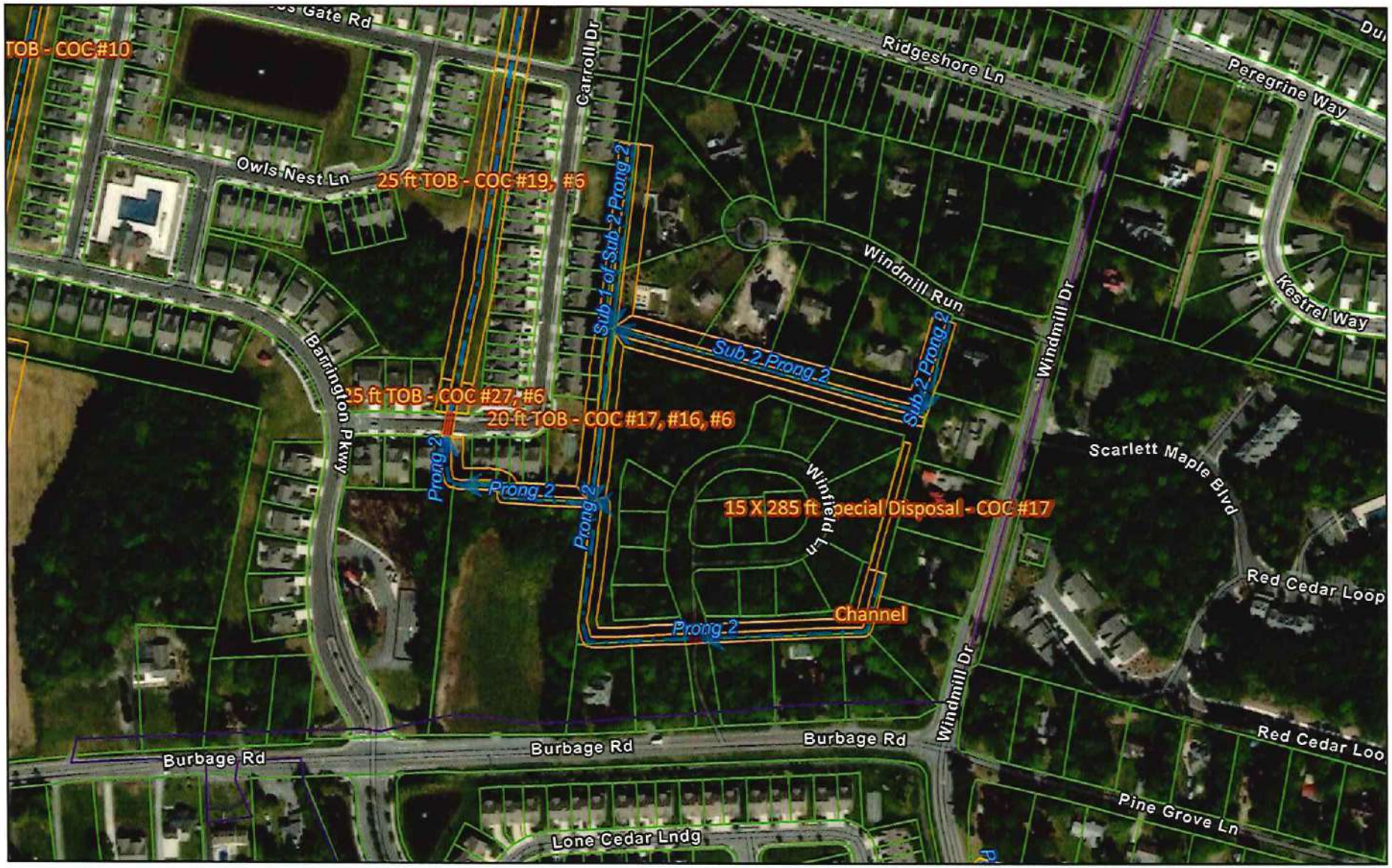
Once we have received both the request form from you and the stormwater management plans from the Sussex Conservation District, we can proceed with a more in-depth review along with processing of any necessary COC's followed by the issuance of our Letter of No Objection to the Sussex Conservation District.

Sincerely,

Karyssa Gortz
Planner II- Permit & Data Specialist

cc: Jordan Watson, Planner IV

# Aerial Map




8/13/2024, 3:34:39 PM

Tax Ditch Channels

Tax Ditch Channel

DITCHPIPEPRIV

Extent of Right-of-Way

Approx. Watershed Boundary

Parcels - Sussex

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

## Ashley Paugh

**From:** Gortz, Karyssa (DNREC) <karyssa.gortz@delaware.gov>
**Sent:** Wednesday, August 14, 2024 12:05 PM
**To:** Planning and Zoning
**Subject:** Glen Cove- TAC Review
**Attachments:** TAC Review Comments.docx; Aerial Map.pdf

**Categories:** Ashley

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Hi,

DNREC Drainage Program preliminary review comment letter for Glen Cove.

Thank you!

Karyssa Gortz
Planner II- Permit & Data Specialist
Drainage Program
DNREC Division of Watershed Stewardship
21309 Berlin Rd, Unit #6, Georgetown, DE 19947
Direct (302) 855-1943

# Sussex County, Delaware
## Technical Advisory Committee

### Comment Sheet

DATE OF REVIEW: August 8, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
**Desiree B. McCall, CFI, Sr. Fire Protection Specialist**
**John A. Colpo, Sr. Fire Protection Specialist**
**Daniel E. Louder, Fire Protection Specialist**
**Walter L. Johnson, Fire Protection Specialist**

AGENCY PHONE NUMBERS: **302-856-5298, Fax: 302-856-5800**

RE: C/U 2462 □ C/Z 2017 Glen Cove

*The reasons and conditions applied to this project and their sources are itemized below:*

**********

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Industrial, Storage and Mercantile)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One □ Two- Family Dwelling)
  - One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Walker Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. Streets designed without parking need to develop a plan for enforcement once HOA takes charge. Fire apparatus still need to negotiate the streets.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The use of open bridge or covered bridge shall be designed to DEDOT standards and accessible by all fire department apparatus.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes**:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications, or brochures.

***THIS DOCUMENT IS INFORMATIONAL ONLY, AND DOES NOT CONSTITUTE ANY TYPE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE***

**ENGINEERING DEPARTMENT**

JOHN J. ASHMAN
SR. MANAGER OF UTILITY PLANNING
& DESIGN REVIEW

(302) 855-7370 T
(302) 854-5391 F
jashman@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

Date: **August 30, 2024**

REF: **T. A. C. COMMENTS**
**GLEN COVE II**
**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**SUSSEX COUNTY TAX MAP NUMBER**
**134-12.00 PARCEL 374.01, 34.02, 375.00, and 3445 through 3460.00**
**AGREEMENT NO. 999-1**

The following comments are the result of the Sussex County Engineering Department's review of the preliminary site plan for the above referenced project:

## DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.

2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.

3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.

4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.

5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.

6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

The plans shall show and address the following items at minimum:

7. The project requires professional land surveying services to accurately delineate, and show the following items but is not limited to the following: all property and right-of-

way lines, established at a minimum, survey monuments, easements, existing and proposed topographic contours at 1-foot vertical intervals and spot elevations as necessary to establish grades, the locations of all existing structures, highway and roadway pavements, shoulders, curbs, driveways, sidewalks, lighting structures, traffic control signs, and all public and private utilities, including, but not limited to, electric power and telephone lines, poles and boxes, underground electric, telephone, and communication lines, potable water lines, fire hydrants and valve boxes, gas lines, wells, sanitary sewers including septic systems, rim and invert elevations of manholes and cleanouts, and the rims and invert elevations and type of storm water structures, drainage ditches, ponds, streams and waterways, flood zones and flood zone boundaries and elevations, and State and Federal wetlands, trees, cemeteries and historic features, and the finished floor elevations of buildings.

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.

9. The plan requires a Certification Signature and/or a Certification Block for the following:

    a. Delaware Professional Engineer or Delaware Land Surveyor.
    b. Owner or Representative of the Owner.
    c. Professional Wetlands Delineator.

10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.

11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.

12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, geo-referenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.

13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.

14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.

15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Road, Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.

17. False berms shall not be utilized to create roadside drainage swale back slopes.

18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.

19. Provide and show the locations and details of all ADA pedestrian connections.

20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.

21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.

22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.

23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.

24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.

25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.

26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

## SEWER SPECIFIC COMMENTS

LOCATION: Approx 500' west of intersection of Windmill Dr. (Rd. 352) and Burbage Rd. (Rd. 353).

NO. OF UNITS: 50 Single family lots.

GROSS ACREAGE: 12.32 Acres

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

(2). Which County Tier Area is project in? Tier 1

(3). Is wastewater capacity available for the project? Yes If not, what capacity is available? N/A.

(4). Is a Construction Agreement required? Yes If yes, contact Utility Engineering at (302) 855-7370 / option 2.

(5). Are there any System Connection Charge (SCC) credits for the project? No

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Parcels located in Tier 1.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

If the above items, as applicable, are incorporated into the development plans, then preliminary approval is recommended. However, final plan approval should be withheld pending the approval of the construction plans by the Sussex County Engineering Department.

**STATE OF DELAWARE**
**EXECUTIVE DEPARTMENT**
**OFFICE OF STATE PLANNING COORDINATION**

March 23, 2021

Ron Sutton
Civil Engineering Associates
55 W. Main St.
Middletown, DE 19709

RE: PLUS review 2021-02-06; Glen Cove

Dear Mr. Sutton:

Thank you for meeting with State agency planners on February 24, 2021 to discuss the proposed plans for the Glen Cove project. According to the information received you are seeking review of a proposed rezoning of 8.84 acres from AR-1 to MR in anticipation of future site plan for 33 residential units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that as the County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

## Strategies for State Policies and Spending

This project is located in Investment Level 2 according to the 2015 *Strategies for State Policies and Spending*. It is also located within the Town of Millville. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. State investments will support growth in these areas. Our office has no objections to the proposed rezoning and development of this project in accordance with Sussex County Comprehensive plan and all applicable codes and ordinances.

122 Martin Luther King Jr. Blvd. South – Haslet Armory · Third Floor · Dover, DE 19901
Phone (302)739-3090 · Fax (302) 739-5661 · www. stateplanning.delaware.gov

## Code Requirements/Agency Permitting Requirements

**Department of Transportation – Contact Bill Brockenbrough 760-2109**

- The site access on Burbage Road (Sussex Road 353) must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017. The December 15, 2020, meeting was sufficient in this regard.

- In accordance with Sections 1.6.1 of the Manual, and Figure 1.5.1 within that section, address entrance spacing. The proposed site driveway is bordered by two vacant lots, Lots 2 and 3 of Windmill Subdivision Phase 1. Lot 2, to the west, has been acquired by the owner of Lot 1 and has an entrance on it that serves Lot 1. Lot 3, to the east, has no constructed entrance but it appears that the entrance to Lot 4 was designed for a future shared access. According to Figure 1.5.1, the proposed site entrance would be too close to the existing entrances on Lot 2 and 4. To optimize conformity to Figure 1.5.1, DelDOT anticipates requiring that driveway easements be granted along the proposed private drive to allow Lots 2 and 4 to take access there when they are developed. DelDOT has no present intention to close the existing access on Lot 2 but may do so if it is proposed for development.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- Per Section 2.2.2.1 of the Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the PLUS application, the total daily trips are estimated at 354 vehicle trip ends per day. Using the 10th edition of the Institute of Transportation Engineers' Trip Generation Manual, DelDOT calculates this number as 375 and estimates the weekday morning and evening peak hour trip ends at 28 and 35, respectively. Therefore a TIS is not required.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Manual, DelDOT will require dedication of right-of-way along the site's frontage on Burbage Road. By this regulation, this dedication is to provide a minimum of 40 feet from the physical centerline of Burbage Road. The following right-of-way dedication note is required, **"An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."**

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Burbage Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **"A 15-foot wide permanent easement is hereby established for the State of Delaware, as per this plat."**

- Referring to Section 3.4.2.1 of the Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.

    - Depiction of all existing entrances within 450 feet of the entrance on Burbage Road.

    - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- Section 3.5.4.2 of the Manual addresses requirements for Shared Use Path (SUP) and sidewalks. For projects in Level 1 and 2 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is mandatory. DelDOT anticipates requiring a Shared Use Path along the site frontage, recognizing that the SUP may be little more than curb ramps due to the limited site frontage.

- In accordance with Section 3.8 of the Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Burbage Road.

- In accordance with Section 5.2.9 of the Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance on Burbage Road and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/Business/subdivisions/index.shtml. DelDOT anticipates that a right turn lane with a five-foot bicycle lane will be warranted and that a left turn lane may be warranted as well.

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- Section 5.8 of the Manual addresses Stormwater Management. DelDOT anticipates requiring additional detail on how the developer will manage any proposed increase in drainage into the State system.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

**Department of Natural Resources and Environmental Control – Beth Krumrine 735-3480**
Concerns Identified Within the Development Footprint

**Stormwater Management**

This project/site has met the minimum threshold of 5000 square feet of land disturbing activity under the DNREC Sediment and Stormwater Program.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically (https://apps.dnrec.state.de.us/eNOI/default.aspx) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

- Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

- General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov
  Website: https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/

**Hydrologic Soils Group**
Hydrologic Soils Group A soils (well drained) exist on the majority of the site; however, Hydrologic Soil Group A/D soils (poorly drained) have been identified on the northwest portion of the site. These soil types are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins, which must meet minimum infiltration requirements.

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation.
- Contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
  E-mail: DNREC.Stormwater@delaware.gov.
  Website: https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/

**Tax Ditches**
The proposed project lies within the Derrickson Tax Ditch Watershed. Tax Ditch channels onsite have associated Tax Ditch Rights-of-Way (ROW) that are utilized for ditch access as well as sediment and debris disposal during maintenance. The Tax Ditch ROWs located on this parcel were previously reduced by a Court Order Change. It is highly unlikely that they can be reduced further, based on the minimal ROW width requirements.

- The previous Court Order Change stipulates that a 15' by 285' Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.
- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROW.
- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channels should be cleared or excavated prior to the construction of the project if needed.
- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site stormwater.
- Contact: DNREC Drainage Program at (302) 855-1930.
  Website: https://dnrec.alpha.delaware.gov/drainage-stormwater/
  Tax Ditch Mapper: de.gov/taxditchmap

**Water Quality (Pollution Control Strategies)**
Pollution Control Strategies have been developed for the following watersheds in Delaware: Christina, Appoquinimink, Broadkill, Mispillion and Cedar Creek, Murderkill, Saint Jones, Inland Bays (Rehoboth Bay, Indian River Bay, and Little Assawoman Bay), Nanticoke, and

Upper Chesapeake. Such strategies were created because surface water failed to meet water quality standards for nutrients and sediment.

- This site lies within the Indian River Bay Watershed. Consult with the appropriate plan review agency to determine if stricter stormwater management standards may apply for development projects in this area.

- Contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
  Website: https://www.sussexconservation.org/

**Wastewater permits – Large Systems**
Sussex County holds existing permits with the DNREC Groundwater Discharges Section's Large Systems Branch.

- It is the responsibility of the permitee (Sussex County) to notify the Large Systems Branch if the capacity of the rate of wastewater disposal is to be updated.

- Contact: DNREC Large Systems Branch at (302) 739-9948.
  Website: https://dnrec.alpha.delaware.gov/water/groundwater/

**Wetlands**
According to the application, approximately 0.8 acres of non-tidal wetlands exist on the northwestern corner of the site, and a wetland delineation has been completed. The U.S. Army Corps of Engineers has signed off on the delineation.

- If the project proposes to disturb (dredge or fill) jurisdictional wetlands under the U.S. Army Corps of Engineers, a delineation of waterways and wetlands is required. In certain circumstances, additional certifications from DNREC Wetlands & Subaqueous Lands Section will be required as part of the U.S. Army Corps of Engineers permit process.

- For a list of consultants and engineers who can conduct wetland delineations, please visit the DNREC Wetlands and Subaqueous Lands Section link:
  http://www.dnrec.delaware.gov/wr/Documents/WSLS/Consultant%20List.pdf

- Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.

**Vegetated Buffer Zones**
Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. They also provide valuable habitat and can help prevent encroachment of human activities into ecologically sensitive areas. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- The applicant must comply with minimum vegetated buffer widths as identified within county and municipal codes.

**State Historic Preservation Office – Contact Carlton Hall 736-7400**

- There are no known archaeological sites or known National Register listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance.

- Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

**Delaware State Fire Marshall's Office – Contact Duane Fox 259-7037**

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

Fire Protection Water Requirements:

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- Where a water distribution system is proposed for townhouse type dwellings it shall be capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

Accessibility:

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be accessible to fire apparatus. This means that the access road to the subdivision shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not

more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

Gas Piping and System Information:

- Provide type of fuel proposed and show locations of bulk containers on plan.

Required Notes:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Townhouse 2-hr separation wall details shall be shown on site plans
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how the suggestions can benefit the project.

**Department of Transportation – Contact Bill Brockenbrough 760-2109**

- There is an open space area in the adjoining Bishops Landing development that abuts the west property line of the subject development for about 200 feet beginning about 300 feet from the south end of the west property line (about 500 feet north of Burbage Road). DelDOT recommends that an easement and a trail be provided to promote walking between the two developments. DelDOT recognizes that there is no such trail on the Bishops Landing property but by providing their own easement and trail, the applicant can initiate a connection and influence where it should be.

- The applicant should expect a requirement that any substation and/or wastewater facilities will be required to have access from an internal driveway with no direct access to Burbage Road.

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 25, 2019. The notes can be found at https://www.deldot.gov/Business/subdivisions/

**Department of Natural Resources and Environmental Control – Beth Krumrine 735-3480**
Concerns Identified Within the Development Footprint

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

**General Drainage Recommendations**

- All existing ditches on the property should be evaluated for function and cleaned, if needed, prior to the construction of the project.

- Environmental permits or exemption coverage may be necessary from the County Conservation District (Standard Plan), DNREC Sediment and Stormwater (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Subaqueous Lands Section prior to clearing and/or excavating ditch channels.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

- Any area designated as a drainage/utility easement should be open space and not owned by the individual landowners.

Any drainage/utility easement owned by an individual landowner should not possess structures such as decks, buildings, sheds, kennels, or fences within the drainage easement to allow for future drainage maintenance. Trees and shrubs planted within a drainage/utility easement should be spaced to allow for drainage maintenance at maturity.

- Contact: DNREC Drainage Program at (302) 855-1930.
  Website: https://dnrec.alpha.delaware.gov/drainage-stormwater/

**Wetlands**

- Recommendations for buffers are prescribed below under the heading, Vegetated Buffer Zones.

**Vegetated Buffer Zones**

- A 20-foot buffer has been proposed from wetlands. DNREC reviewers recommend incorporating a 100-foot vegetated buffer zone from the edge of wetlands. If possible, relocate stormwater management outside of the vegetated buffer zone so that habitat remains intact.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance (LOD) on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Vegetated buffer zones should be deeded as community open space. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Maintain vegetated buffer zones as either grasslands/meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.
- Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600.
  Website: https://dnrec.alpha.delaware.gov/fish-wildlife/contact-information/

**Mosquitoes**

The project lies within a zone that will be impacted by mosquitoes due to its location near wetlands and waterways.

- Mosquito control issues are increasing as developments infringe on wetland areas, often leading to increased demands by the public for mosquito control services. These control services can be provided at no charge to homeowners and other entities by the state's

Mosquito Control Section, or by a private company licensed in this area of specialty.

- Contact: DNREC Division of Fish and Wildlife at (302) 739-9917. Website: https://dnrec.alpha.delaware.gov/fish-wildlife/mosquito-control/

**Additional Sustainable Practices**

- Incorporate nonmotorized connectivity (walkways) where feasible to help facilitate non-vehicular travel modes to nearby open spaces.

- Use efficient Energy Star rated products and materials in construction and redevelopment to lessen the power source emissions of the project and costs. Every percentage of energy efficiency translates into a percent reduction in pollution.

- Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers. Use of structural paint coatings that are low in Volatile Organic Compounds will help protect air quality.

- The applicant should consider the use of recycled materials, such as reclaimed asphalt pavement, to reduce landfill waste, heat island effects on paved surfaces, and pavement costs.

- Include an option to install electric vehicle charging stations in garages of homes for your customers and tenants to assist Delaware in achieving its clean transportation goals.

- Consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities. Grants may be available for qualifying renewable energy systems installed in Delaware by applicants whose electricity provider collects funds for the program and offers a grant program for renewable energy projects. Additional information can be found at: https://dnrec.alpha.delaware.gov/climate-coastal-energy/renewable/assistance/.

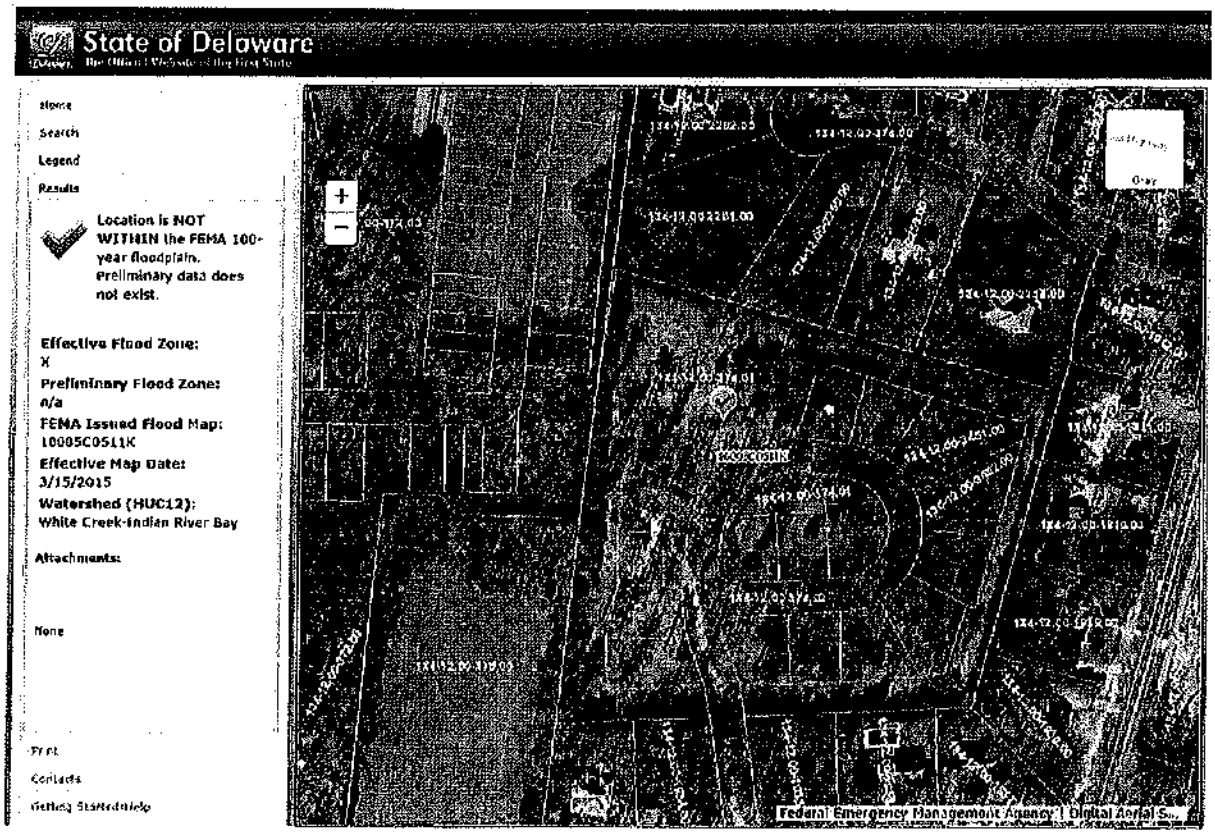
**Delaware State Fire Marshall's Office – Contact Duane Fox 259-7037**

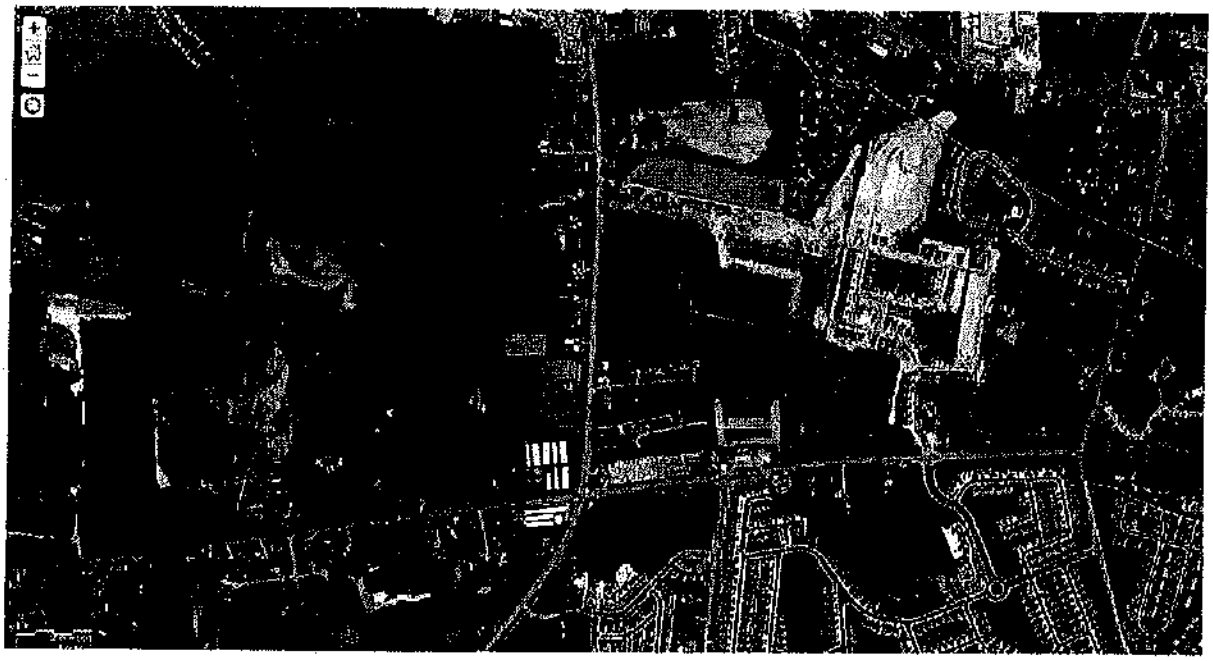
- Although not a requirement of the State Fire Prevention Regulations, the Office of the State Fire Marshal encourages home builders to consider the benefits of home sprinkler protection in dwellings. The Office of the State Fire Marshal also reminds home builders that they are obligated to comply with requirements of Subchapter III of Chapter 36 of Title 6 of the Delaware Code which can be found at the following website: http://delcode.delaware.gov/title6/c036/sc03/index.shtml

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

**Delaware Emergency Management Agency – Contact Philip Cane 659-2325**

- The location is not within any flood plain nor in a coastal inundation zone. 2018 QAP described the region this project is located in as being an "Area of Opportunity". The region has a homeownership rate of approximately 86.2%, a poverty ratio of 14 to 1 with approximately 28.3% of that census block's population at the age of 65 or older.





**Sussex County Engineering Department – Contact Chris Calio 855-1299**

- The proposed project is located within a Tier 1 area within the Sussex County Unified Sanitary Sewer District and connection to the sewer system is mandatory.

- A "Use of Existing Infrastructure Agreement" is required for new projects. Sussex County Code, Chapter 110, requires that the Engineer and/or Developer request a Sewer System Concept Evaluation (SSCE) from the Utility Planning & Design Review Department for the project by providing the parcel(s) estimated equivalent dwelling units (EDU) for the project, along with payment of a $1,000.00 fee for the evaluation and must be approved prior to approval of construction plans. The fee is to be payable to Sussex County Council. The Department will review the parcel(s) and EDU, confirm capacity, provide the connection point and define any additional parcels that must be served as part of the project. Should it be determined that a pump station is required for the project, additional information may be requested. This information will be conveyed to the engineer and/or developer. The Department will use this information when reviewing construction drawings to verify that the correct connection point is used, and all required parcels are served.

- The proposed development will require a developer installed collection system in accordance with Sussex County standards and procedures.

- One-time system connection charges will apply. Please contact the Utility Permits Division at 302 854-7719 for additional information on charges.

**Sussex County Housing – Contact: Brandy Nauman 855-7779**

- Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations.

- For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: www.sussexcountyde.gov/affordable-and-fair-housing-resource-center. The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County.

- The Community Development & Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state and county sources, as well as private funding sources that also promote affordable housing in Sussex County.

- Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland

Constance C. Holland, AICP
Director, Office of State Planning Coordination

CC: Sussex County Planning Department

## Michael Lowrey

**From:** Valerie Thompson
**Sent:** Monday, February 17, 2025 10:03 AM
**To:** Michael Lowrey
**Subject:** RE: Glen Cove DAR

Good morning Micharl,

I have reviewed the resubmitted DAR for Glen Cove. Based on the provided Site Plan, all SCE comments have been addressed.

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
2 The Circle, Georgetown DE 19947
Office: 302-855-7790
Cell: 443-783-8063
Email: valerie.thompson@sussexcountyde.gov

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**From:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Sent:** Friday, February 14, 2025 3:18 PM
**To:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>
**Subject:** RE: Glen Cove DAR

Good afternoon.

I've attached the Applicant's response to your prompts & the full email thread of the Applicant's response. Additionally, I've hosted all the submitted materials referenced in the email or the attached response here:
GLEN COVE - SHARE W SCED

Let me know if you have any questions & tanks for your time.
Have a nice weekend.
Michael

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947

302-855-7878
michael.lowrey@sussexcountyde.gov

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf
Much of the County's Planning and Zoning Information can be found online at:
https://sussexcountyde.gov/sussex-county-mapping-applications
Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

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**From:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>
**Sent:** Friday, January 24, 2025 1:32 PM
**To:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Subject:** Glen Cove DAR

Good afternoon Michael,

Attached are the review comments and checklist for Glen Cove.

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
2 The Circle, Georgetown DE 19947
Office: 302-855-7790
Cell: 443-783-8063
Email: valerie.thompson@sussexcountyde.gov

**STATE OF DELAWARE**
**OFFICE OF MANAGEMENT AND BUDGET**
**OFFICE OF STATE PLANNING COORDINATION**

September 17, 2024

Ron Sutton, Jr.
Civil Engineering Associates, Inc.
55 W Main St,
Middletown, DE 19709

RE: PLUS review – Glen Clove 2; 2024-08-02

Dear Mr. Sutton:

Thank you for meeting with State agency planners on August 28th, 2024 to discuss The Glen Cove 2 project. According to the information received, you are seeking review of this proposed rezoning of 12.32 from AR-1 to MR to build 50 single family condo units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

## Strategies for State Policies and Spending

This project is located in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. This site is also located in the Coastal Area of Sussex County.

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this **rezoning and site plan** provided it meets the relevant codes and ordinances of the Sussex county

122 Martin Luther King Jr. Blvd. South – Haslet Armory · Third Floor · Dover, DE 19901
Phone (302)739-3090 · Fax (302) 739-5661 · www. stateplanning.delaware.gov

With that said, this parcel is adjacent to the Town of Millville and within their planned growth area. The developer should consider annexing or at least working with the town to ensure the planned development meets the desires of their comp plan.

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis and based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF). This project is located in an area anticipated to be in the future Roxana Transportation Improvement District (TID). This TID will not be operational for at least a year. If your development timeline allows participation in the TID may be an option in place of the AWSF.

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across any property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to

assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Tax Ditches**
Prong 2 of the Derrickson Tax Ditch lies along several of the property boundaries and bisects the western and eastern parcels. Derrickson Canal Sub 2 Prong 2 runs along the property boundary in the northeast. Tax ditches are man-made channels created to move normal water flow off agricultural lands. These channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during maintenance. Tax ditch ROWs vary by channel size and location. Prong 2 and Sub 2 Prong 2 of the Derrickson Tax Ditch have a 20-foot to Top of Bank (TOB) ROW extending into the project boundary.

- The previous Court Order Change stipulates that a l5-foot by 285-foot Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.

- If the site and/or stormwater management features are designed to discharge into Prong 2 of the Derrickson Tax Ditch, design must consider existing conditions versus design specifications. Please consult with the DNREC Drainage Program for As-Built design information if necessary.

- Proposed structures or construction lies within the existing tax ditch ROW. Contact the DNREC Drainage Program to discuss the on-site tax ditch ROWs prior to the project application meeting with the appropriate plan review agency for construction stormwater management.

- The site plan appears to show a road crossing the tax ditch between Lots 16 and 17. The applicant must consult with the DNREC Tax Ditch Program on the elevation of the crossing. To reduce or change existing tax ditch ROWs, a Court Order Change must be

submitted by the DNREC Drainage Program. The associated Land Development Project Review Request form is attached, as well as the aerial drainage map.

- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROWs.

- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channel should be cleared or excavated prior to the construction of the project if needed.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

**Stormwater Management**

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Wetlands and Waterways**

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the western portion of the site, as well as riverine wetlands associated with the canal that runs around the periphery of the site. The application indicates that wetlands have been delineated. According to the application, the U.S. Army Corps of Engineers sign-off is completed. The application states that the project does not propose direct impacts to the wetlands.

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.

- If road crossings are proposed in drainage features functioning as intermittent or perennial features, **s**tate permits from the DNREC Wetlands and Waterways Section may be required for disturbance proposed in state jurisdictional wetlands and waterways. To apply for a permit online, please visit their website at https://dnrec.delaware.gov/water/wetlands-subaqueous/permits/.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/

**Wastewater Disposal Systems – Large Systems**

- For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

**Electric Vehicle Charging**

Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or
2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.

Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

<u>Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325</u>

**Proposed Project Parcel Flood Concern**

- This parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within two Sussex County Evacuation Zones B (red) and D (yellow).

**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There are no known archaeological sites or known National Register-listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance. Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

- If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Clubhouse)

- Where a water distribution system is proposed for single-family dwellings, it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)

- One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.

- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq. ft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Burbage Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Forest**
The preliminary plan proposes the elimination of approximately 9 of 12 acres forest on the site. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

- Removing forested areas for development should be avoided to the greatest extent possible.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st. Likewise, avoid mowing open space areas and grass filter strips during the same timeframe, as various species of birds utilize these areas for nesting sites.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

**Forested Wetlands and Vegetated Buffer Zones**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of freshwater forested wetlands on the western portion of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb wetlands. Wetlands are a critical part of our natural environment. They reduce the impacts of flooding, improve water quality, and sequester carbon dioxide from the atmosphere. Wetlands also provide habitat for plants and animals that are uniquely adapted to saturated conditions.

- Maintain an upland buffer of at least 100 feet along all wetlands, except tax ditches, including those containing existing forest or natural vegetative cover.

- Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Maintain vegetated buffer zones as either meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.
- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Grass cutting for vegetated buffer zones if maintained as meadow should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

**Tax Ditches**

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Water Quality**
This site lies within the Indian River Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable.
- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.
- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. https://dnrec.alpha.delaware.gov/watershed-stewardship/

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.

- Offer the option to install solar or geothermal systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities such as the proposed pool house, consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves

consumers and businesses money, while also helping to reduce pollution from power generation.

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 23, though, with development, this will undoubtedly change. The 5 adjacent blocks aggregated bring the area to a total population of 404.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected

Expected Annual Loss
× Social Vulnerability
÷ Community Resilience
= Risk Index

Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.

- According to FEMA's National Risk Index, the parcel is considered relatively low for overall natural hazards risks.
- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.
- Its community resilience is rated at relatively moderate whereas its social vulnerability is rated as very low.

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes electricity as the predominant fuel type for heating purposes.
- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.
- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

Preliminary meetings with Fire Protection Specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason, therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

David L. Edgell, AICP
Director, Office of State Planning Coordination

Attachments:

- Sussex County Planning & Zoning Comments
- Sussex Engineering Comments
- DNREC Tax Ditch Map
- DNREC Tax Ditch Land Development Project Review Request Form

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
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Sussex County
DELAWARE
sussexcountyde.gov

# Preliminary Land Use Service (PLUS) Meeting
# August 28th, 2024
# June PLUS Comments
# Sussex County Department of Planning & Zoning

DRAFT

**I. Review and Discussion: Glen Cove 2 (2024-08-02)**

**Location:** Winfield Lane and on the north side of Burbage Lane (S.C.R. 353) approximately 300 feet west of the intersection of Burbage Road (S.C.R. 353) and Windmill Drive (S.C.R. 352).

**Project:** Review of proposed multifamily improvements comprised of (50) single family detached multifamily condominiums on (19) parcels comprised of a total of (12.32) acres +/-.

**Sussex County Department of Planning & Zoning Comments**

**The applicant is required to participate in a pre-application meeting with the County. Please contact the Planning and Zoning Department to schedule a pre-application meeting with staff to discuss the proposed project by calling (302)855-7878 or you may reach out to the Planning & Zoning Office at p&z@sussexcountyde.gov.**

**Following submission to the County, staff will review the Preliminary Site Plan, where more detailed comments will be provided to the applicant. At the PLUS stage of review, staff wish to limit comments to high-level comments only.**

**Please note that the following are informal staff comments, and do not prejudice any decision that the Sussex County Planning & Zoning Commission may wish to make as part of any application submitted to the Department.**

**Tax Parcel ID:** 134-12.00-375.00, 134-12.00-374.01, 134-12.00-374.02, 134-12.00-3445.00, 134-12.00-3446.00, 134-12.00-3447.00. 134-12.00-3448.00, 134-12.00-3449.00, 134-12.00 3450.00, 134-12.00-3451.00, 134-12.00-3452.00, 134-12.00-3453.00, 134-12.00-3454.00, 134-12.00-3455.00, 134-12.00-3456.00, 134-12.00-3457.00. 134-12.00-3458.00, 134-12.00-3459.00, 134-12.00-3460.00

**Proposed:** The Applicant proposes multifamily improvements comprised of single-family detached condominiums (50 units), amenities including a pool and poolhouse, internal roads, forested buffers, and ancillary improvements on a total of (19) parcels comprised of a total of (12.32) acres +/-.

**Zoning:** The parcels are zoned Agricultural Residential (AR-1) Zoning District with the boundary with the Town of Millville immediately adjacent to the north and west of the Parcels

and just beyond the adjacent properties to the east and south as well. The multifamily use at the site is the subject of pending Conditional Use & Change of Zone Applications submitted to the County in July of 2023. The Change of Zone is from Agricultural Residential (AR-1) District to Medium-Density Residential (MR) District and the Conditional Use approval for multifamily use will soon be scheduled for Public Hearings. (CU 2462 & CZ 2017– Gulf Stream Glen Cove, LLC)

**Density:** If a Conditional Use were to be approved, the proposed density of ≈ (4.1) dwelling units per acre would comply with the County Code requirements for multifamily improvement in an (MR) District which allows up to (12) multifamily dwelling units per acre when serviced by a central sewer system (§115-Attachment 2 – Table II)(§115-22).

**Applicability to Comprehensive Plan:** The project lies within the Growth Area and is categorized as "Coastal Area" (per the 2018 Comprehensive Plan). Coastal Areas are growth areas that the County encourages only the appropriate forms of concentrated new development, especially when environmental features are in play. The Coastal Area designation is intended to recognize the characteristics of both anticipated growth and ecologically important and sensitive characteristics. The Plan notes, "A range of housing types should be permitted in Coastal Areas, including single-family homes, townhouses, and multi-family units" (2018 Sussex County Comprehensive Plan, 4-15). In terms of density the Plan notes:

*Medium and higher density could be supported in areas:*

- *Where there is central water and sewer*
- *Near sufficient commercial uses and employment centers*
- *Where it is in keeping with the character of the area*
- *Where it is along a main road or at/or near a major intersection*
- *Where there is adequate Level of Service*
- *Or where other considerations exist that are relevant to the requested project and density*

(2018 Sussex County Comprehensive Plan, 4-16).

**Open Space Provisions:** The proposed plan includes (8.3) acres +/- (out of a total of (12.32) acres) of open space which equates to approximately (67%) of the project site.

**Interconnectivity:** While it is understood that there are existing site constraints which may inhibit the ability for proposals to connect to adjacent lands, please note that Staff desire to see interconnectivity between proposed developments. Staff recommend any future Plan include stubs or easements for connection to all parcels adjacent to the site prior to any future site plan review by the Planning & Zoning Commission.

**Transportation Improvement District (TID):** The proposed project is **<u>not</u>** located within the Henlopen TID.

DRAFT

**Agricultural Areas:** The site is located within the vicinity of parcels which appear to be actively farmed. Please include on any plans submitted the Agricultural Use Protection notice located in (§99-6(G)(1)) of the County Code. This language shall also be included within any subsequent deed restrictions, leases, or agreements of sale for the property.

**Forested Areas:** The Application indicates no forested area. Staff note that majority of the area within the Parcels contains trees will very little appearing to be unforested outside of TM# 134-12.00-375.00. Staff appreciate efforts to conserve as many mature trees as possible on the project site. Staff note that any buffers which may be required as part of this plan are required to be exclusive of "stormwater management areas or facilities, wastewater treatment and/or disposal facilities" (§99-5 FORESTED AND/OR LANDSCAPED BUFFER) & (§115-193(C)(18)). Staff note that any Plan submitted will require a design ensuring the location of stormwater management basins are exclusive of the required wetland resource buffers (if applicable) or any screening or vegetative buffers which may be required as part of any conditions of approval if approved.

**Wetlands:** N/A - The Application notes that there are (0.2) acres of non-tidal wetlands present on the site. Please note that Sussex County Code requires that Preliminary and Final Site Plans include the location and regulatory delineation of all state and federal wetlands (§115-220(B)(13)) & (§115-221(B)(14)). Please note, under (§115-193) Resource Protection in County Code, non-tidal wetlands and streams are required to provide prescriptive resource buffering. Additionally, as wetland resources are on the site, a Drainage Assessment Report (DAR) per (§115-193F(2)) and a Resource & Resource Buffer Management Plan (RRBMP) are required to be submitted <u>at the time of Application submission</u> for applications with wetland resources on site.

**Site Considerations (Flood Zones, Tax Ditches, Groundwater Recharge Potential etc.):** The property is located within Flood Zone "X" (Unshaded - Areas determined to be outside of the 100 year floodplain) as indicated in the applicant's Conceptual Land Use Plan. This is accurate according to current data available to Sussex County Planning & Zoning. The site is located within an areas of "fair" & "good" Groundwater Recharge according to State and County GIS data. Please note this on any plan in order to comply with the provisions of Chapter 89 "Source Water Protection" of the Sussex County Code (§89-7). Staff note that the proposal is not within a wellhead protection area. Tax Ditches and Tax Ditch ROWs are adjacent to the perimeter of the site on three sides and will run through the proposed community. Please note, any Tax Ditch crossing will require permitting through DNREC prior to Final Site Plan approval. Additionally, any revisions to the Tax Ditch ROWs will be required to show documentation of any Court Order Change (COC) which approves any revision to the ROW.

DRAFT

PLUS

Efficient. Data-Rich. Connected.

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**Preliminary Land Use Service (PLUS) Meeting**
**Meeting will be conducted on-line and in person**
**Room 219, Haslet Armory**
**122 Martin Luther King Jr. Blvd., South**
**Please see https://publicmeetings.delaware.gov/ for link to on-line access**
**August 28, 2024**

**Applicants should arrive at least 15 minutes before their appointed time. Times are approximate and are subject to change.**

**Public comment will be heard at the end of each PLUS application after the State Agencies have shared their comments with the applicants. Each person wishing to comment on the application under review will have up to 3 minutes.**

I. 8:30 AM **Pre-Meeting Discussion – PLUS Reviewers**

II. 9:00 AM **Review and Discussion: The Commons at Odessa (2024-08-01)**
**County:** New Castle **Municipality:** Odessa
**Location:** 631 Main Street, Odessa, DE 19730
**Project**: Review of this proposed Mixed Use Residential Subdivision with 238 total residential units of Single Family, Multi-Family 5 units per building, Duplex or Townhouse with a 188,300 sq ft of commercial section on 45.12 acres zoned PND (Planned Neighborhood Development).

III. 9:30 AM **Review and Discussion: Poole East (2024-08-03)**
**County:** New Castle **Municipality:** Middletown
**Location:** 827 Middletown Warwick Road, Middletown, DE 19709.
**Project:** Review of a proposed Site Plan with commercial uses, restaurants, retail, and self-storage facility on 32.6 acres zoned C-3 (Employment/Regional Retail).

IV. 10:00 AM **Review and Discussion: NCC Creation of Zoning District for Publicly Owned Conserved Land & Public Parks (2024-08-05)**
**County:** New Castle **Municipality:** Unincorporated
**Location:** All Unincorporated parts of New Castle County.
**Project:** Review of this proposed Ordinance to amend County Code Chapter 40 to establish a zoning district for publicly owned conserved land and public parks.

V. 10:15 AM **Review and Discussion: NCC Rezoning – Individual Parcels (2024-08-06)**
**County:** New Castle **Municipality:** Unincorporated.
**Location:** All unincorporated parts of New Castle County.
**Project:** Review of this proposed Ordinance to amend County Code Chapter 40, Article 31 and Article 33 to change zoning procedures.

VI. 10:30 AM **Review and Discussion: NCC Community Development Plans and Guidelines/ DRAC (2024-08-07)**
**County:** New Castle **Municipality:** Unincorporated
**Location:** All unincorporated parts of New Castle County.
**Project:** Review of this proposed Ordinance to amend County Code Chapter 40, section 40.26.430 relating to Community Development Plans and Design Guidelines.

VII. 10:45 AM **Review and Discussion: Glen Cove 2 (2024-08-02)**
**County:** Sussex **Municipality:** Unincorporated
**Location:** Burbage Road – Ocean View, DE.
**Project:** Review of a proposed Rezoning of 12.32 acres consisting of 19 parcels from AR-1 (Agricultural Residential) to MR (Medium Density Residential) to build 50 single-family Condo units.

**The proposed project is located within a Tier 1 area within the Sussex County Unified Sanitary Sewer District and connection to the sewer system is mandatory.**

**A "Use of Existing Infrastructure Agreement" is required for new projects. Sussex County Code, Chapter 110, requires that the Engineer and/or Developer request a Sewer System Concept Evaluation (SSCE) from the Utility Planning & Design Review Department for the project by providing the parcel(s) estimated equivalent dwelling units (EDU) for the project, along with payment of a $1,000.00 fee for the evaluation and must be approved prior to approval of construction plans. The fee is to be payable to Sussex County Council. The Department will review the parcel(s) and EDU, confirm capacity, provide the connection point and define any additional parcels that must be served as part of the project. Should it be determined that a pump station is required for the project, additional information may be requested. This information will be conveyed to the engineer and/or developer. The Department will use this information when reviewing construction drawings to verify that the correct connection point is used, and all required parcels are served.**

**The proposed development will require a developer installed collection system in accordance with Sussex County standards and procedures.**

**One-time system connection charges will apply. Please contact the Utility Permits Division at 302 855-7719 for additional information on charges.**

For questions regarding these comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7370.

VIII. 11:00 AM **Review and Discussion: Greens Landing (2024-08-04)**
**County:** Sussex **Municipality:** Unincorporated
**Location:** Sussex Road – Dagsboro, DE
**Project:** Review of proposed Site Plan with a 104 single-family second homes project on 61.67 acres zoned AR-1 (Agricultural Residential) district with coastal overlay zoning.

**The proposed project is located in a Tier 2 area and is contiguous to the Sussex County Unified Sanitary Sewer District. The Sussex County Engineering Department would support the Greens Landing project connecting to the County sewer district, as the project would enhance the economic feasibility of an existing adjacent community project's ability to proceed with a septic elimination project. The existing modest sized canal front community has requested central sewer**

**service that would benefit the inland bays area. Combining the two projects would eliminate the existing on-site septic systems for the existing community.**

**A "Use of Existing Infrastructure Agreement" is required for new projects. Sussex County Code, Chapter 110, requires that the Engineer and/or Developer request a Sewer System Concept Evaluation (SSCE) from the Utility Planning & Design Review Department for the project by providing the parcel(s) estimated equivalent dwelling units (EDU) for the project, along with payment of a $1,000.00 fee for the evaluation and must be approved prior to approval of construction plans. The fee is to be payable to Sussex County Council. The Department will review the parcel(s) and EDU, confirm capacity, provide the connection point and define any additional parcels that must be served as part of the project. Should it be determined that a pump station is required for the project, additional information may be requested. This information will be conveyed to the engineer and/or developer. The Department will use this information when reviewing construction drawings to verify that the correct connection point is used, and all required parcels are served.**

**The proposed development will require a developer installed collection system in accordance with Sussex County standards and procedures.**

**One-time system connection charges will apply. Please contact the Utility Permits Division at 302 855-7719 for additional information on charges.**

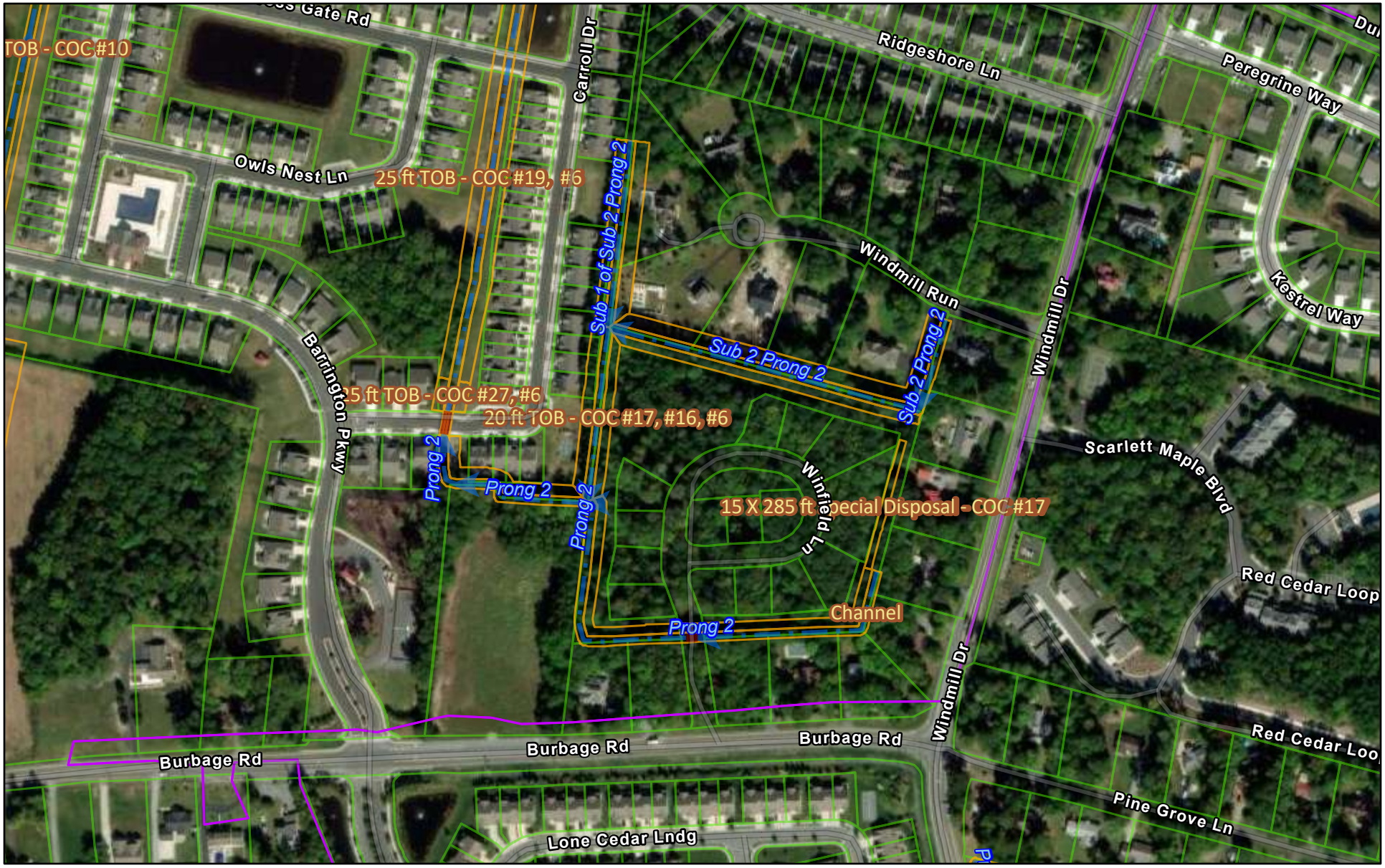
For questions regarding these comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7370.

IX. 11:30 PM **Review and Discussion: 350 Lafferty Lane Flex and Warehousing (2024-08-08)**
**County:** Kent **Municipality:** Dover
**Location:** 350 Lafferty Lane, Dover, Delaware
**Project:** Review of a proposed Site Plan with the construction of two flex space buildings and one warehouse building with all parking, drive aisles, and loading space required for each building on 19.74 acres zoned M (Manufacturing).

X. 12:00 PM **Review and Discussion: Sunshine Estates (2024-08-09)**
**County:** Kent **Municipality:** Harrington
**Location:** Approx. 412 Jackson Ditch Road, Harrington, DE
**Project:** Review of a proposed Subdivision of 277 entry level residential lots, 172 being single-family and 105 Townhouse lots on 55 acres of Traditional Neighborhood Development.

**The agenda items times are approximate and subject to change. This agenda is subject to change to include additional items or the deletion of items, which arise at the time of the meeting.**

# Aerial Map




8/13/2024, 3:34:39 PM

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Tax Ditch Channels

Tax Ditch Channel

DITCHPIPEPRIV

Extent of Right-of-Way

Approx. Watershed Boundary

Parcels - Sussex

Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

Division of Watershed Stewardship
Drainage Program
21309 Berlin Rd., Unit 6
Georgetown, DE 19947

# Tax Ditch Land Development Project Review Request Form

**Project Name:** _____

**Attach Site Plan of proposed request(s) and include all structures, easements, setbacks, etc. that make your proposal as requested necessary. Include and label existing tax ditch channel and rights-of-way for comparison.**

*Check out de.gov/taxditchmap to view tax ditch channels and rights-of-way from any web browser. To download the tax ditch GIS Feature Service layer to your own application, visit Delaware FirstMap. Don't forget to label all tax ditch features in all your plans!*

**Project Representative/Consultant Information:**

Name(s): _____
Company: _____
Title(s): _____
Phone Number(s): _____
Email(s): _____

**Owner(s) Contact Information:**

Name: _____
Phone Number: _____
Email: _____

**Authorized Signer(s) Contact Information (when applicable):**

Name: _____
Title: _____
Phone Number: _____
Email: _____

**For Internal Use Only**
Date Received: _____
Tracking #: _____

Division of Watershed Stewardship
Drainage Program
21309 Berlin Rd., Unit 6
Georgetown, DE 19947

**Property Information:**

Tax Parcel(s) Affected: _____
Tax Ditch Organization(s) Affected: _____

**Request(s) of / Proposed Impact(s) to Tax Ditch System (Check all that apply):**

| | |
|---|---|
| ☐ | Outfall/Discharge into Tax Ditch Channel(s) |
| ☐ | Pipe Crossing/Entrances in Tax Ditch Channel(s) |
| ☐ | Relocate/Eliminate Tax Ditch Channel(s) |
| ☐ | Reduce/Increase Tax Ditch Rights-of-Way |
| ☐ | Change Tax Ditch Watershed Boundary |
| ☐ | Alteration of Existing Tax Ditch Channel(s) |
| ☐ | Utility Crossing in Tax Ditch Channel |
| ☐ | Other Explain: |

*Based on the options selected above, additional information may be requested.*

***Please specify Tax Ditch Channel(s) affected, existing and requested tax ditch rights-of-way extents whenever applicable, using the space below. (REQUIRED)***

Submit all forms to the DNREC Drainage Program
Via email: DNREC_drainage@delaware.gov
Subject Line: Tax Ditch- Land Development Request

For questions about this form please call the Tax Ditch Program at 302-855-1930.

**For Internal Use Only**
Date Received: _____
Tracking #: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

# MEMORANDUM

**TO:** John Pietrobono, Acting Sussex County Review Coordinator

**FROM:** Sireen Muhtaseb, TIS Group Manager

**DATE:** November 4, 2024
**Revised December 13, 2024**

**SUBJECT:** **Glen Cove**
**(Protocol Tax Parcel # 134-12.00-374.01)**
**Area Wide Study Fee (AWSF) and Off-site Improvements**

---

**Note Concerning Revision**: This document has been updated to revise the proposed trip generation of the development due to a reduction in the number of dwelling units of the proposed site. Specifically, the revision updates the number of single-family detached houses from 50 dwelling units to 49 dwelling units. As such, the trip generation and the Area Wide Study Fee has been updated to reflect this change. This document replaces our previous AWSF memorandum dated November 4, 2024, a copy of which is enclosed herein.

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 49 dwelling units of single-family detached houses. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 523 average vehicle daily trips (ADT) and 51 vehicle trips during the

p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be □5,230.

2. The developer shall improve the State-maintained Roads on which they front (Burbage Road, Sussex Road 353), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

SAM: km
Enclosure
cc: John Murray, Foxlane Homes Delaware
Scott Roberts, Civil Engineering Associates, LLC
Jamie Whitehouse, Sussex County Planning □ Zoning
Lauren DeVore, Sussex County Planning □ Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming □ Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tijah Jones, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

August 19, 2024

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray** (Burbage Road, Millville, DE 19967) proposed land use application, which we received on August 6, 2024. This application is for an approximate 12.32-acre assemblage of parcels (Tax Parcel: 134-12.00-374.01, 134-12.00-3445.00 Thru 3460.00, and 375. 00). All Parcels are located on the north side of Burbage Road (Sussex County Road 353) and approximately 460 feet west of the intersection of Windmill Drive (Sussex County Road 352) and Burbage Road. The parcels are currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a Conditional Use approval to place 50-Condos units, on the parcels.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road where the subject land is located, which is from Windmill Drive to Substation Road (Sussex County Road 366), is 3,224 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 50), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at annamaria.furmato@delaware.gov, if you have questions concerning this correspondence.

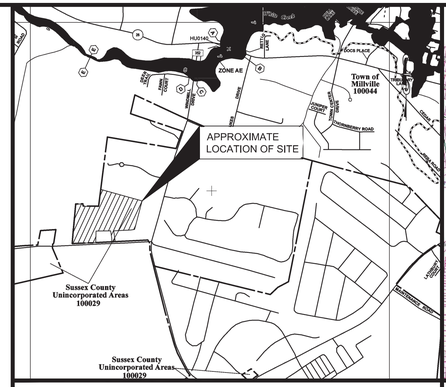
Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:bfm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Engineer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Engineer, Development Coordination
José Quixtan, Sussex County Subdivision Engineer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination

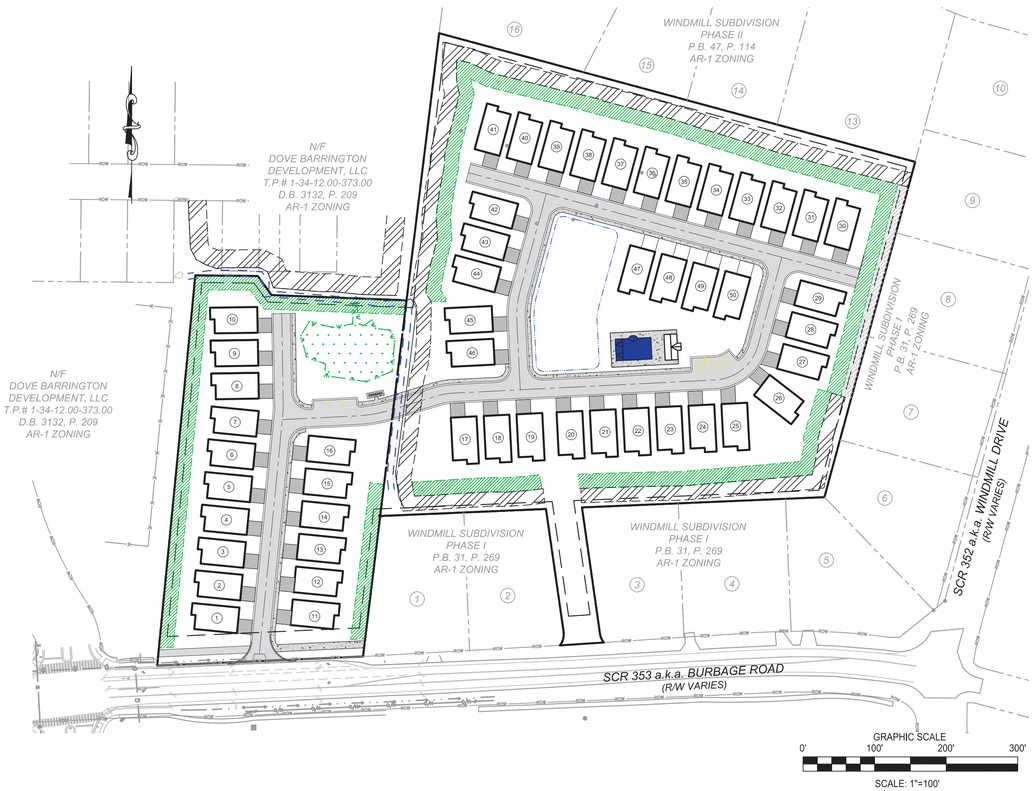
# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'

VICINITY MAP
SCALE: 1" = 1000'




## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW ROW |
| ADJACENT RIGHT-OF-WAY | ROW ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE PE |
| EXISTING SEWER | SS SS |
| PROPOSED SEWER | 8SS 8SS |
| EXISTING WATER | W W |
| PROPOSED WATER | W W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 50 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 50 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 112,926.00 S.F. ± = 2.59 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 61,969.91 S.F. ± = 1.42 AC. ± |
| OPEN SPACE | = 361,921.06 S.F. ± = 8.30 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (50 UNITS)*(2 SPACES) = 100 PARKING SPACES
    PROVIDED: (50 UNITS)*(2 SPACES) + 9 OFF-STREET= 109 PARKING SPACES

15. UTILITIES: WATER: TIDEWATER UTILITIES
    SANITARY SEWER: SUSSEX COUNTY

16. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

17. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

18. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

19. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27
    VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Harris DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Dean N. Collins DATE 7-17-2024
OT COLLINS FAMILY LIMITED PARTNERSHIP

## CERTIFICATION OF PLAN ACCURACY

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS


| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |


DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM


**COVER SHEET** FOR **GLEN COVE**
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

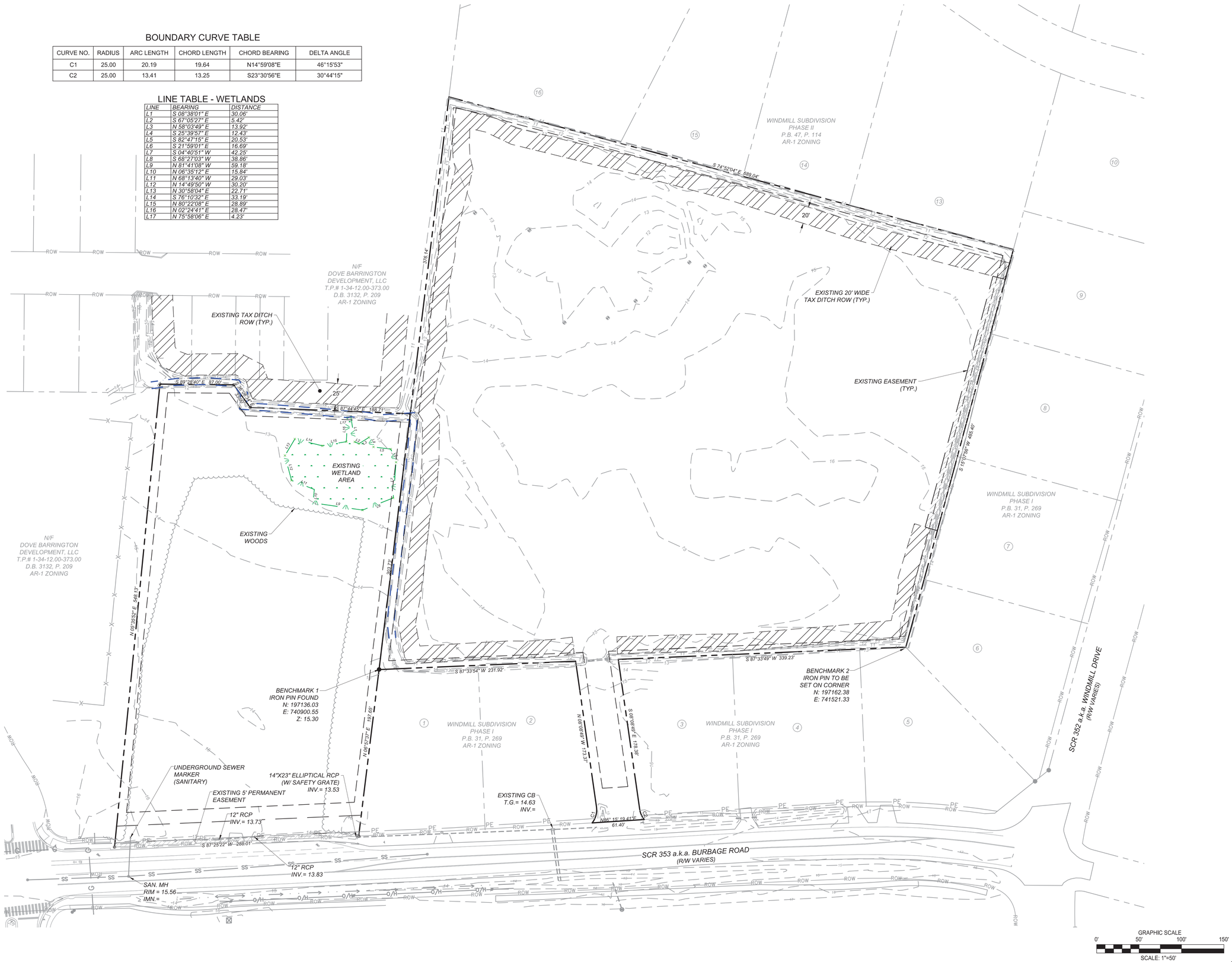
DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: **T-1**

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

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# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

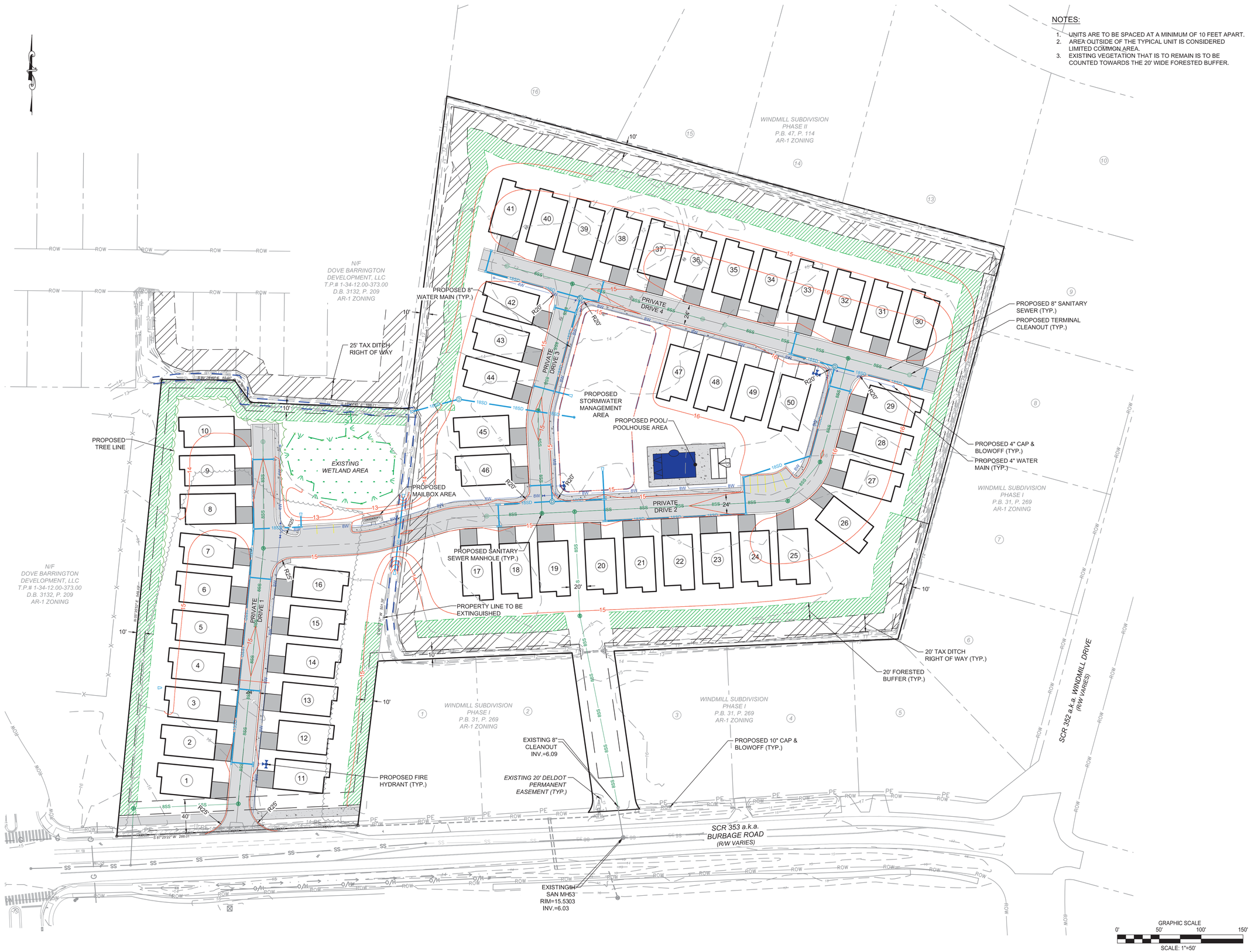
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.

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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

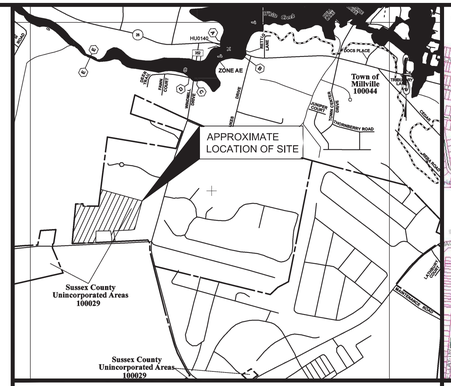
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

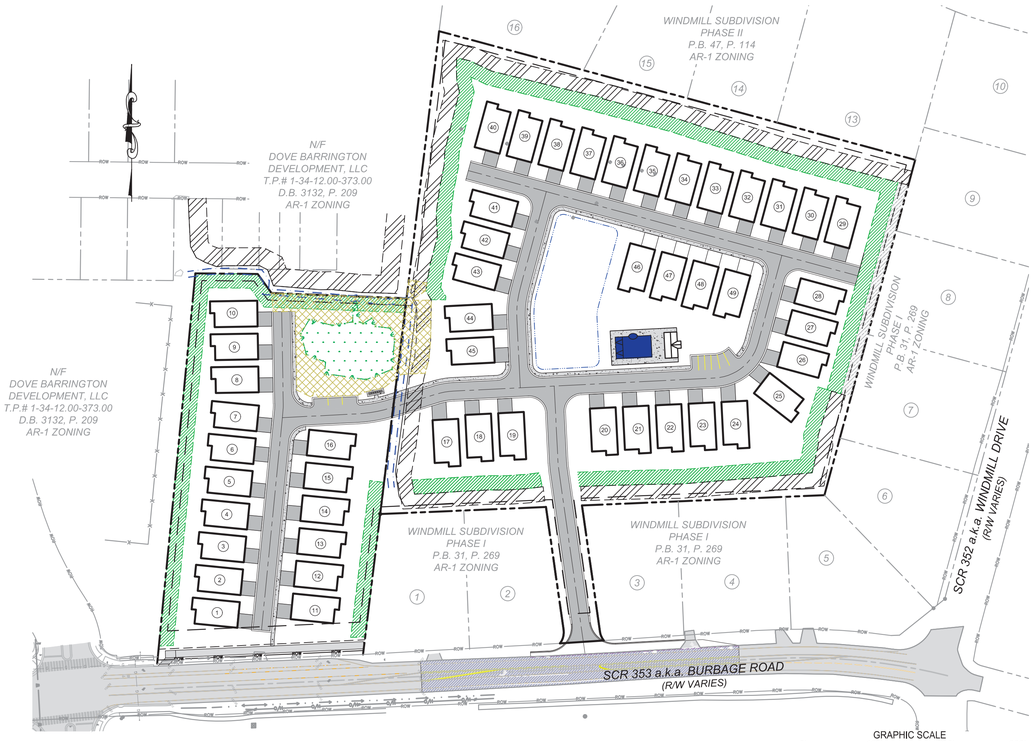
# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'

VICINITY MAP
SCALE: 1" = 1000'




## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW |
| ADJACENT RIGHT-OF-WAY | ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE |
| EXISTING SEWER | SS |
| PROPOSED SEWER | 8SS |
| EXISTING WATER | W |
| PROPOSED WATER | W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| RESOURCE BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | S |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | S |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 49 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 49 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 110,667.48 S.F. ± = 2.54 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 79,262.37 S.F. ± = 1.82 AC. ± |
| OPEN SPACE | = 346.887.12 S.F. ± = 7.96 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (49 UNITS)*(2 SPACES) = 98 PARKING SPACES
    PROVIDED: (49 UNITS)*(2 SPACES) + 9 OFF-STREET= 107 PARKING SPACES

15. RESOURCE BUFFER AREA:
    REQUIRED - 16,195 SF (0.37 AC)
    PROVIDED - 16,677 SF (0.38 AC) (ACCESS TO BUFFER WILL EXTEND FROM END OF PRIVATE DRIVE 1)

16. UTILITIES: WATER: TIDEWATER UTILITIES
    SANITARY SEWER: SUSSEX COUNTY

17. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

18. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

19. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

20. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27
    VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Hanna DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

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SIGNATURE Dee N. Collins DATE 7-17-2024
OT COLLINS FAMILY LIMITED PARTNERSHIP

## CERTIFICATION OF PLAN ACCURACY

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS

| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |

DATE

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| REVISION | DATE | DESCRIPTION |
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**COVER SHEET**
FOR
**GLEN COVE**
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: **T-1**

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
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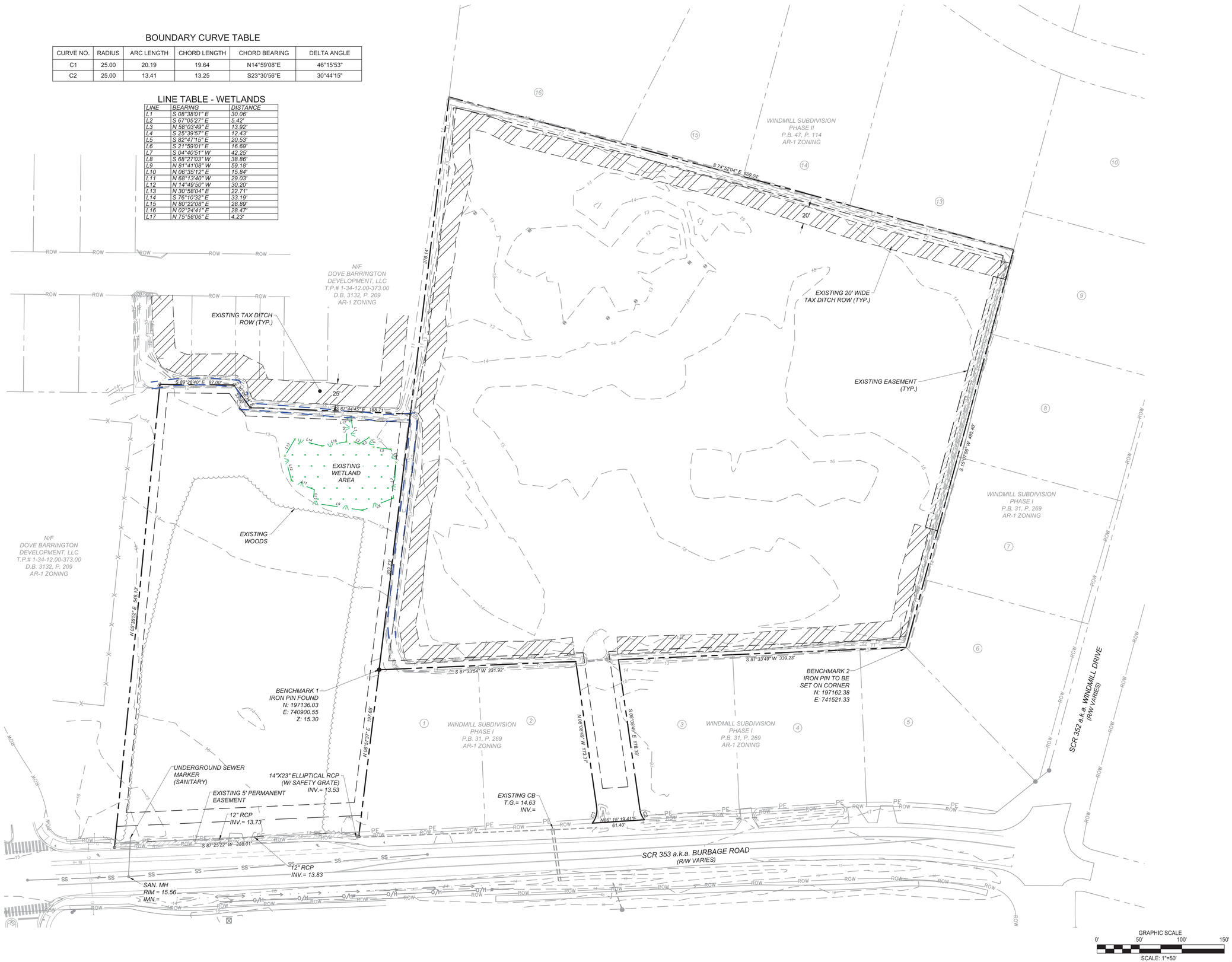


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# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR | APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

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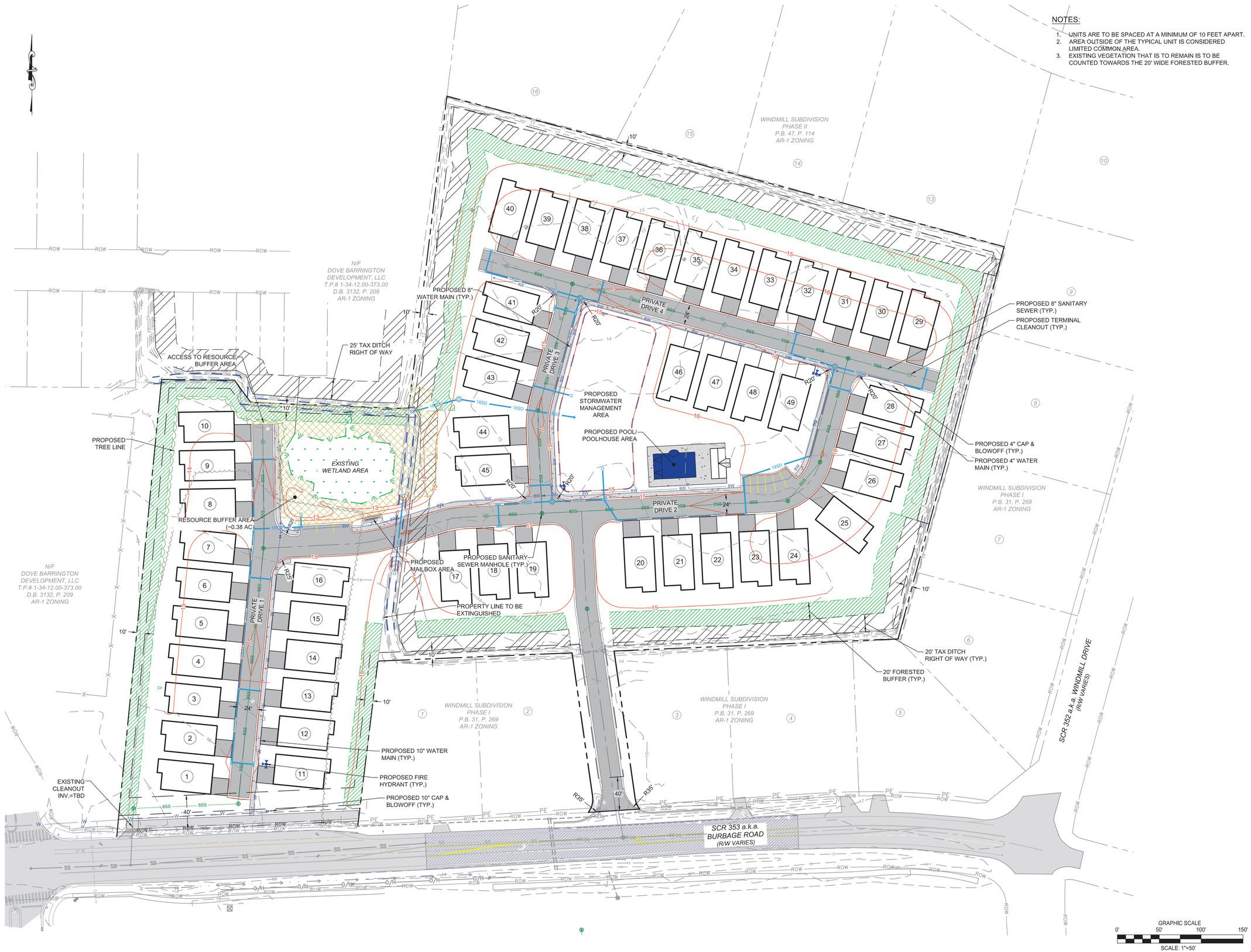


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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

# RESOURCE BUFFER MANAGEMENT PLAN

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
January 2025

_____
Seal

# TABLE OF CONTENTS

Section Pages

A. EXECUTIVE SUMMARY ..... 1

B. ESTABLISHMENT OF RESOURCE BUFFERS ..... 2

C. RESOURCE BUFFER MANGEMENT PLAN ..... 3

# APPENDICES

A. WETLAND DELINEATION – COLLINS PROPERTY

## A. EXECUTIVE SUMMARY

The proposed Glen Cove project will include forty-nine (49) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 49 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by one (1) stormwater management area (Wet detention pond).

This Report provides a summary of site-specific information relative to resource protection and accompanies the Preliminary Plans submittal, dated April 30, 2024. This Report has been prepared in accordance with Chapter 115 – 193 of the Sussex County Code.

## B. ESTABLISHMENT OF RESOURCE BUFFERS

Per the Wetland Delineation performed by Watershed Eco, LLC., the subject property contains approximately 0.20 acres of wetlands. Specifically, Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the OT Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted in the attached wetland report (See Appendix A). These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway.

Using a 30-foot resource buffer offset, we determined that the resource buffer area required totals 16,195 square feet (0.37 acres). As shown on the plans, the area designated by the hatching equals 16,677 square feet (0.38 acres). This area was obtained through buffer averaging. In summary, a resource buffer around the existing wetlands of 0.37 acres is required and a resource buffer totaling 0.38 acres is proposed.

The location of the required resource buffer for the existing wetland is shown on Sheet C-1 of the Preliminary Plans.

## C. RESOURCE BUFFER MANAGEMENT PLAN

The Resource Buffer Management Plan for the Glen Cove project will consist of a hands-off approach once construction is completed. No land disturbing maintenance activities within the resource buffer, wetland, or associated drainways is currently required or anticipated.

Should any emergency removal of vegetation endangering residents, infrastructure or capacity of the onsite wetland drainageway be required, those activities are permitted to occur. As specified by the Drainage and Resource Buffer Ordinance No. 2852, such work will be conducted under the supervision of a qualified professional as designated by the Code. No lots are situated nearby the proposed resource buffer, so emergency situations are unlikely.

This Resource Buffer Management Plan will serve as a guideline for the Homeowners Association. Silvicultural or Pest Management plans to promote the health of the Resource Buffer are also permitted as needed, under the supervision of a qualified professional.

Access to the buffer will extend from the end of Private Drive 1.

The outer perimeter of the resource buffer shall be marked with signage in 100-foot intervals. The developer, succeeded by the future Homeowners Association, shall be responsible for inspecting signage and making any necessary repairs at a minimum 2-year interval.

# APPENDIX A

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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Executive Summary ..... 1

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

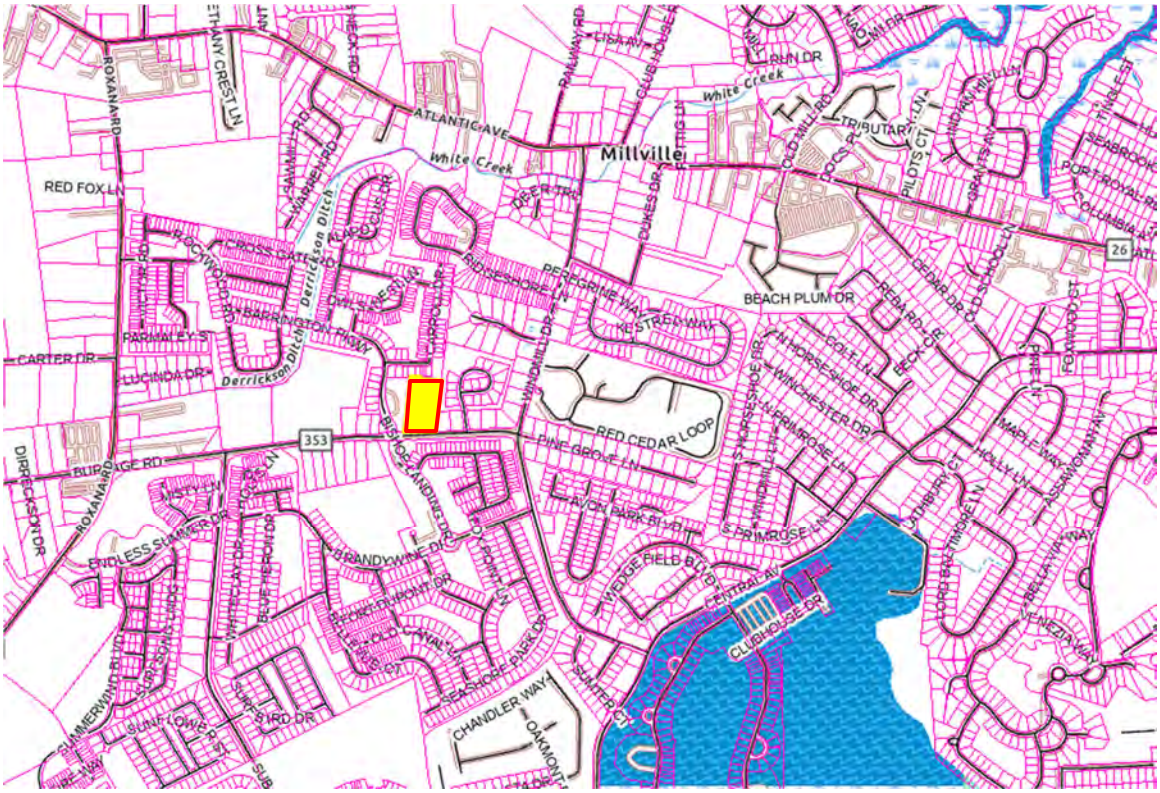



Figure 1: Location Map

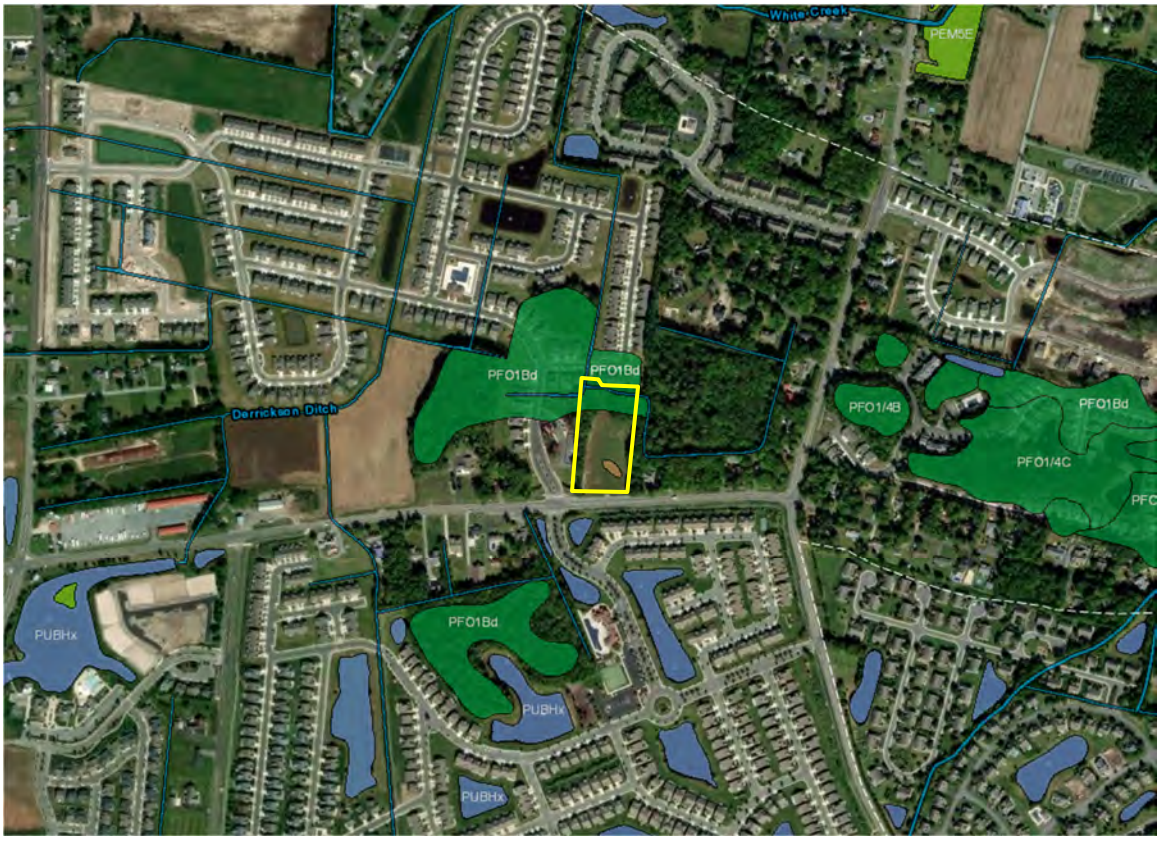



Figure 2: National Wetland Inventory Map.

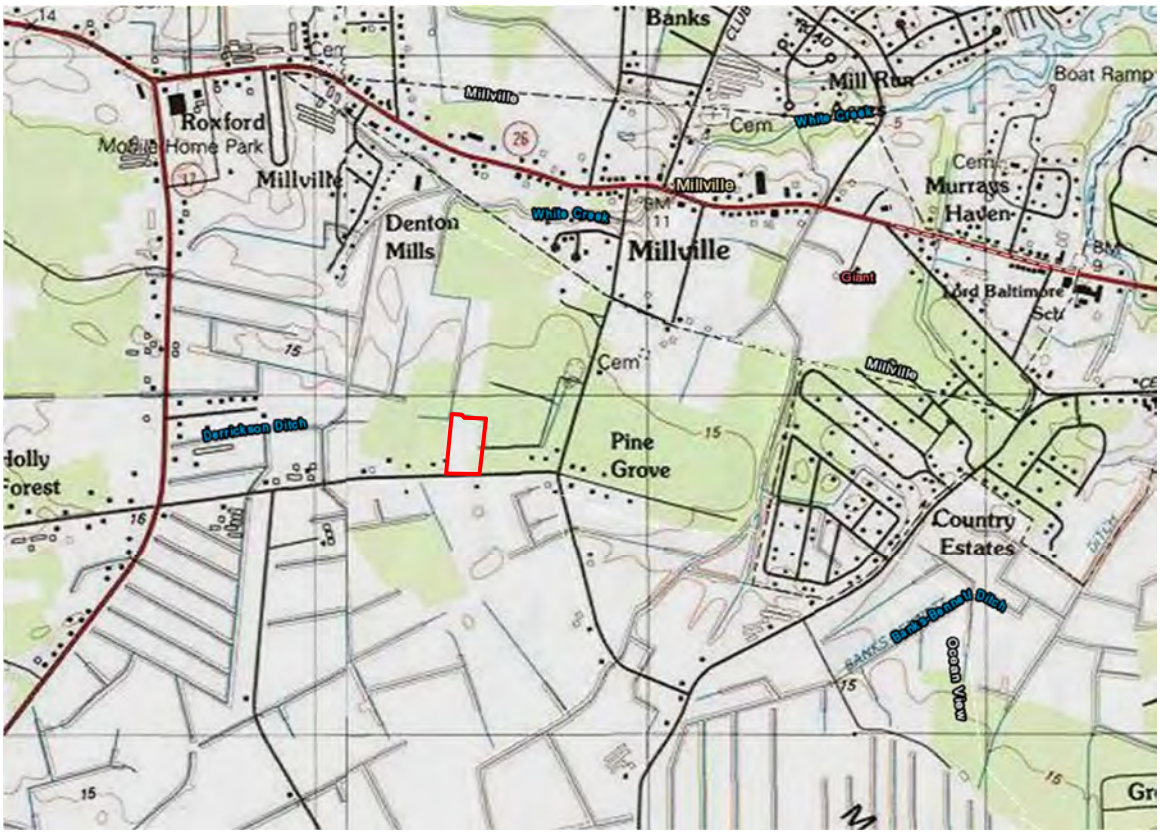



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

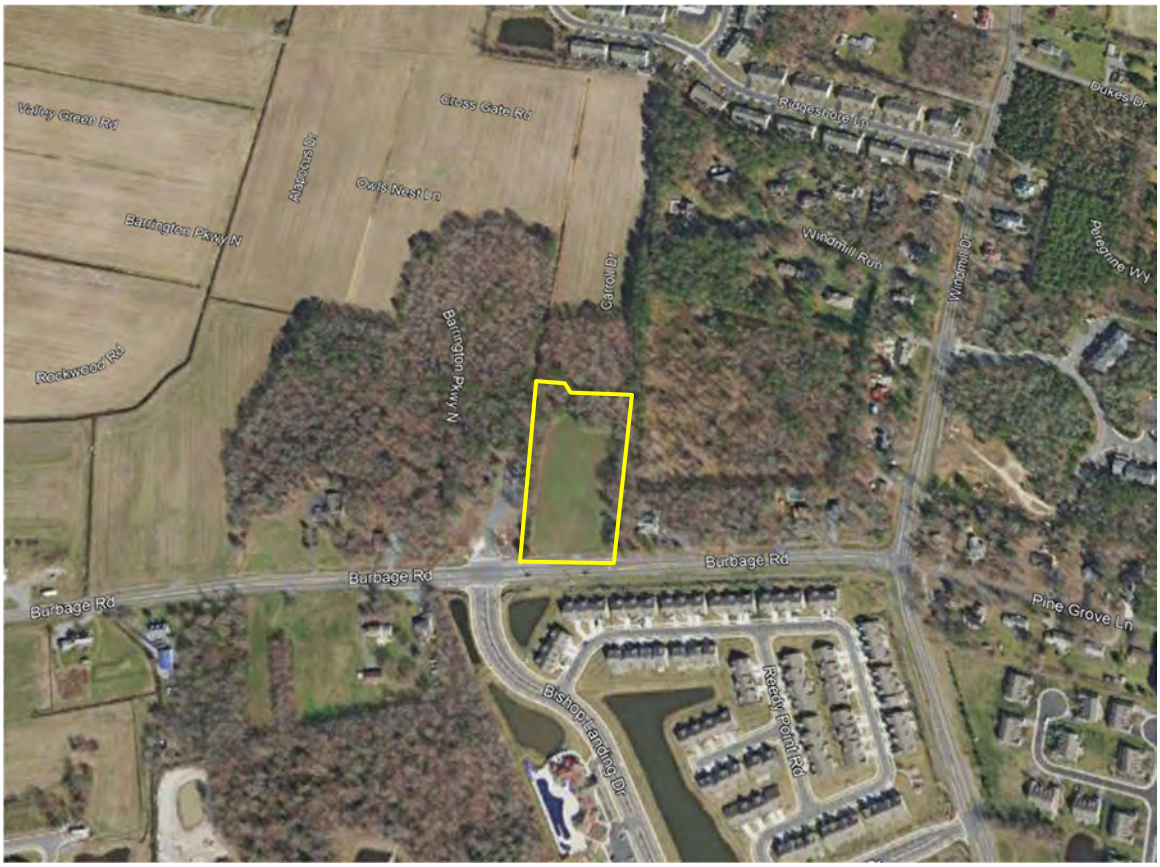



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

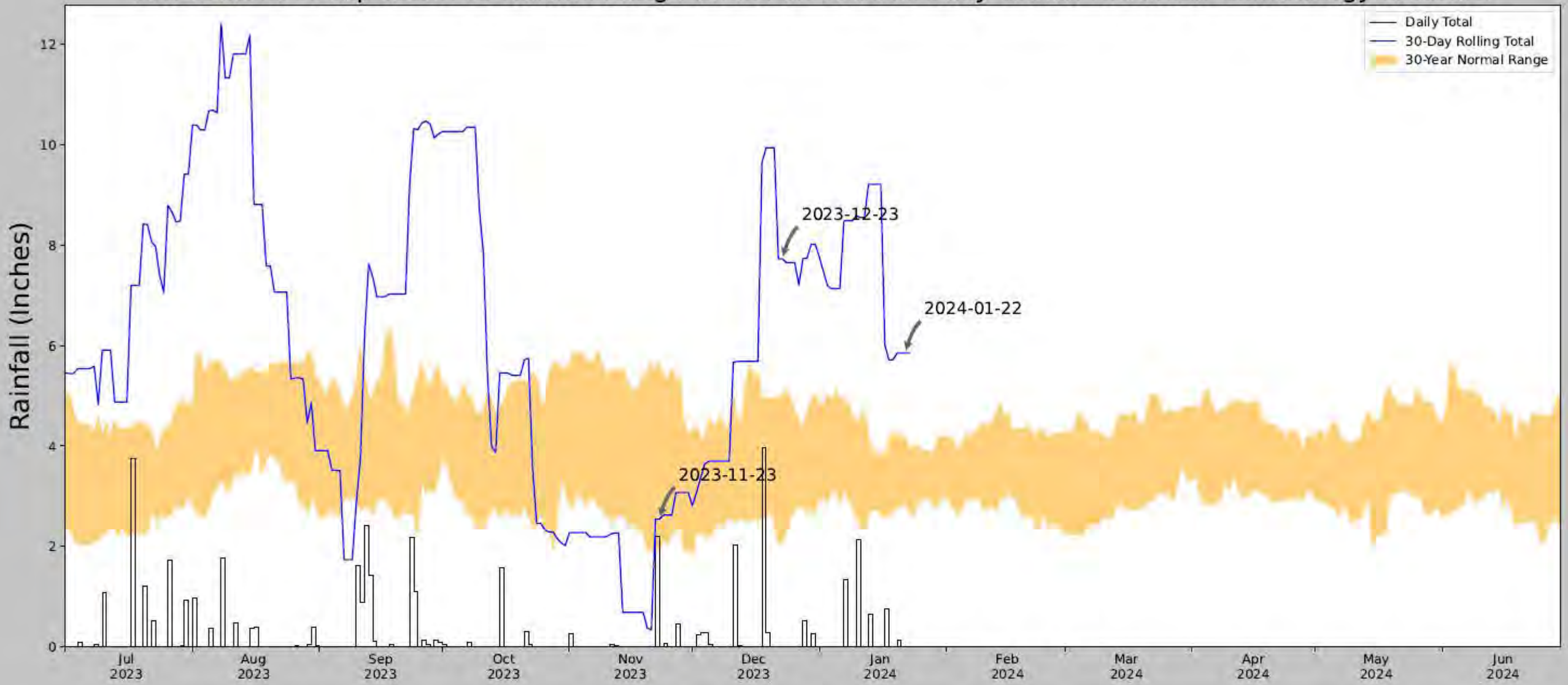
View looking west at intermittent ditch at the northwestern boundary of the property.

Intermittent ditch draining northerly, off-site.

# Appendices

Collins Property
Wetland Delineation Map
Legend
Flag ID#
Property Boundary
Waters
Wetlands
Barrington Pkwy N
Burbage Rd
Burbage Rd
Burbage Rd
Google Earth
Image © 2024 Airbus
N
200 ft

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ___ No ✓ |
| Hydric Soil Present? | Yes ___ | No ✓ | |
| Wetland Hydrology Present? | Yes ___ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

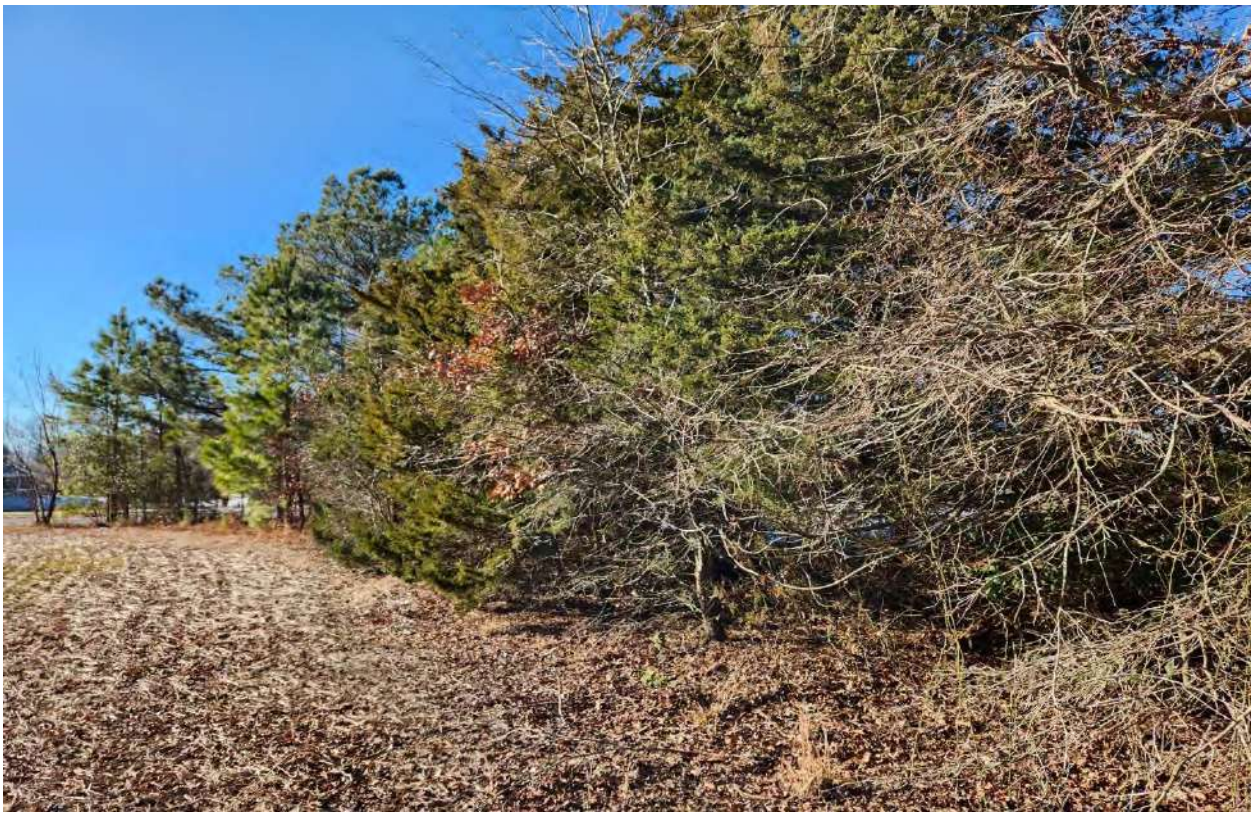
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

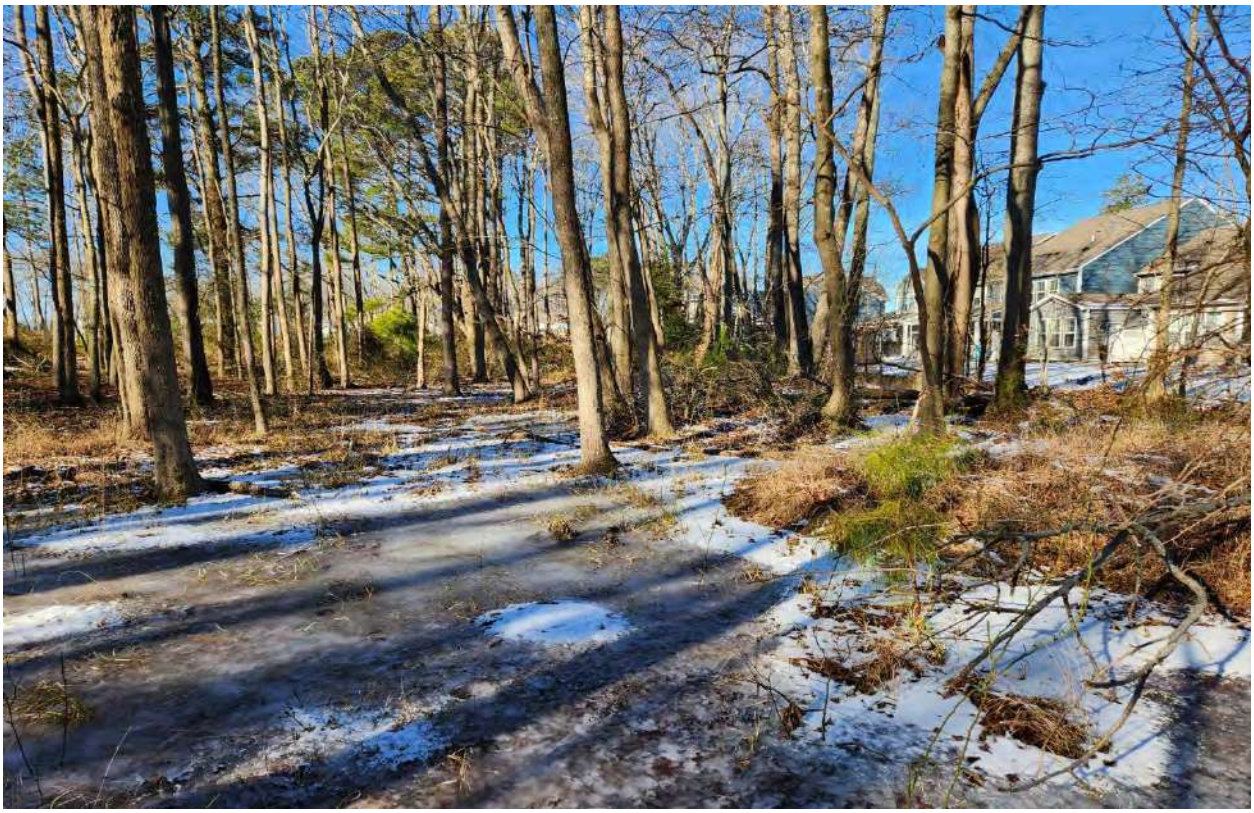
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

NRCS

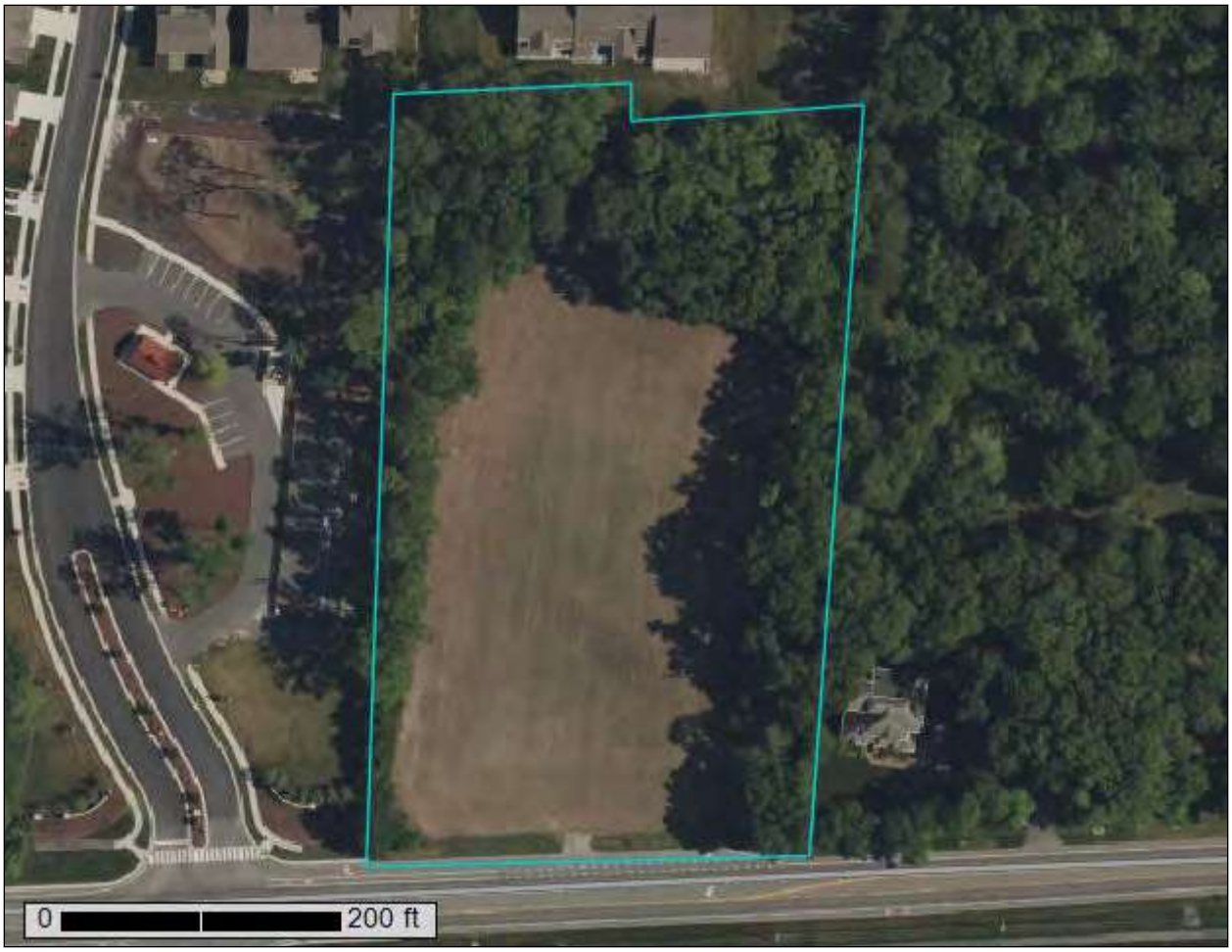
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:993 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

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# GLEN COVE
## SUSSEX COUNTY
## DESIGN CONSIDERATIONS
## (SECTION 99-9.C)

### INTEGRATION OF THE PROPOSED SUBDIVISION INTO EXISTING TERRAIN AND SURROUNDING LANDSCAPE

The proposed project consists of 49 single family condominiums surrounded by existing landscaping/woods that will be maintained. Furthermore, landscape buffers will be provided to supplement the surrounding woods.

### MINIMAL USE OF WETLANDS AND FLOODPLAINS

There is a small portion of wetlands on the project property, no impact to the wetlands is anticipated.

### PRESERVATION OF NATURAL AND HISTORICAL FEATURES

There are no existing natural or historical features on site.

### PRESERVATION OF OPEN SPACE AND SCENIC VIEWS

The project is surrounded by existing developments and residential areas, there are no existing scenic views from the property. Proposed open space will exceed the 30% requirement.

### MINIMIZATION OF TREE, VEGETATION AND SOIL REMOVAL AND GRADE CHANGES

During construction activities, care will be taken to preserve as many of the large trees surrounding the property as well as any vegetation not impinging on the development. Proposed grades will closely match existing to tie-in to the surrounding developed areas.

### SCREENING OF OBJECTIONABLE FEATURES FROM NEIGHBORING PROPERTIES AND ROADWAYS

As stated above, the property is surrounded by existing woods which will be maintained and supplemented with additional landscaping.

### PROVISION FOR WATER SUPPLY

Water will be provided by Tidewater Utilities.

## PROVISION FOR SEWAGE DISPOSAL

Water will be provided by Sussex County.

## PREVENTION OF POLLUTION OF SURFACE AND GROUNDWATER

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## MINIMIZATION OF EROSION AND SEDIMENTATION, MINIMIZATION OF CHANGES IN GROUNDWATER LEVELS, MINIMIZATION OF INCREASED RATES OF RUNOFF, MINIMIZATION OF POTENTIAL FOR FLOODING AND DESIGN OF DRAINAGE SO THAT GROUNDWATER RECHARGE IS MAXIMIZED

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## PROVISION FOR SAFE VEHICULAR AND PEDESTRIAN MOVEMENT WITHIN THE SITE AND ADJACENT WAYS

The proposed layout of the road consists of twelve (12) foot travel lanes with curbing as well as five (5) foot sidewalks on one side of the road. The site entrance will be located off of Burbage Road within a 50-foot right-of-way through the Windmill Subdivision. A ten (10) foot wide shared use path is also proposed along a portion of the frontage for connection to adjacent ways.

# GLEN COVE

## DESIGN SUMMARY & SUPPLEMENTAL DATA

### CONDITIONAL USE & REZONING APPLICATIONS CU-2463 & CU-2017

### PROPOSED MR-1 – SINGLE FAMILY CONDOMINIUMS

**BALTIMORE HUNDRED**
**SUSSEX COUNTY, DELAWARE**

FOR:

FOXLANE HOMES

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

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# APPENDIX A

## CONDITIONAL USE APPLICATION FORMS

File #: _____

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✓

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**

Change of zoning from AR-1 to MR-1

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302)732-9366
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7-17-24

***Signature of Owner***

_____ Date: 7-17-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ✓
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**
SINGLE-FAMILY CONDOMINIUMS

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302) 732-9364
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
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***Signature of Applicant/Agent/Attorney***

_____ Date: 7/17/24

***Signature of Owner***

_____ Date: 7-12-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

# APPENDIX B

## PROPERTY SURVEY AND DEED

13641 #02482 2125

Tax Parcel 1-34-12.00-4.00
1-34-11.00-176.00
1-34-12.00-1.00
1-34-12.00-375.00
1-34-13.00-68.00
RETURN TO GRANTEE
Prepared by: David N. Baker, Esq., P.A.
P O Box 551, 109 S. Race St.
Georgetown, Delaware 19947

NO TITLE OR LIEN SEARCH PERFORMED - NONE REQUESTED

# This Deed, made this 5th day of May

in the year of our Lord Two Thousand.

BETWEEN OMEDA T. COLLINS, TRUSTEE OF THE OMEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, of Rt. 2, Box 23, Clarksville, Delaware 19970, party the first part,

-and-

O. T. COLLINS FAMILY LIMITED PARTNERSHIP, a limited partnership organized and existing under the laws of the State of Delaware, with offices at Rt. 2, Box 23, Clarksville, Delaware 19970, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of One Dollar ($1.00) and other valuable consideration, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, its Successors and Assigns,

Parcel No. 1: 1-34 12.00 4.00

Tract No. 1:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in

Consideration : 0 0.00 Exempt Code: A

| County | State | Total |
|---|---|---|
| 0.00 | 0.00 | 0.00 |
| Grantor | Date: 05/05/2000 | |

Baltimore Hundred, Sussex County, Delaware, lying on the north side of the State Highway leading from Clarksville to Bethany Beach adjoining lands now or formerly of Charles Aydelotte, Manaen Robinson and Roland West, bounded and described as follows, to wit:

BEGINNING at a fence post at the edge of the aforesaid highway; thence running with the same 88-3/4° West 4.12 chains to the center of the outlet road; thence with same North 4-1/4° East 14.50 chains to a post; thence South 85-3/4° East 4.61 chains to a stake in line of a row of cedars; thence with same South 6° West 12 chains to a post; thence South 17-3/4° West 1.64 chains; thence South 7-1/2° West 65 links or 52 feet home to the place of beginning, containing six acres and 97 square perches more or less.

Tract No. 2:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in Baltimore Hundred, Sussex County and State of Delaware and being on the North side of Stone Road leading from Millville to Clarksville, bounded and described as follows, to wit:

BEGINNING at an iron bolt, driven at right of way of said stone road, and corner of lands formerly owned by Edward Hammonds thence running with said lines N. 8-1/2° East 52 feet, N. 17-3/4° E. 108-1/4 feet to a stake in line with row of cedars, thence N. 6° 55' E. 792 feet N. 85° W. 303-3/5 ft. to center of an outlet road thence down said Road N. 5° 10' E. 365 feet to lands now or formerly of Manehn Robinson thence with same down center of Ditch S. 80-3/4° E. 557 feet to land formerly owned by Frank Howard, thence with said Howard line S. 2-3/4° E. 1268 feet to the aforesaid stone road right of way, thence with said right of way 339 feet home to the place of beginning, containing 10-1/2 acres more or less.

Parcel No. 2: 1-34 11.00 176.00

ALL that certain piece, parcel or tract of land lying and being situate in Baltimore Hundred, Sussex County, and State of Delaware, joining lands now or formerly of Smith Murray, Manaen Robinson, Loving Aydelotte and Elmer Murray, bounded and described as follows to wit:

BEGINNING at stone in middle of county road leading from Millville to Clarksville running N. 7 1/2 degrees E. 17.08 chs. to stake; thence S. 85 E. 7.47 chains to cedar stake; thence S. 8 degrees W. 10.14 chs. to stake and lands now or formerly of Elmer Murray; thence with same S.82 degrees E. 3.28 chains to cedar

post and Graveyard lot; thence with said lot S. 5 degrees E. 1.00 ch. to small pine; thence S 88 1/2 W. 1.61 chs. to stake corner of said graveyard; thence S. 4 degrees W. 1.54 chs. to stake; thence S. 84-5/8 degrees E. 1.39 chs. to outlet road; thence with same S. 7-2/5 degrees W. 9.20 chs. to middle of aforesaid county road; thence down same N. 46 1/2 degrees W. 5.03 chs. to stone, home place of beginning, containing ten acres and one hundred and twenty square perches be the same more or less, said outlet road to graveyard is ten feet wide.

WITH THE EXCEPTION of 2.47 acres of land which was conveyed by Herbert Williams and wife to William Clifford Wilson by indenture dated the 18th day of March, 1952, and of record in the aforesaid Office in Deed Record No. 409, Page 347

Parcel No. 3: 1-34 12.00 1.00

ALL that certain triangular lot, piece or parcel of land, situate, lying and being near Clarksville, Baltimore Hundred, Sussex County, Delaware, more particularly bounded and described as follows, to-wit:

BEGINNING at a concrete marker found near the intersection of two ditches; thence, by and with other lands now or formerly of Harold H. Collins and wife, North 11° 00' 55" East, 266.00 feet to a point; thence, by a new line through the lands now or formerly of Calvin C. McComrick and wife, South 35° 12' 33" East, 368.06 feet to a point in the center of a ditch, a corner for this land and other lands now or formerly of Harold H. Collins and wife; thence, by and with the line of the ditch and lands of Harold H. Collins and wife, North 81° 26' West, 266.00 feet, home to the point and place of beginning, containing 35,346.875 square feet of land, more or less. The foregoing description is taken from a survey made by C. Kenneth Carter & Associates, Professional Land Surveyors, dated December 28, 1983, a copy of which survey is of record in the aforesaid Office in Plot Book 27, Page 901.

Parcel No. 4: 1-34 12.00 375.00

ALL that certain lot, piece, parcel or tract of land, lying and being situate in Baltimore Hundred, Sussex County, State of Delaware, bounded as follows: On the North by lands now or formerly of Harry N. Dukes, Jr., on the East by lands now or formerly of Jack Tubbs, on the South by a 30 foot County Road that leads from the Clarksville to Selbyville Road to Millville, on the West by lands now or formerly of the aforementioned Dukes and being more particularly described as follows to wit:

BEGINNING at an oak hub in the Northern right-of-way line of the said County Road, a corner for these lands and lands now or

formerly of Jack Tubbs; thence with the Tubbs line along and with a ditch, North 15° 50' East 506 feet to where a cross ditch intersects the line; thence with the cross ditch, a new division line, 3 courses; North 79° 15' West 213 feet, North 3° 45' East 23 feet, North 81° 45' West 87 feet to where a small ditch intersects the cross ditch, a new corner now established between these lands and lands now or formerly of the aforementioned Dukes; thence with a new division line now established, South 14° 10' West 549 feet to an oak hub in the Northern right-of-way line of the line of the said 30 foot County Road; thence with the Northern right-of-way line, South 84° 15' East 287.9 feet, home to the place of beginning and containing 3.57 acres, be the same more or less.

Parcel No. 5: 1-34 13.00 68.00

ALL that certain piece, parcel or lot of land, lying and being situate in Cedar Neck, Baltimore Hundred, Sussex County, State of Delaware and lying on the westerly side of the slag road leading from Ocean View to Cedar Grove, bounded and described as follows, to-wit:

BEGINNING at a bounder settled on westerly edge of aforesaid slag road right-of-way and corner for land now or formerly of Harry H. Dukes, Jr.; thence with land now or formerly of said Dukes, westerly 345-3/4 feet to a bounder corner for said Dukes, and said described land, thence, with said Dukes land northerly 97-1/3 feet to an iron bolt corner for land now or formerly of Peter Cunningham, thence, with land now or formerly of said Cunningham easterly 345-3/4 feet to an iron bolt driven on westerly side of said slag road right-of-way; thence, with westerly side of said slag road right-of-way southerly 129 feet to Beginning.

BEING a part of the lands conveyed unto Omeda T. Collins, Trustee of the Omeda T. Collins Revocable Trust by deed of Omeda T. Collins dated April 23, 1993 and filed of record in the Office of the Recorder of Deeds, in and for Sussex County, State of Delaware, in Deed Book 1908 at page 335.

#02482 #129

IN WITNESS WHEREOF, the party of the first part has hereunto set her Hand and Seal the day and year first above written.

Witness

Witness

Oneda T. Collins (Seal)
ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 5th day of May, A.D. 2000, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, party to this indenture, known to be personally to be such, and acknowledged this Indenture to be her act and deed.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

DAVID W. BAKER
ATTORNEY AT LAW
NOTARY PUBLIC STATE OF DELAWARE
MY COMMISSION HAS NO EXPIRATION DATE
29 Del.C § 4323 (a) (3)

Notary Public (SEAL)

Received
MAY 08 2000
ASSESSMENT DIVISION
OF SUSSEX CTY

RECORDER OF DEEDS
RICHARD H. BELL, II
00 MAY -5 PM 2:42
SUSSEX COUNTY
DOC. SURCHARGE PAID

5,30/00

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

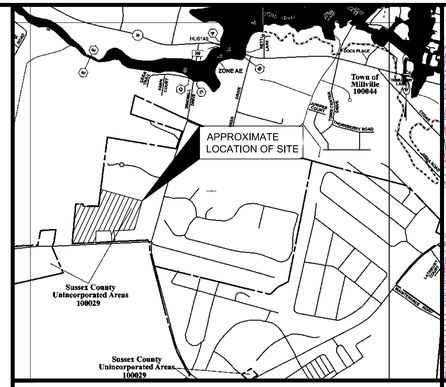
SHEET NO.: **EX-1**

# APPENDIX C

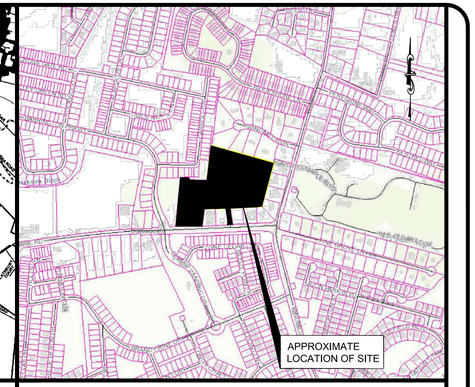
## PRELIMINARY PLANS

# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'




VICINITY MAP
SCALE: 1" = 1000'

## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW ROW |
| ADJACENT RIGHT-OF-WAY | ROW ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE PE |
| EXISTING SEWER | SS SS |
| PROPOSED SEWER | 8SS 8SS |
| EXISTING WATER | W W |
| PROPOSED WATER | W W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| RESOURCE BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | S |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | S |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 46 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 46 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 103,891.92 S.F. ± = 2.39 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 79,262.37 S.F. ± = 1.82 AC. ± |
| OPEN SPACE | = 353,662.68 S.F. ± = 8.12 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (46 UNITS)*(2 SPACES) = 92 PARKING SPACES
    PROVIDED: (46 UNITS)*(2 SPACES) + 6 OFF-STREET= 98 PARKING SPACES

15. RESOURCE BUFFER AREA:
    REQUIRED - 16,195 SF (0.37 AC)
    PROVIDED - 16,499 SF (0.38 AC) (ACCESS TO BUFFER WILL EXTEND FROM END OF PRIVATE DRIVE 1)

16. UTILITIES: WATER: TIDEWATER UTILITIES; SANITARY SEWER: SUSSEX COUNTY

17. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

18. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

19. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

20. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27; VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Hanna DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

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SIGNATURE Glen N. Collins DATE 7-17-2024
OT COLLINS FAMILY LIMITED PARTNERSHIP

## CERTIFICATION OF PLAN ACCURACY

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS


| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |


DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|


CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM


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COVER SHEET FOR GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: T-1

## BOUNDARY CURVE TABLE

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| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
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MIDDLETOWN, DE 19709
PHONE (302) 376-8833
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WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

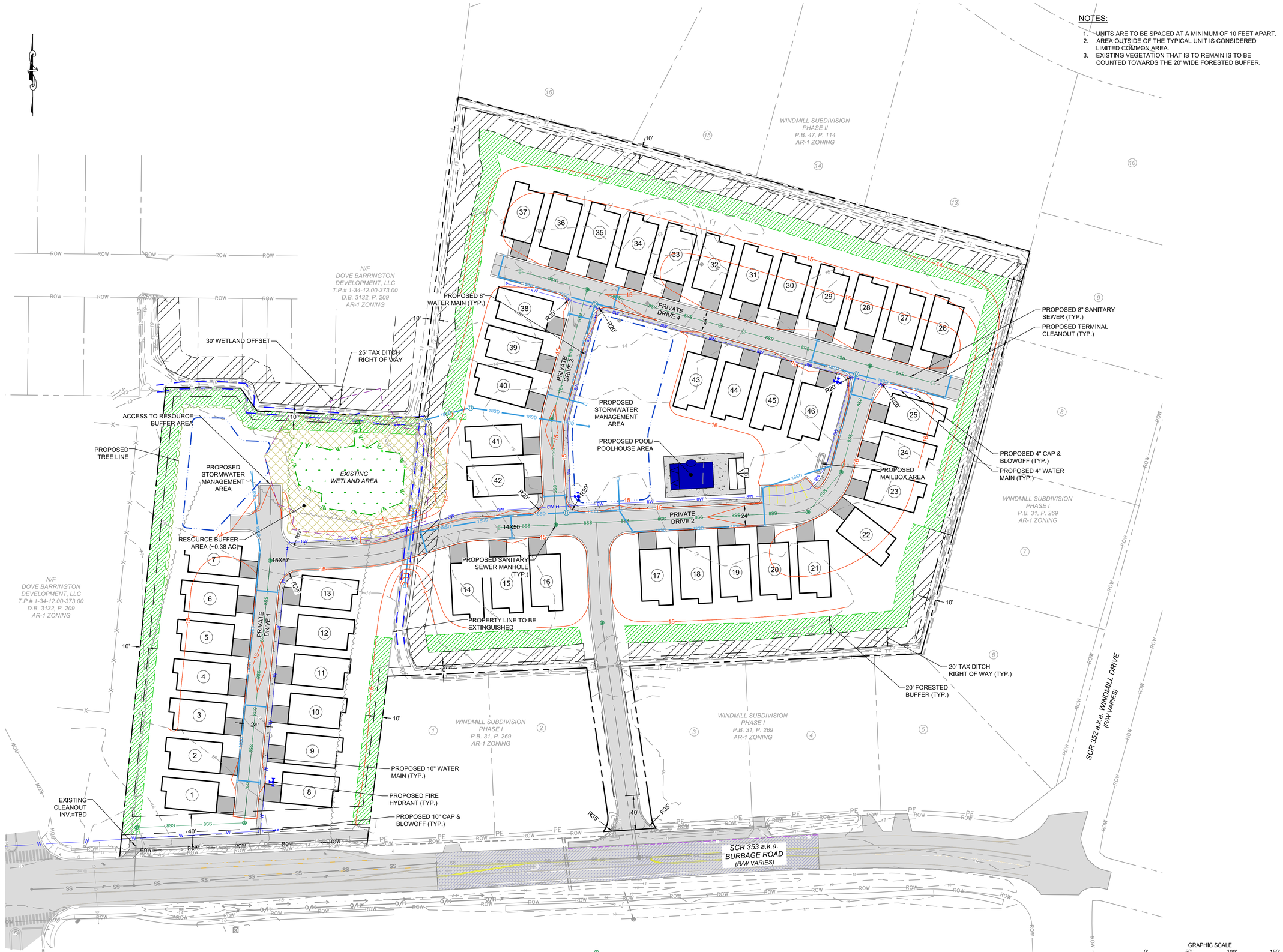
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.




DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

# APPENDIX D

## SUSSEX COUNTY CODE

## DESIGN CONSIDERATIONS (SECTION 99-9.C)

# GLEN COVE
## SUSSEX COUNTY
## DESIGN CONSIDERATIONS
## (SECTION 99-9.C)

### INTEGRATION OF THE PROPOSED SUBDIVISION INTO EXISTING TERRAIN AND SURROUNDING LANDSCAPE

The proposed project consists of 46 single family condominiums surrounded by existing landscaping/woods that will be maintained. Furthermore, landscape buffers will be provided to supplement the surrounding woods.

### MINIMAL USE OF WETLANDS AND FLOODPLAINS

There is a small portion of wetlands on the project property, no impact to the wetlands is anticipated. A resource buffer will be provided.

### PRESERVATION OF NATURAL AND HISTORICAL FEATURES

There are no existing natural or historical features on site.

### PRESERVATION OF OPEN SPACE AND SCENIC VIEWS

The project is surrounded by existing developments and residential areas, there are no existing scenic views from the property. Proposed open space will exceed the 30% requirement.

### MINIMIZATION OF TREE, VEGETATION AND SOIL REMOVAL AND GRADE CHANGES

During construction activities, care will be taken to preserve as many of the large trees around the perimeter of the property as well as any vegetation not impinging on the development. Proposed grades will closely match existing to tie-in to the surrounding developed areas.

### SCREENING OF OBJECTIONABLE FEATURES FROM NEIGHBORING PROPERTIES AND ROADWAYS

As stated above, the property is surrounded by existing woods which will be maintained and supplemented with additional landscaping.

### PROVISION FOR WATER SUPPLY

Water will be provided by Tidewater Utilities.

## PROVISION FOR SEWAGE DISPOSAL

Water will be provided by Sussex County.

## PREVENTION OF POLLUTION OF SURFACE AND GROUNDWATER

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## MINIMIZATION OF EROSION AND SEDIMENTATION, MINIMIZATION OF CHANGES IN GROUNDWATER LEVELS, MINIMIZATION OF INCREASED RATES OF RUNOFF, MINIMIZATION OF POTENTIAL FOR FLOODING AND DESIGN OF DRAINAGE SO THAT GROUNDWATER RECHARGE IS MAXIMIZED

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## PROVISION FOR SAFE VEHICULAR AND PEDESTRIAN MOVEMENT WITHIN THE SITE AND ADJACENT WAYS

The proposed layout of the road consists of twelve (12) foot travel lanes with curbing as well as five (5) foot sidewalks on one side of the road. The site entrance will be located off of Burbage Road within a 50-foot right-of-way through the Windmill Subdivision. A ten (10) foot wide shared use path is also proposed along a portion of the frontage for connection to adjacent ways.

# APPENDIX E

## ENVIRONMENTAL ASSESSMENT & PUBLIC FACILTY EVALUATION REPORT

# ENVIRONMENTAL ASSESSMENT
# &
# PUBLIC FACILITY EVALUATION REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
February 2025

_____
Seal

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# A. EXECUTIVE SUMMARY

## Introduction

This Report has been prepared in accordance with Chapter 115 – Zoning: Article XXV Supplementary Regulations, 194.3 Coastal Area of the Sussex County Code. This Report provides a summary of site-specific information and accompanies the Preliminary Plans submittal, dated April 30, 2024. This report is not required however the Applicant is voluntarily providing this information as they are proposing less than 50 units.

## Scope of Project:

The proposed project will include forty-six (46) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 46 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by two (2) stormwater management areas (wet detention ponds).

## B. ENGINEER'S REPORT

### Drainage and Stormwater Runoff

Stormwater quality will be met by managing the Resource Protection Event (RPv) and quantity management will be met by managing the Conveyance Event and the Flooding Event (Cv and Fv) this will be achieved through two (2) proposed stormwater management areas and will be denoted on the plans as Stormwater Management Area. The proposed Stormwater Management Areas will be wet detention ponds that will collect all of the runoff from the site. It will discharge into an existing ditch that is in good working condition.

The runoff from the areas that are being developed will be collected by several methods. Road runoff will be collected by the proposed storm drain system which outlets into the proposed stormwater management areas. The runoff from the proposed lots will also be collected and directed to the proposed stormwater management areas by downspouts or by grass lined swales.

### Potable Water

A connection to the existing 12-inch waterline at the intersection of Doves Landing and Burbage Road is expected. During the Sussex County approval process Water Plans will be submitted to Tidewater Utilities for approval as well. Once the Tidewater Utilities approves the connection, both domestic and fire flows will be provided.

Since 46 condominium units are being proposed an estimated consumption of 12,500 GPD is anticipated. (46 lots * 250 GPD = 11,500 GPD)

As it is expected to be served by the extension of the existing Tidewater Utilities facilities, no private wells are expected to be impacted.

### Wastewater Treatment and Disposal

The proposed site lies within an existing Sussex County Sanitary Sewer District, it is anticipated to connect and be served by an existing gravity sewer line situated within Burbage Road. Ordinance No. 38 Plans will be submitted to the County for approval.

As it is anticipated to be served by the extension of the existing gravity sewer line situated in the road, no impacts to the surrounding surface or ground waters are expected.

## Impacts to Surrounding Roadways

The Glen Cove development is proposed to contain 49 single family condominium units. Based upon the latest Institute of Transportation Engineers Traffic Generation Manual, a single-family home (Land Use 210) is anticipated to generate approximately 9.43 vehicle trips per day (1/2 entering the site, 1/2 leaving the site), and the site is anticipated to generate approximately 524 vehicle trips per day (262 entering, 262 leaving).

Per DelDOT's Service Level Evaluation Report (SLER), dated August 19, 2024, the project will generate less than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day and therefore the traffic impact was determined to be negligible. Due to this, an Area Wide Study (AWS) will be required in lieu of a Traffic Impact Study (TIS). Based upon the 2023 DelDOT Traffic Counts, Burbage Road currently carries 3,224 average annual daily vehicles within the project area. Therefore, it is anticipated that the Glen Cove development will not cause any adverse impacts to the surrounding road network.

## Endangered or Threatened Species

Field investigations were performed by Watershed Eco, LLC. on the Glen Cove and OT Collins parcels. Based upon field investigations, the existence of any endangered or threatened species is not expected. In addition, A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property.

## Preservation and Protection of Tidal and Non-Tidal Wetlands

A wetland delineation was performed by Watershed Eco Inc. in January 2024. Based on the delineation it was determined that approximately 0.20 Acres of wetlands exist on the site. Subsequently, there will be no disturbance of wetlands associated with development of this project. Per the Drainage and Buffer Ordinance, a wetland buffer will be established on the plans.

## Open Space and Buffers

Under the designed layout of the proposed Glen Cove development, approximately 8.12 acres are provided as open space. The total area of the site is 12.32 acres, which produces 66% of provided open space.

In addition, forested buffer strips are proposed around the project site. These forested buffers strips will be composed of a mix of 70% deciduous shade trees and 30% evergreen trees. They will also follow the Sussex County code requirement of having a minimum total of 15 trees for every one-hundred-foot length of buffer.

## Proposed Public and Private Infrastructure

The surrounding properties are currently provided with sewer and water.

## Economic & Recreational Benefits

The proposed development is anticipated to provide several economic benefits including:

- Increase to the tax base of Sussex County.

The proposed development is anticipated to provide several recreational benefits including:

- Amenity area with pool.
- An aesthetic wet pond.

## Historic and Cultural Resources

There is no known presence of any historic or cultural resources listed on the National register of Historic Places at the site.

## Affirmation of Conformance with Sussex County Comprehensive Plan

The proposed development has been designed in accordance to the current Sussex County Comprehensive Plan. The site is located within the Coastal Area, a designated Growth Area, which is among the most desirable locations in Sussex County for new housing and the proposed multifamily use is permitted within this Future Land Use Designation. Furthermore, the site is located within a Level 2 Investment Area, where growth is anticipated by local, county, and State plans, and the project is therefore consistent with the 2020 Strategies for State Policies and Spending.

## Actions Taken to Mitigate Proposed Impacts of the Development

All mitigation measures, where required, have been discussed in their foregoing, respective section.

# APPENDIX F

## DRAINAGE ASSESSMENT REPORT

# DRAINAGE ASSESSMENT REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
February 2025

_____
Seal

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A. SITE PHOTOGRAPHS

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D. GEOTECHNICAL INVESTIGATION LETTER

E. FOREST STAND AERIAL IMAGERY

F. IPAC LETTER

G. WETLAND DELINEATION – COLLINS PROPERTY

H. WETLAND INVESTIGATION SUMMARY LETTER

## A. EXECUTIVE SUMMARY

Sussex County Code Section 115-193-F specifically states, “If a resource buffer abuts or contains features such as ephemeral, intermittent or perennial streams which are not part of an established tax ditch and which convey drainage from or through a site proposed for development, a drainage assessment report shall be prepared by a registered Delaware Professional Engineer.” The wetland resource buffer directly abuts the Derickson Canal Tax Ditch system. Therefore, it is our opinion that the Drainage Assessment Report is not required due to the resource buffer’s proximity to the tax ditch.

However, we are providing this Drainage Assessment Report on a voluntary basis for Sussex County’s use. This Drainage Assessment Report has been prepared in accordance with Sussex County Code Section 115-193-F and the county provided checklist.

## B. PROJECT NARRATIVE

### Introduction:

The proposed Glen Cove project will include forty-six (46) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 46 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by two (2) stormwater management areas (wet detention ponds).

### Existing Conditions:

The existing properties are located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The property is bound by existing single-family homes on the north, south, and east, and the Bishops Landing Community to the west. The project consists of approximately 12.32 acres and is primarily woodlands with some grassed areas. The existing woodlands are not mature, as referenced in the Forest Stand History section below. There are existing wetlands to the northwest and tax ditches located along the perimeter of the site. The tax ditches outfall west offsite to the Derrickson Ditch via offsite tax ditches.

### Field Investigations and Findings

Field investigations were performed by Watershed Eco, LLC. in September 2021 on the Glen Cove parcel. The site is surrounded by the Derrickson Canal Tax Ditch which appears to be ephemeral in nature. There are no other wetlands or drainage conveyance features within the subject property. An additional wetland investigation was conducted by Watershed Eco, LLC. on the adjacent Collins property to the west on January 22, 2024. This investigation identified an intermittent ditch and palustrine forested wetlands which drain off-site to the north.

No signs of stream bank erosion, debris, or any impediments to conveyance were observed throughout the surrounding tax ditches. In addition, no sand or gravel deposits were observed. As such, no remedial action is necessary regarding the structural integrity of the surrounding tax ditch system. State and federal permitting may be required for the ditch crossing for the connector

road to the west. See Section C. regarding documentation of the investigations.

## C. SITE INVESTIGATION AND DOCUMENTATION

### Photographs:

Photographs of the site are provided in Appendix A.

### Channel Cross-Sections:

Cross-sections of the surrounding tax ditch are provided in Appendix B.

## D. ENVIRONMENTAL CONDITIONS AND HABITAT ASSESSMENT REPORT

### Land Types:

Active Agricultural Fields, hedgerows, drainage ditches, and mixed deciduous/coniferous forest.

### Period of Investigation:

Glen Cove: Wetland Investigation-September 20, 2021

Collins Property: Wetland Investigation-January 22, 2024

### Soil Conditions:

According to the USDA Soil Survey, the majority of the subject property is underlain with well drained Rosedale loamy sand (RoA) with lesser areas of poorly drained Mullica-Berryland complex (MuA) and Klej loamy sand (KsA) in the western portion of the property. The perimeter ditches were likely excavated to facilitate drainage of the property.

Additional Geo-technical borings were conducted by Hardin Kight Associates, Inc. in 2021. Based on the soil boring logs, the site consists of loamy sand soils with seasonal high groundwater ranging from 4.7 to 6.2 feet below the existing surface. The geotechnical investigation report is provided in Appendix D.

### Forest Stand History:

The Glen Cove parcel is predominantly wooded with mixed deciduous/coniferous forest cover. Based on aerial imagery the western portion of the property was cleared around 2012 and now consists of sapling loblolly pine and sweetgum. The eastern portion of the property is dominated by (12-24"DBH) northern red oak, southern red oak, and white oak with red maple, sassafras, and American holly in the understory. Shrub/herbaceous species consisted of highbush blueberry, sweet pepperbush, lowbush blueberry, Virginia creeper, and common greenbrier. A small, wooded area was observed in the northern portion of the Collins property. This area was dominated by 12-18" DBH loblolly pine and sweetgum. The understory consisted of red maple and black gum. Common shrub species observed included lowbush blueberry, common greenbrier, sweet pepperbush, and loblolly pine saplings.

Based on historical aerial imagery, neither parcel is part of a larger contiguous forested area. The on-site forest would not qualify as Forest Interior Dwelling Bird Habitat and would not be classified as mature or old growth. Aerial imagery is provided in Appendix E.

## Wetland Identification:

As stated above, there is evidence of wetlands existing on the project site. Watershed Eco, LLC. identified and flagged a palustrine forested wetland on the Collins property during the January 2025 field investigation. The area of wetlands is approximately 0.20 acres. The wetland directly abuts an intermittent ditch and drains off-site to the north.

Per Sussex County Code, the wetland area will be protected by a future Resource Buffer. Access to the resource buffer and wetland area will be available at the end of Private Drive 1 for future maintenance as illustrated on the Preliminary Plans. A Resource Buffer Management Report has been created to establish the protocol for protection of the resource.

Please see Appendix G for the Wetland Delineation – Collins Property and Appendix H for the Wetland Investigation Summary Letter performed by Watershed Eco, LLC.

## Endangered Species:

A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property. A copy of the IPAC is provided in Appendix F.

## E. EXISTING CONDITIONS MAPPING

Please see Appendix C for Existing Conditions Mapping.

# APPENDIX A

## SITE PHOTOGRAPHS

GLEN COVE PROPERTY

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

Photo 3: Man-made drainage ditch along southern property boundary, facing east.

Photo 4: Man-made drainage ditch along southern property boundary, facing west.

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.

Photo 10: Upland forest cover in the northeastern portion of the property.

OT COLLINS PROPERTY

PHOTO 1: View looking east at southern portion of the property bordering Burbage Road.

PHOTO 2: View looking west at mowed field area in the southern portion of the property.

PHOTO 3: View looking north across mowed field in the central portion of the property.

PHOTO 4: View looking southeast across mowed field from the northwestern portion of the property.

PHOTO 5: Forest cover in the northwestern portion of the property.

PHOTO 6: Forested wetland in the northeastern portion of the property looking west.

PHOTO 7: Drainage ditch along the eastern boundary of the property.

PHOTO 8: View looking west at drainage ditch along the northern boundary of the property.

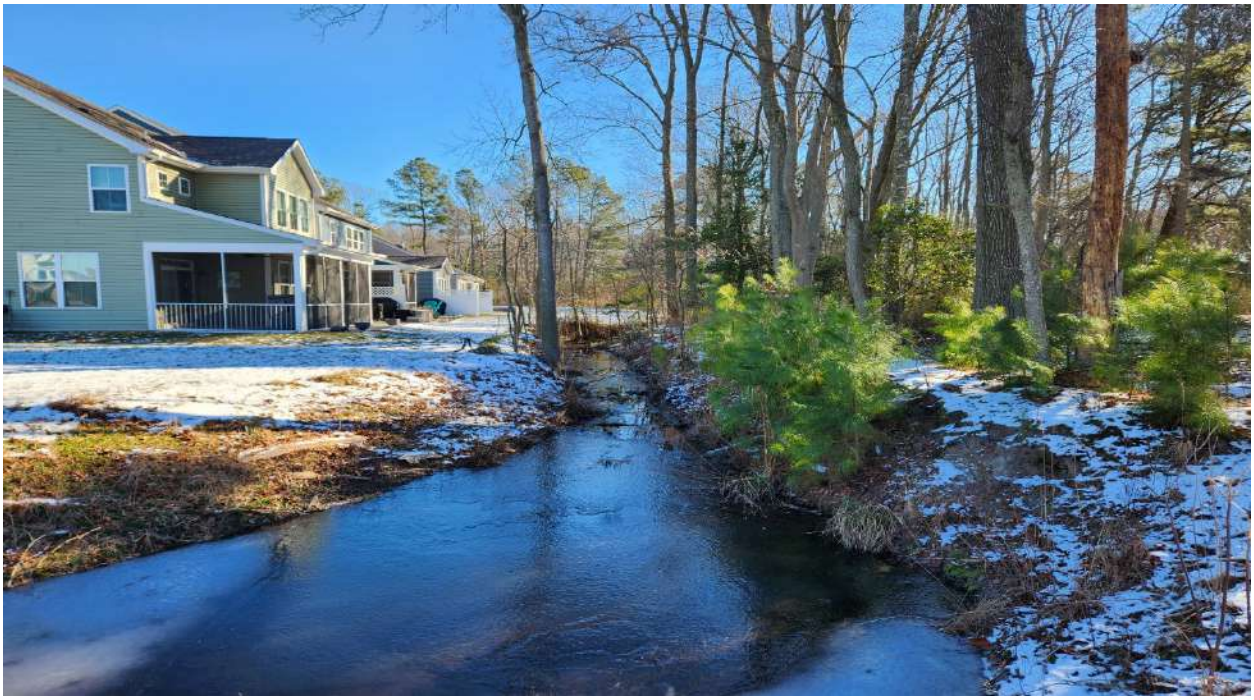

PHOTO 9: Residential properties north of the subject property, looking east.

PHOTO 10: View looking south across mowed field area bordering woodlands along the eastern property boundary.

# APPENDIX B

## DITCH CROSS SECTIONS

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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# DITCH CROSS-SECTIONS
## PLAN VIEW
FOR
# GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

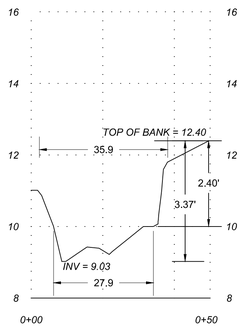
DATE: APRIL 30, 2024

DESIGNED BY:

APPROVED BY: RHS

FILE: P23101 - CONST DITCH

SHEET NO.: **CS-1**

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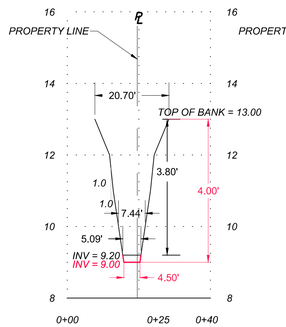


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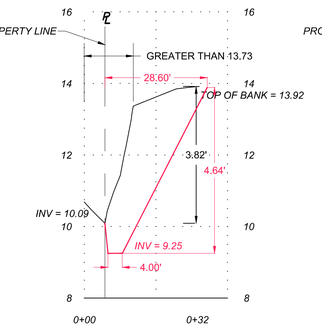


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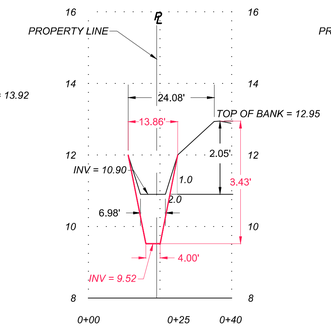


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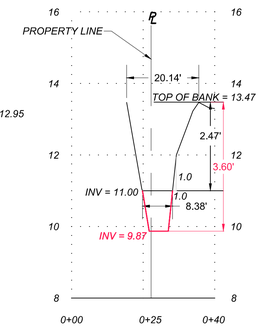


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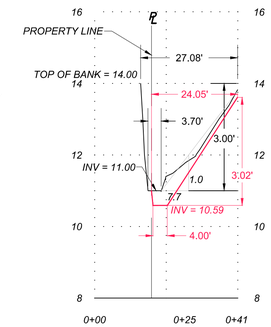


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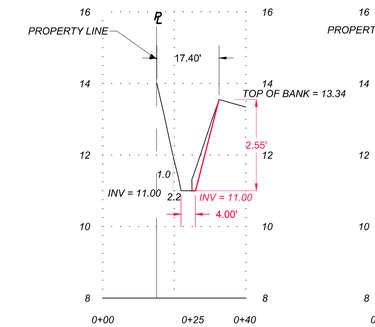


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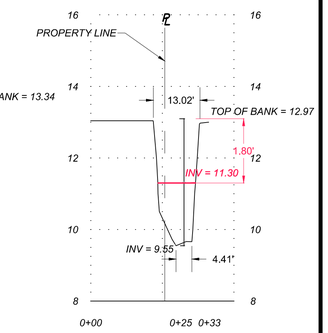


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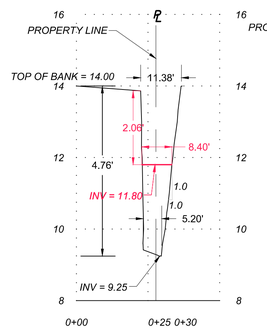


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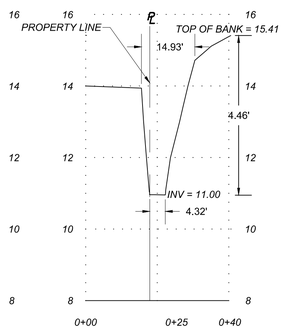


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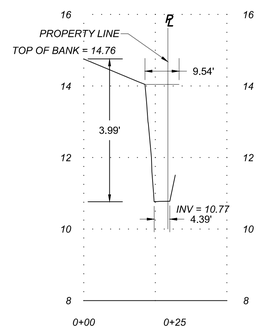


PROFILE
CROSS SECTION A11
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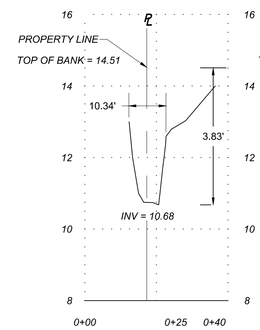
VERTICAL 1" = 2'

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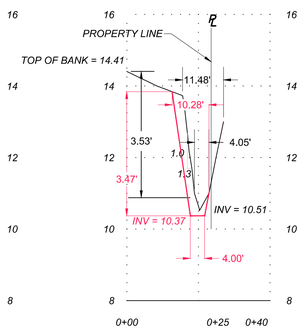
VERTICAL 1" = 2'




PROFILE
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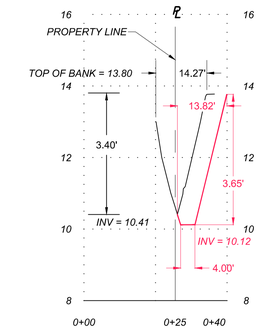
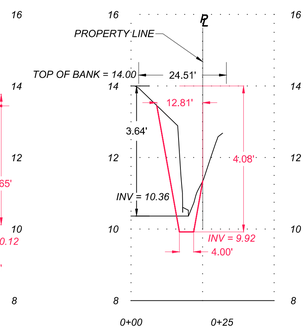
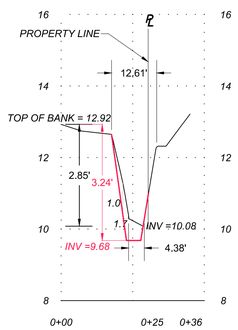
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A14
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A15
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'




PROFILE
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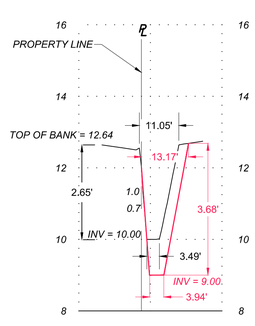
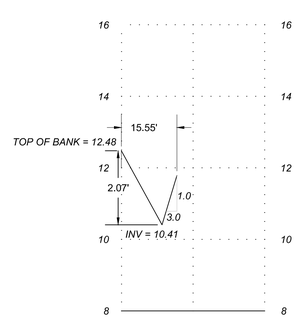
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A17
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A19
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# DITCH CROSS-SECTIONS

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY:
APPROVED BY: RHS
FILE: CONST-DITCH
SHEET NO.: CS-2

# APPENDIX C

## EXISTING CONDITIONS MAPPING

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

# APPENDIX D

## GEOTECHNICAL INVESTIGATION LETTER

HARDIN
KIGHT
ASSOCIATES,
INC.

December 30, 2021 Our Job Number: 21855

**GULFSTREAM DEVELOPMENT, LLC**
**27 Atlantic Avenue**
**Ocean View, Delaware 19970**

Attention: Mr. Bob Harris

Reference: Glen Cove II
SWM Geotechnical Investigation
Sussex County – Millville, Delaware

Dear Mr. Harris:

As requested by Mr. Al Ruble, we have completed a limited subsurface investigation of the soil and groundwater conditions for the stormwater management (SWM) pond proposed for construction in the Glen II Community, planned for development in Millville, Delaware. This investigation was performed to determine the depth to estimated seasonal high groundwater (SHG) and analyze the characteristics of the underlying soils with respect to the design of the stormwater management pond. This investigation included drilling five (5) hand auger probes, and review of available geological and soil survey literature for the subject site. Our findings and analysis are presented herein.

For this investigation we were provided with an electronic copy of a site plan entitled *Soil Testing Locations for Glen Cove II*, prepared by Civil Engineering Associates (CEA), dated November 1, 2021. The site plan illustrates the layout of the proposed development and roadways, the location of the SWM Pond, and includes existing and proposed grades. The site plan was used in preparation of this report.

## SITE DESCRIPTION

The site is located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The site consists of approximately 10 acres, most of which is wooded and contains light underbrush. The property is bound by existing single-family homes on the north, south and east, and the Bishops Landing Community to the west. The SWM Pond is proposed in the northwest corner of the site.

From review of the ground surface elevations provided, topographically, the site is relatively flat in surface elevation, at approximately 13 feet above Mean Sea Level (MSL). The natural site surface drainage is generally from south to north. At the time of this investigation, the ground surface was dry and stable.

12515 Caterpillar Lane • Bishopville, MD 21813 • 410-352-5001 • FAX 410-352-3228 • www.hardin-kightassociates.com

## PROPOSED CONSTRUCITON

One SWM Pond is proposed. The pond is proposed as a wet pond, with a top of berm at El. 13 and a pond bottom at El. 6. The pond will receive water from 2 stormwater pipes, and includes an outfall, discharging into an existing drainage ditch located along the west property boundary. From review of the proposed grades shown on the previously referenced site plan, excavations of approximately 7 to 8 feet will be required for pond construction.

## INVESTIGATION

In order to evaluate the soil and groundwater conditions in the area of the pond, five (5) hand-auger probes were drilled. The auger probes were advanced within the proposed SWM ponds at locations established by survey, provided by CEA. The auger probes are labeled as Auger Probes T-1 through T-5. Ground surface elevations were provided by CEA at each staked location. The auger probes were drilled to depths ranging from 6.5 to 8 feet below the existing ground surface. The soil conditions encountered were visually identified in general accordance with the Unified Soil Classification System (USCS), and United States Department of Agriculture (USDA) classification system. The locations of the auger probes are shown on the attached Auger Probe Location Plan, labeled as Figure 1, which is an altered version of the previously referenced site plan prepared by CEA.

Additionally, we have reviewed the monthly depth to groundwater readings for Monitoring Well Qi31-03, taken from the *Delaware Geological Survey* website. The depth to groundwater was at the normal seasonal high in January 2021. The depth to groundwater at Well Qi31-01, located approximately 5 miles west of the site, was approximately 5 feet below the normal SHG in September 2021. The monthly well report is attached for your reference.

## GEOLOGY

Based on the *Geologic Map of the Bethany Beach and Assawoman Bay Quadrangles GM-18* (Ramsey and Tomlinson, 2012), the the geologic unit underlying the site at the surface is the Ironshire Formation.

The Ironshire Formation is described as pale yellow to light gray, fine to very coarse sand. Very coarse sand to fine gravel are a common constituent of the unit, especially near its base. Thin, light gray, silty clay beds occur but are not present at all localities. Based on the profile provided in the above referenced map, it unconformably overlies the Omar Formation. Where the Ironshire Formation overlies the Omar Formation, the boundary is not always clear, but is commonly marked by a coarse sand or pebbly sand at the base of the Ironshire Formation. The estimated thickness at the site location is about 20 feet thick.

The top of the Omar formation is described as a gray to pale yellow, fine to very fine, clean to slightly silty Sand, with rare very fine beds of silt. These silty sands are underlain by a gray to light greenish gray, silty clay to silty fine sand with scattered thin beds of oyster shells. In places, there is a 2- to 10-foot thick bed of medium to coarse, relatively clean sand

underlying the shelly, silty clay. Underlying the shelly, silty clay or the medium to coarse sand, where present, in the areas where the Omar is thickest, there is a 10- to 40-foot-thick layer of greenish-gray, compact, silty clay to clayey silt. Beneath this silty clay, if present, is a 3- to 5-foot-thick bed of very dark-gray to black, organic-rich, sandy silt to silty clay. The bottom, up to 5 feet of the unit, normally consists of 1 to 3 feet of gray to very dark-gray fine to coarse silty sand with scattered laminae, to thin beds of peat composed of sand to gravel-size plant fragments, overlying light to dark gray, coarse to very coarse, sand.

## SOIL SURVEY

The information in this section is from the *Web Soil Survey* which was accessed on December 29, 2021. Soil Survey information can be used for general planning, onsite investigation is needed to supplement this information. Soil Survey information is limited to the upper most 6 feet in any given location.

Based on the Sussex County, Delaware survey the soils units on site are:

- The Klej loamy sand, 0 to 2 percent slopes (KsA) has one major component, the Klej component which makes up 70 percent of the unit. The minor components in the Klej loamy sand are the: Galloway (10%), Berryland, drained (5%), Hammonton (5%), Hurlock, drained (5%), and Runclint (5%). This soil does not meet hydric criteria.

- The Mullica-Berryland complex, 0 to 2 percent slopes (MuA) has four major components: the Mullica, drained (26%), the Mullica, undrained (16%), the Berryland, drained (24%), and the Berryland, undrained (14%). The minor components are: Klej (10%), Askecksy, drained (5%), and Galloway (5%). This soil meets hydric criteria.

- Rosedale loamy sand, 0 to 2 percent slopes, (RoA). It has one major component, the Rosedale (75%). The minor components include: Evesboro (10%), Klej (5%), Hambrook (5%), and Galloway (5%). This soil does not meet hydric criteria.

The following descriptions, properties, and limitations are based on Sussex County, Delaware survey area data, Version 22, August 26, 2021, with aerial images photographed between November 21, 2018 and March 12, 2019. The major components (greater than 10%) are described below. The minor components are not addressed in this report.

The Klej component parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. The natural drainage class is described as somewhat poorly drained with water movement in the most restrictive layer being moderately high. It has an apparent water table that exists at 12 inches during February. This soil typically does not flood or pond. The normal upper limit of the water table from June through October is greater than 6.0 feet. It typically has a seasonal upper limit of water saturation between 0.8 to 1.7 feet from December to April. The pH is typically between 4.3 and 5.5, and the organic matter content in the surface horizon is about 0 percent.

The Mullica parent material consists of sandy and loamy fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content in the surface horizon is about 16 percent. The pH is typically between 4.0 and 6.5. The shrink-swell potential is low. The potential for frost action is low.

The drained component has rare ponding events throughout the year. It typically has a seasonal zone of water saturation from January through March between 0 and 8 inches. The undrained component has frequent ponding events for long periods during January through April, and occasionally during the remaining part of the year. It typically has a seasonal zone of water saturation from December through April, between 0 and 8 inches. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 66 percent.

The Berryland, parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content of the surface horizon is about 11 percent. The pH is typically between 4.3 and 6.5. The shrink-swell potential is low as is the potential for frost action.

The drained component has rare ponding events during November through May. It typically has a seasonal zone of water saturation between 0 and 8-inches during January, February, and March. The undrained component has frequent ponding events for long periods during January through April, and occasionally for the remaining part of the year. It typically has a seasonal zone of water saturation between 0 and 8 inches, from December through May. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 68 percent.

The Rosedale parent material consists of sandy eolian deposits over fluviomarine sediments. The undisturbed hydrologic soil group is A. The natural drainage class is described as well drained. Water movement in the most restrictive layer is moderately high. This unit is typically not flooded, nor does it pond. The upper limit of the water table is greater than 6 feet, and typically has a seasonal upper limit of water saturation between 3.3 to 6.0 feet during January, February, March, and April. The pH is typically between 4.3 and 6.5. Organic matter content in the surface horizon is about 1 percent.

The following limitations and restrictions described below may be mitigated by following the recommendations provided in this report and our recommendations during construction.

| Limitations for | Klej | Mullica | Berryland | Rosedale |
|---|---|---|---|---|
| Infiltration Systems | Severely Limited<br>Wetness<br>adsorptive capacity | Severely Limited<br>wetness<br>water movement | Severely Limited<br>wetness<br>water movement | Deep -Severely<br>Shallow – Somewhat<br>wetness<br>water movement<br>adsorptive capacity |
| Unlined Retention Systems | Somewhat Limited<br>water movement<br>wetness interfering with installation | Somewhat Limited<br>wetness interferes with installation<br>water movement | Somewhat Limited<br>water movement<br>wetness interferes with installation | Somewhat Limited<br>wetness interferes with installation<br>insufficient groundwater<br>water movement |
| Lined Retention Systems | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface,<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement<br>insufficient groundwater |
| Embankments | Very Limited<br>depth to saturated zone<br>piping<br>seepage | Very Limited<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Very Limited<br>piping<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Somewhat Limited<br>Seepage<br>depth to saturated zone |
| Aquafer Fed Excavated Ponds | Very Limited<br>Unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls<br>Depth to saturated zone |
| Pond Reservoir Areas | Very Limited<br>seepage | Very Limited<br>Seepage | Very Limited<br>seepage | Very Limited<br>seepage |
| Shallow Excavations | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls | Very Limited<br>depth to saturated zone<br>unstable excavation walls<br>Undrained areas are subject to ponding. | Very Limited<br>depth to saturated zone | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls |
| Shrink-swell Potential | Low | Low | Low | Low |
| Frost Action Potential | Low | Low | Low | Low |
| Corrosion Risk Uncoated Steel | High | High | High | Moderate |
| Corrosion Risk Concrete | High | High | High | High |

## FINDINGS

The findings at the auger probes are consistent with the geology and soil survey as described above. Approximately 3 to 20 inches of topsoil was present at the existing ground surface. Below the topsoil, the soil conditions consist of sand with varying amounts of silt. The soils generally consist of material visually classified as predominately Poorly-graded Sand with Trace Silt (USCS SP/SM; USDA Loamy Sand), Poorly-graded Sand with Silt (USCS SM; USDA Sandy Loam), Silt (USCS ML; USDA Silt Loam), and Poorly-graded Sand (USCS SP;

USDA Sand). Detailed descriptions of the soil conditions encountered can be found on the attached auger probe logs.

At the time of drilling the probes, water was encountered at a depth ranging from approximately 5 to 6 feet below the existing ground surface. Subsequent groundwater readings were taken after 7 days, with groundwater recorded at depths of 4.7 to 6.2 feet below the existing site surface, corresponding to elevations ranging from 7.5 to 8.4 feet above MSL.

**ANALYSIS / DISCUSSION**

Based on our findings, the seasonal high groundwater (SHG) is estimated to be approximately 2.7 to 4.5 feet below the existing site surface, corresponding to approximately elevation 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Our estimate of the SHG at the auger probe locations are based on the field measurements of the depth to groundwater, soil coloring and mottling, and should be considered approximate. The results of the groundwater readings and Hardin-Kight Associates professional opinion of the estimated SHG depth are summarized as follows:

| Auger Probe Number | Existing Surface Elevation (MSL) | Depth To Water Below Surface At Completion (Ft.) | Depth To Water Below Surface After 7 Days (Ft. - MSL) | Estimated Depth Below Surface to SHG (Ft. - MSL) | Estimated Depth Below Surface To Normal Water (Ft. – MSL) |
|---|---|---|---|---|---|
| T-1 | 13.32 | 6.25 | 5.71 – 7.61 | 3.3 – 10.0 | 4.0 – 9.3 |
| T-2 | 12.59 | 5.00 | 4.75 – 7.84 | 3.0 – 9.6 | 3.5 – 9.1 |
| T-3 | 12.76 | 5.50 | 5.26 – 7.50 | 2.7 – 10.0 | 3.5 – 9.3 |
| T-4 | 12.85 | 5.75 | 5.30 – 7.55 | 3.0 – 9.8 | 4.5 – 8.9 |
| T-5 | 14.64 | 5.25 | 6.19 – 8.45 | 4.5 – 10.1 | 5.0 – 9.6 |

Considering that the normal SHG is estimated to be within a few feet of the existing site surface, wet pond construction is feasible. Based on our findings, we do not anticipate that an impervious liner will be required to maintain water within a few feet of the existing surface. Although, seasonal groundwater variations of approximately 2 feet should be anticipated between the traditional wet and dry seasons.

From our analysis, and assuming wet pond construction, the groundwater levels found on this site will likely be above the pond bottom during construction. The contractor should be prepared to control groundwater during pond excavation. Cut subgrades below the groundwater will be susceptible to instability and softening. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

**PRELIMINARY RECOMMENDATIONS**

In consideration of the above data, we have prepared the following preliminary recommendations for your review and consideration. These recommendations are considered preliminary, pending our review of the final grading plans and construction drawings. Once the grading plans and construction drawings are finalized, our office should be contacted for additional review and comment.

1. We recommend that wet pond storage practices be used for stormwater collection on this site.

2. We recommend that the SWM ponds be designed and constructed in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

3. We recommend that both permanent fill and cut slopes be constructed on a maximum gradient of 3:1 (horizontal to vertical). Flatter slopes are suggested where possible to aid in the establishment of vegetative cover, reduce the potential for erosion, and facilitate maintenance.

4. We recommend that the contractor be prepared to control groundwater during pond basin excavation.

5. We recommend that the SWM pond excavation be monitored by Hardin-Kight Associates, Inc. (HKA) for slope seepage and stability. If slope seepage resulting in slope instability is observed, supplemental stabilization practices (ie; underdrains, drainage blankets, and rip-rap) may be required. HKA will provide recommendations and details during construction, as needed.

6. We recommend that the material proposed for use backfill placed around stormwater inflow and outfall pipes, meet the USC classification of SP, SM SP/SM, SC, CL, CL/ML or CH, be free of deleterious materials, and be approved by Hardin-Kight Associates, Inc. (HKA).

7. We recommend that the pipe trench backfill be placed in uniform 8-inch thick layers and be compacted to a minimum of 95% of the maximum dry density as determined in accordance with the standard moisture density relationship test (ASTM D-698/AASHTO T99).

8. We recommend that each layer of trench backfill, be tested and approved prior to placement of the succeeding layer. We recommend that fill which fails to meet the minimum compaction requirements be compacted and reworked, until satisfactory compaction is obtained.

9. We recommend that the construction of the SWM Ponds be monitored by HKA.

## CONCLUSIONS

Based on our findings, the SHG at the auger probe locations is estimated to be at an elevation of approximately 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Groundwater will likely be encountered above the pond bottom during construction. The contractor should be prepared to control groundwater during pond basin excavation. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378,* latest editions.

## LIMITATIONS

This preliminary report was prepared in accordance with generally accepted practice for geotechnical engineering in this area. It is intended for the use of the client for the specific site, as shown on the Auger Probe Location Plan.

The soil and water conditions discussed herein represent the conditions encountered at the locations of the exploratory auger probes as shown on the Auger Probe Location Plan. Variations in the soils and groundwater between the auger probe locations, and below the depths explored, should be anticipated.

A copy of the auger probe logs and location plan are enclosed for your reference. If you have any questions concerning this report, or if we can be of any further assistance at this time, please feel free to contact us.

Very truly yours,

**HARDIN-KIGHT ASSOCIATES, INC**

Paul M. Till

Justin A. Frizzell, P.E.

JUSTIN AMASA FRIZZELL
LICENSE
No. 16715
DELAWARE
PROFESSIONAL ENGINEER

Cc: Al Ruble – Awruble@aol.com
Ron Sutton - CEA

# APPENDIX E

## FOREST STAND AERIAL IMAGERY

1937 Aerial Photograph.

1954 Aerial Photograph.

1968 Aerial Photograph.

1992 Aerial Photograph.

1997 Aerial Photograph.

2002 Aerial Photograph.

Glen Cove

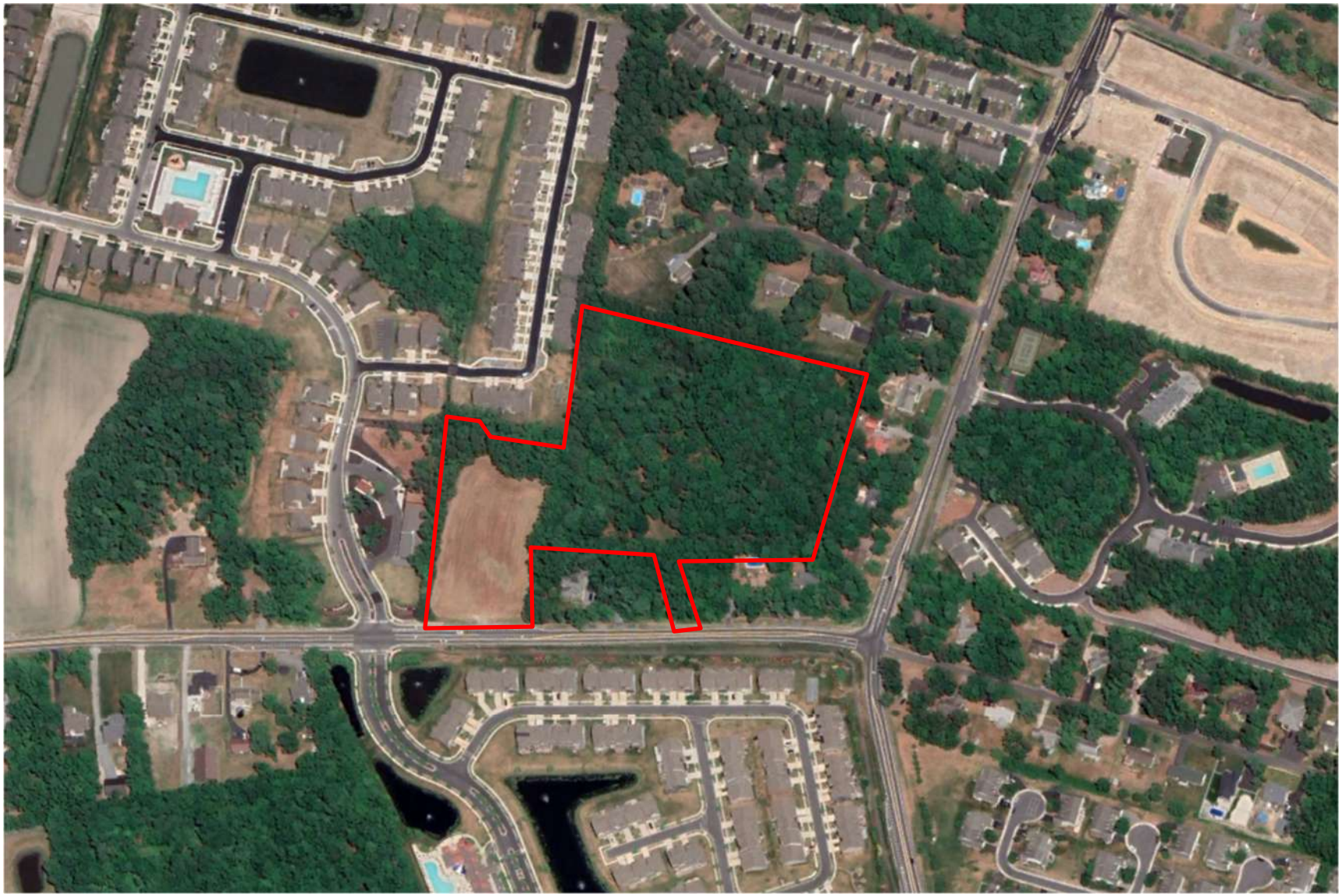
Sussex County, DE

2012 Aerial Photograph

2017 Aerial Photograph

Glen Cove

Sussex County, DE



2021 Aerial Photograph

Glen Cove

Sussex County, DE

2024 Aerial Photograph

# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

Introduction ..... 1

Executive Summary ..... 1

Contents ..... 2

Definition of Jurisdictional Waters and Wetlands ..... 3

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Field Investigation ..... 5

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

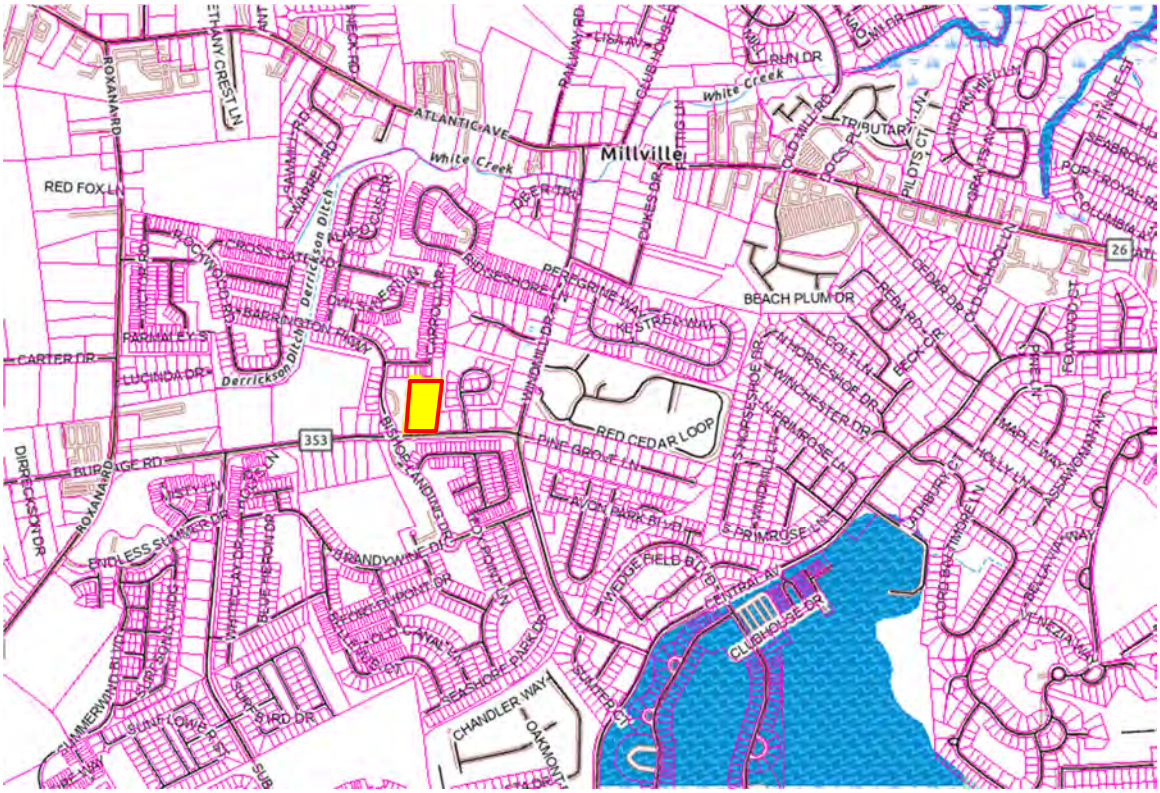



Figure 1: Location Map

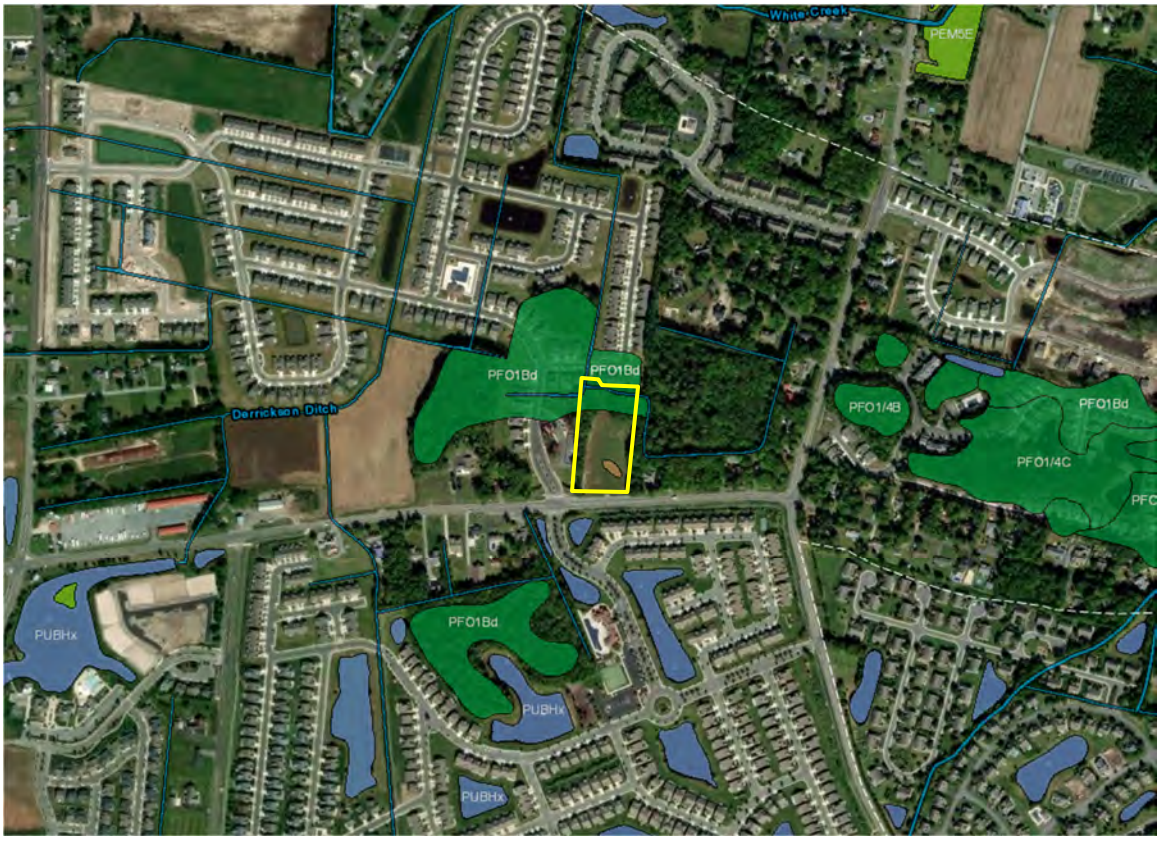



Figure 2: National Wetland Inventory Map.

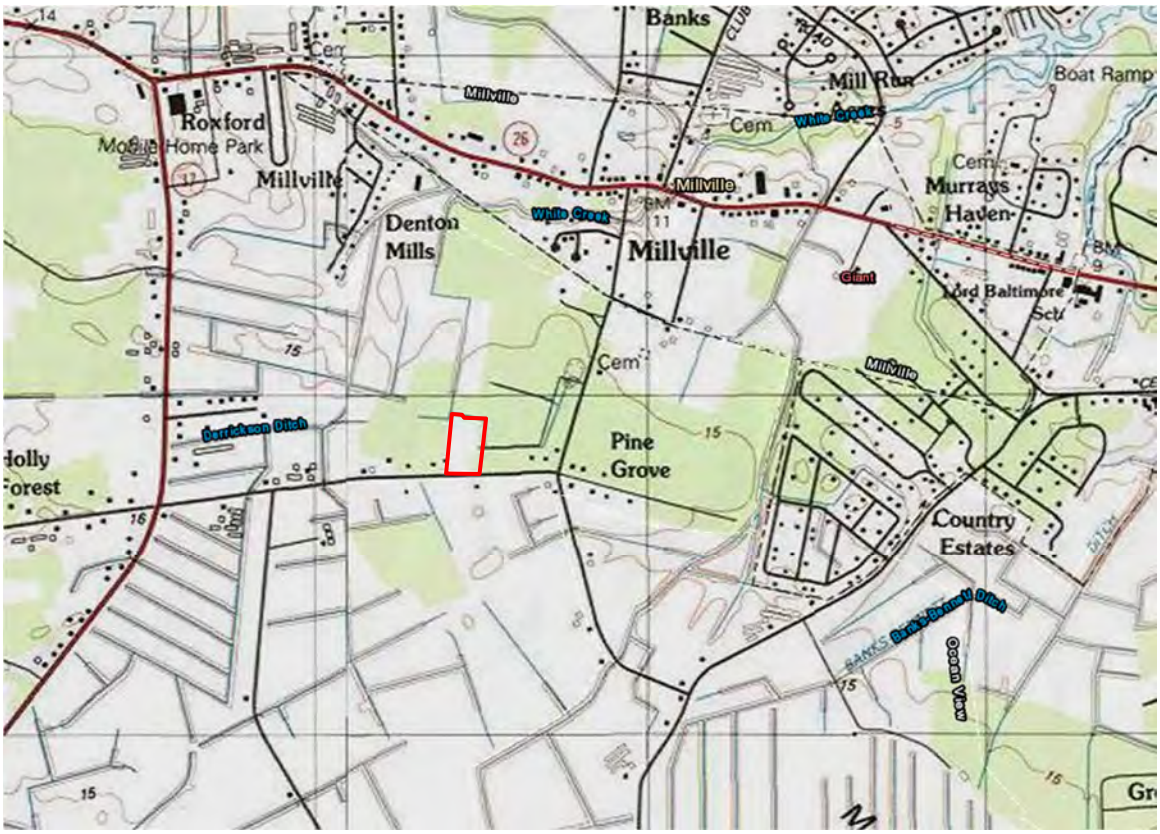



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

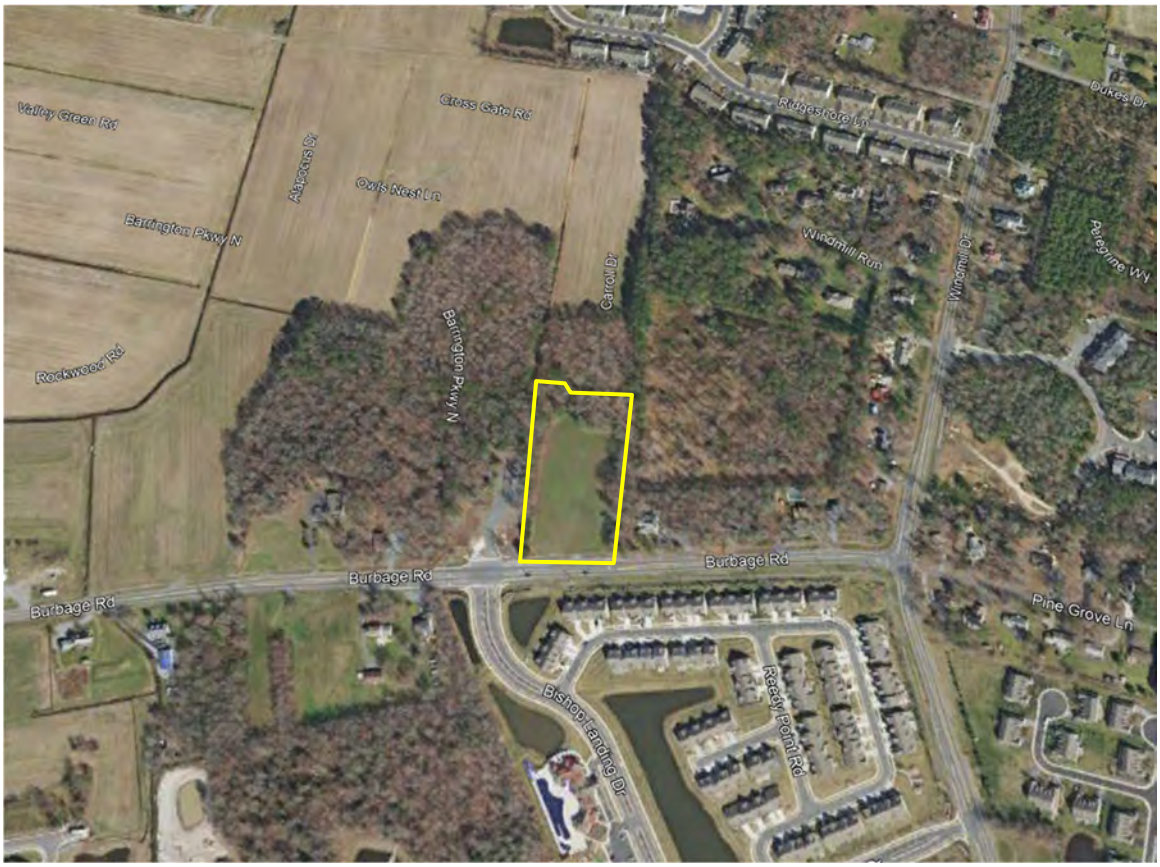



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

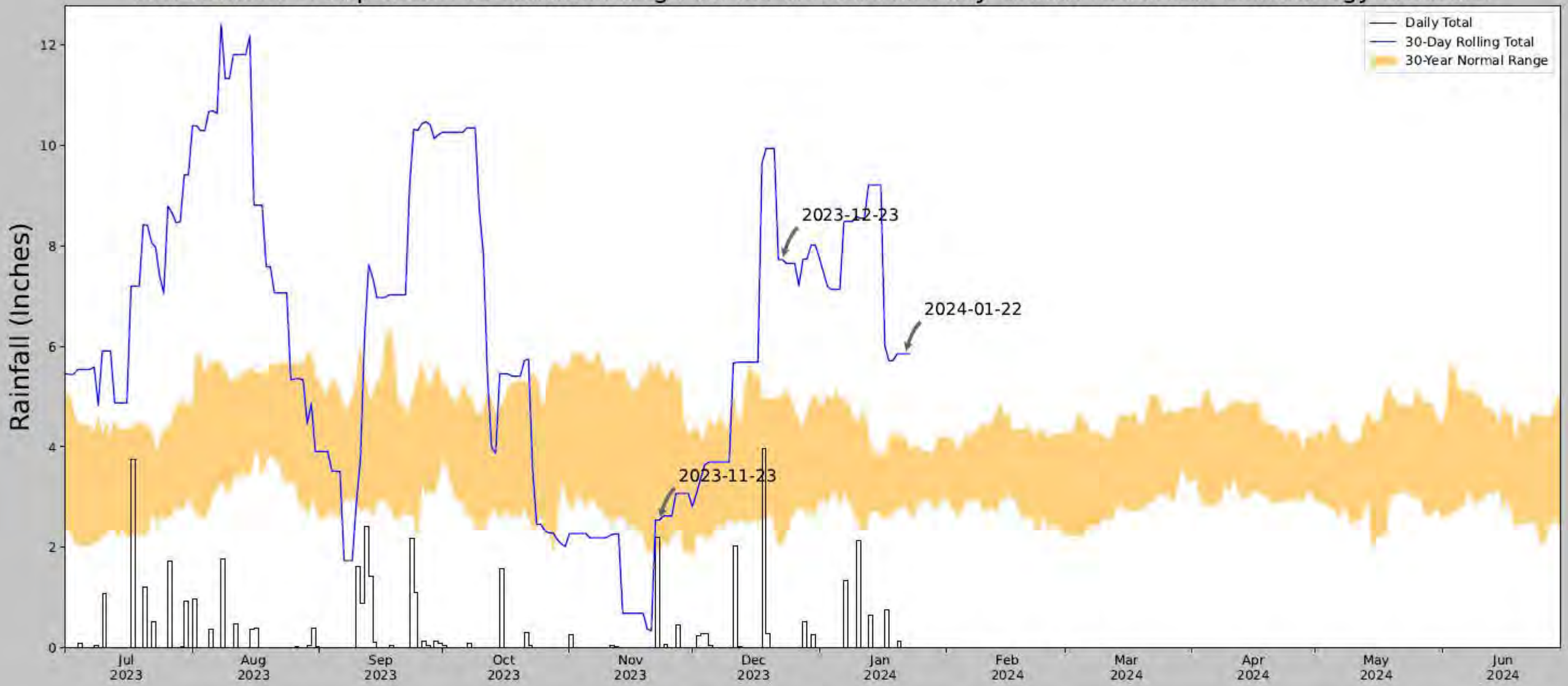
View looking west at intermittent ditch at the northwestern boundary of the property.

Intermittent ditch draining northerly, off-site.

# Appendices

Collins Property
Wetland Delineation Map
Legend
Flag ID#
Property Boundary
Waters
Wetlands
Barrington Pkwy N
Barrington Pkwy N
Barrington Pkwy N
Burbage Rd
Burbage Rd
Burbage Rd
Burbage Rd
Google Earth
Image © 2024 Airbus
N
200 ft

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ___ No ✓ |
| Hydric Soil Present? | Yes ___ | No ✓ | |
| Wetland Hydrology Present? | Yes ___ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

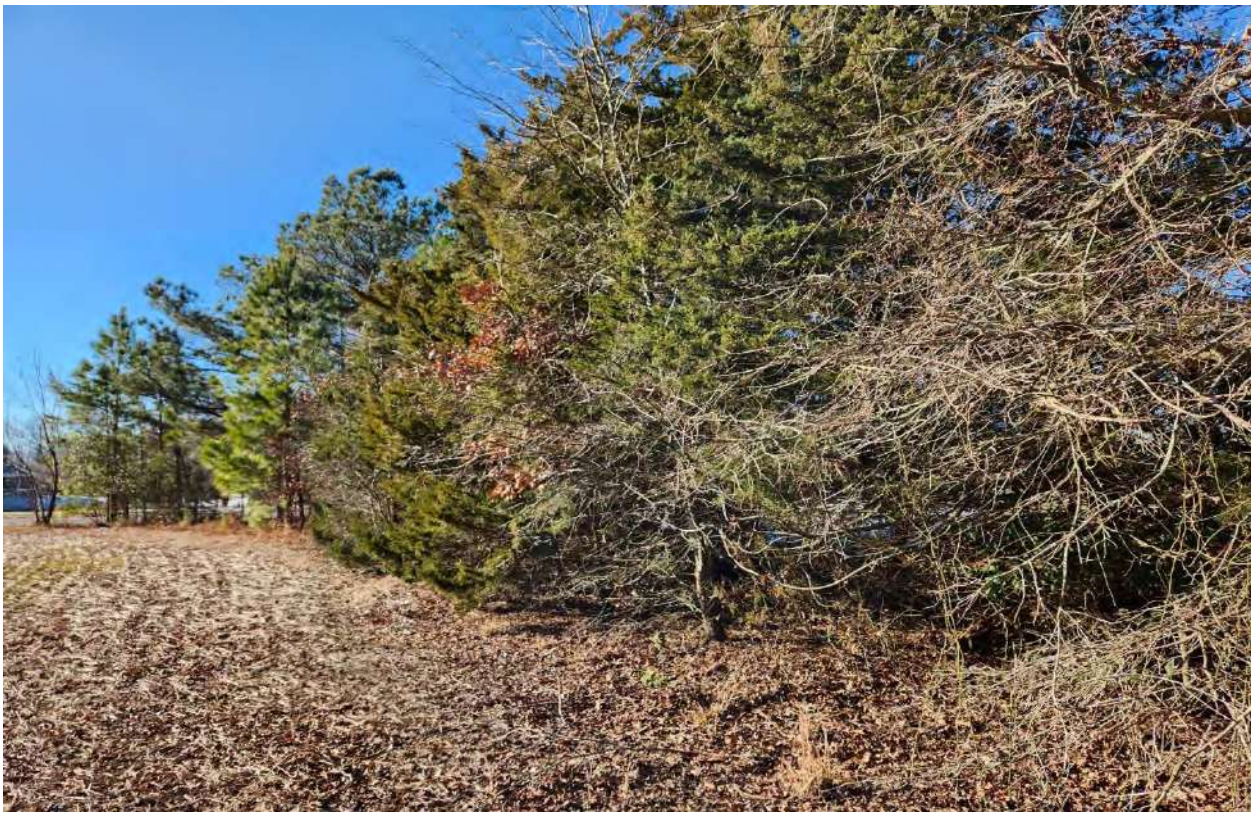
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

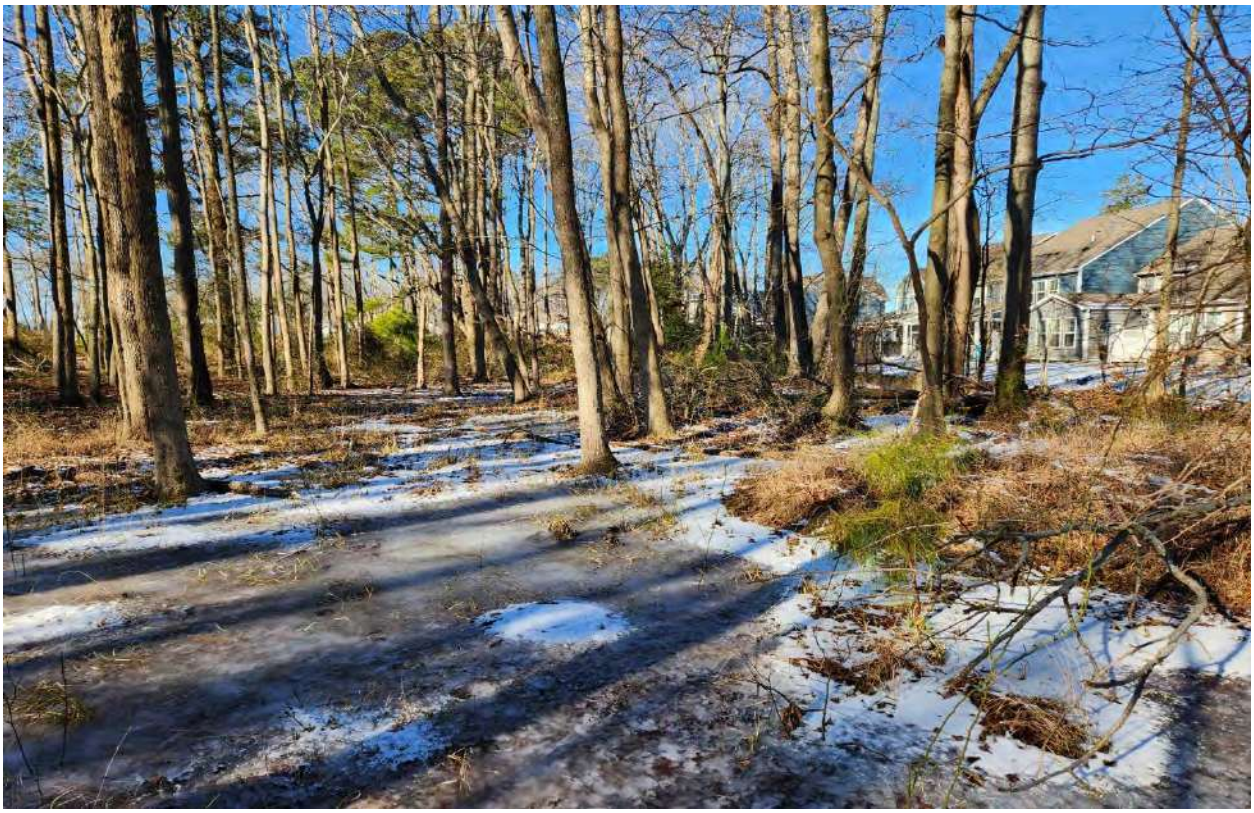
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

NRCS

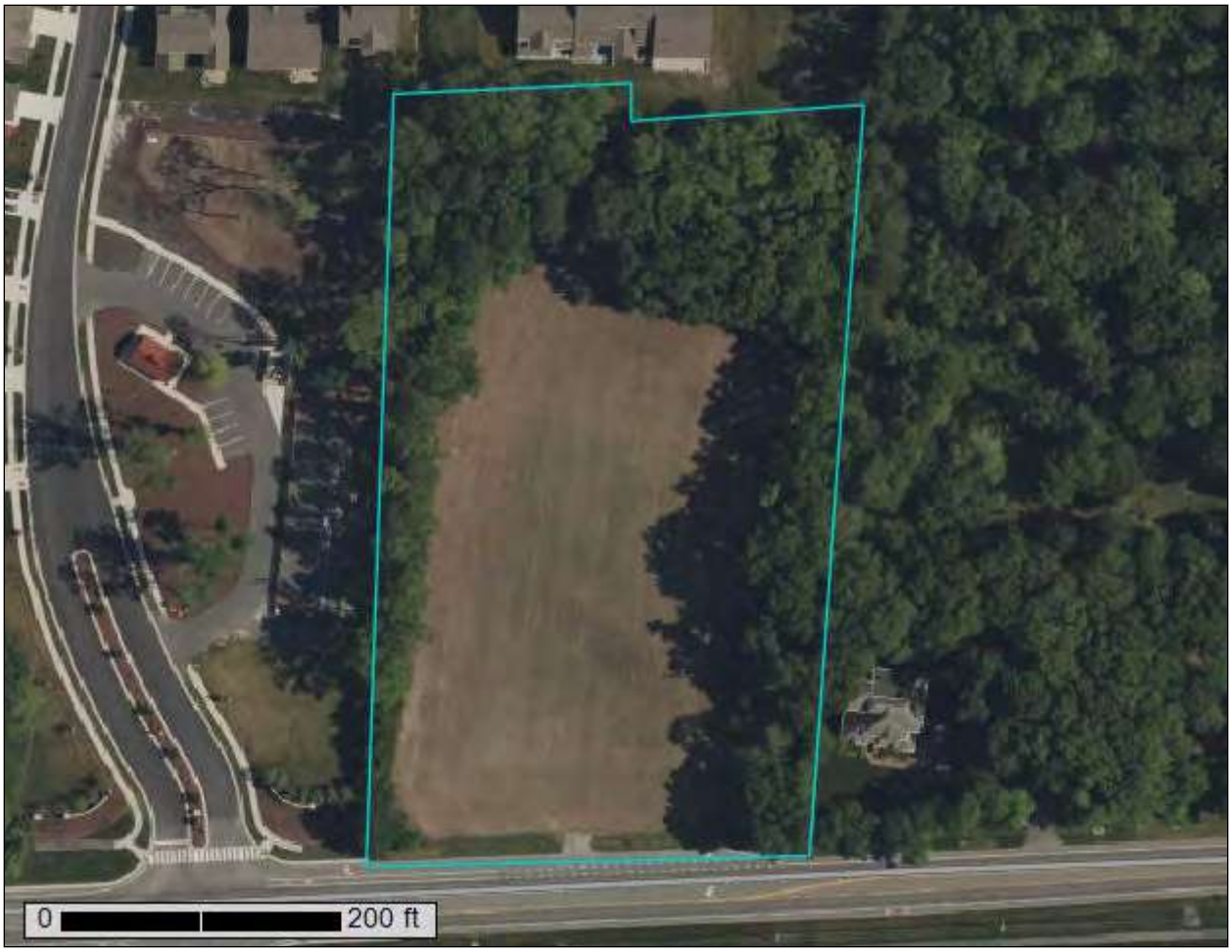
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:993 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

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# APPENDIX H

## WETLAND INVESTIGATION SUMMARY LETTER

*www.WatershedEco.com*
*Creating Value*

September 23, 2021

Gulfstream Glen Cove, LLC.
27 Atlantic Avenue
Ocean View, DE 19970

Attention: Mr. Robert Harris

Subject: Wetland Investigation Summary Letter
Glen Cove
36199 Burbage Road, Ocean View, DE 19970
Tax Parcel: 134-12.00-374.01

Dear Bob:

Watershed Eco, LLC. investigated the above referenced property on September 20, 2021 for the purpose of conducting a wetland delineation within the 3.88 acres subject property. The wetland delineation followed the criteria in the 1987 Corps Delineation Manual (Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Additionally, I have reviewed the National Wetland Inventory Map, National Hydrographic Dataset, U.S. Geological Survey mapping, and USDA Soil Survey mapping.

The field investigation and review of mapping confirmed that the site is entirely wooded with a man-made ditch excavated around the perimeter of the property as depicted on the National Hydrography Dataset, NWI and USGS maps (Figures 2-4). This ditch network drains westerly off-site then north to White Creek, a tributary of Indian River Bay. No wetland features were observed within the boundaries of the subject property.

*302-464-0831*
*Jim@WatershedEco.com*

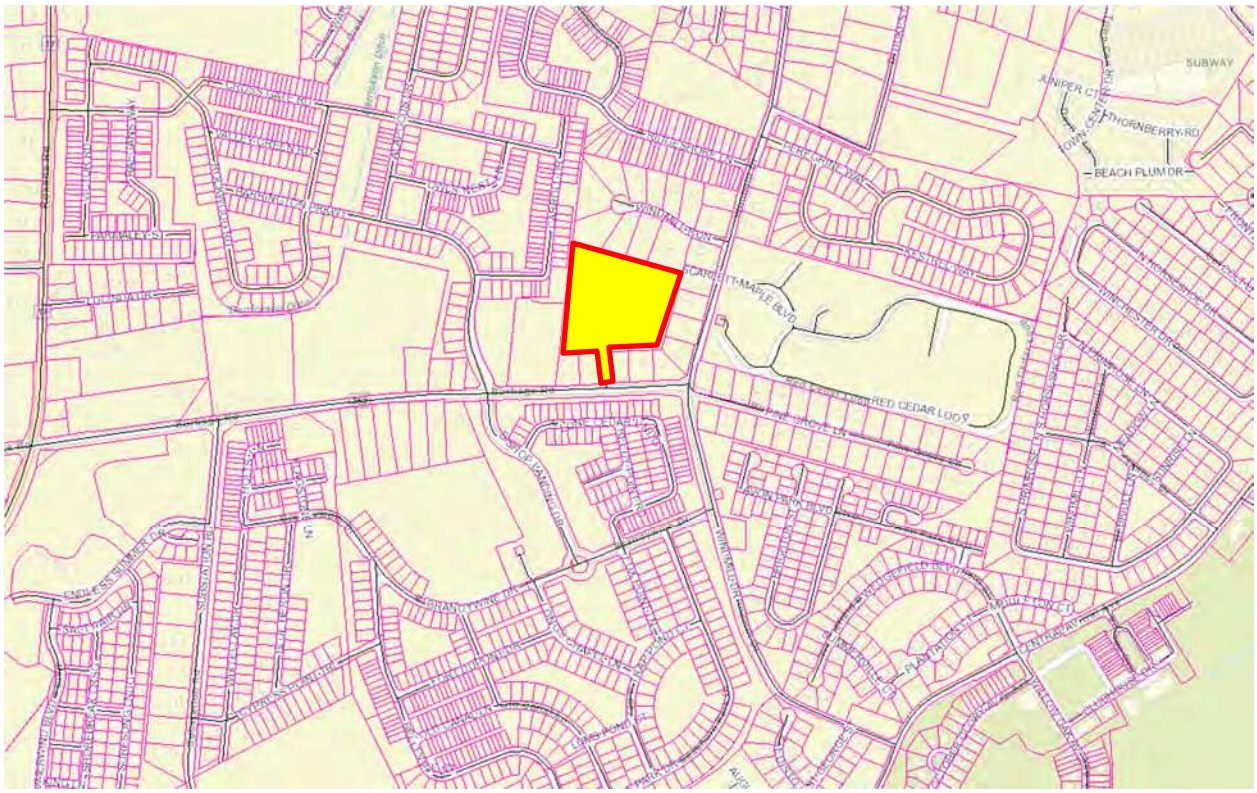



**Figure 1: Location Map.**

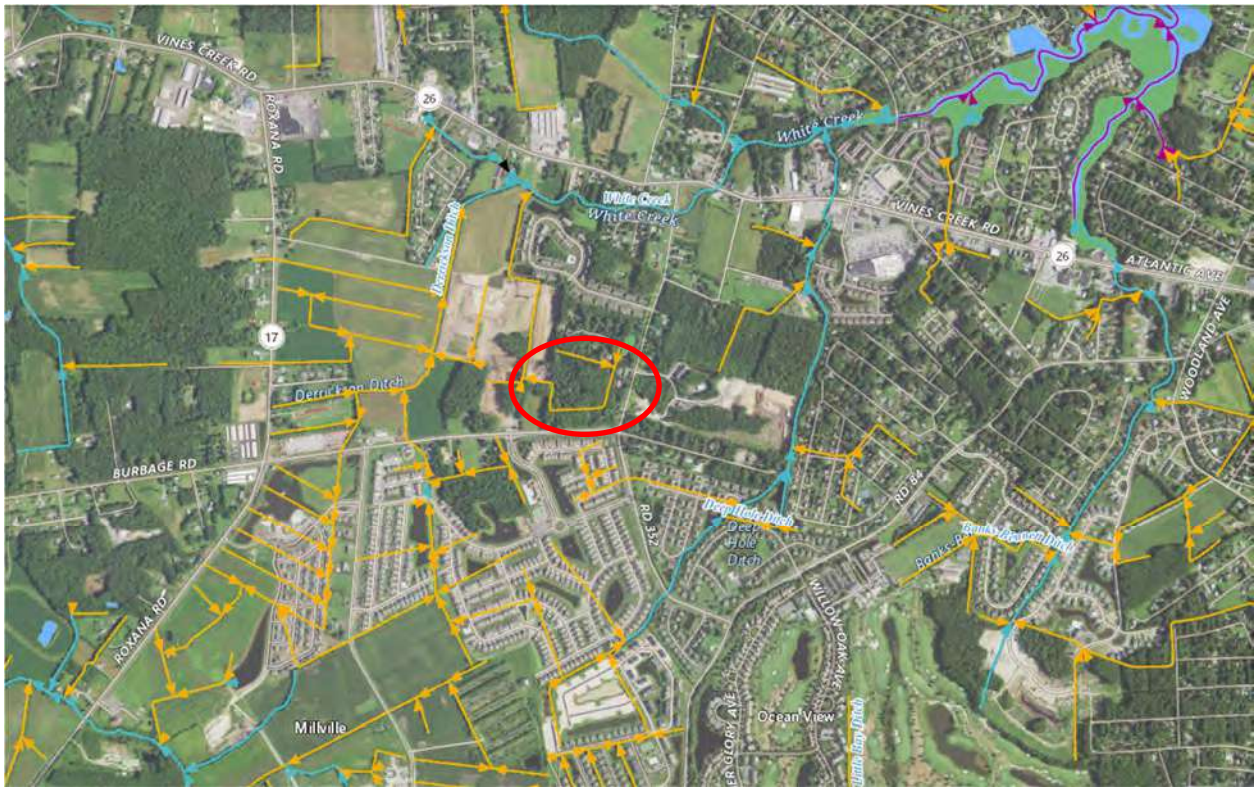



**Figure 2: National Hydrography Dataset Map.**

The National Wetland Inventory Map depicts a blue-line drainage feature along the northern, eastern, southern and southwestern property boundaries. This ditch extends off-site to the west, then drains north to White Creek.

Figure 3: NWI Map

The USGS topo map depicts a similar ditch network to the NWI and NHD map.

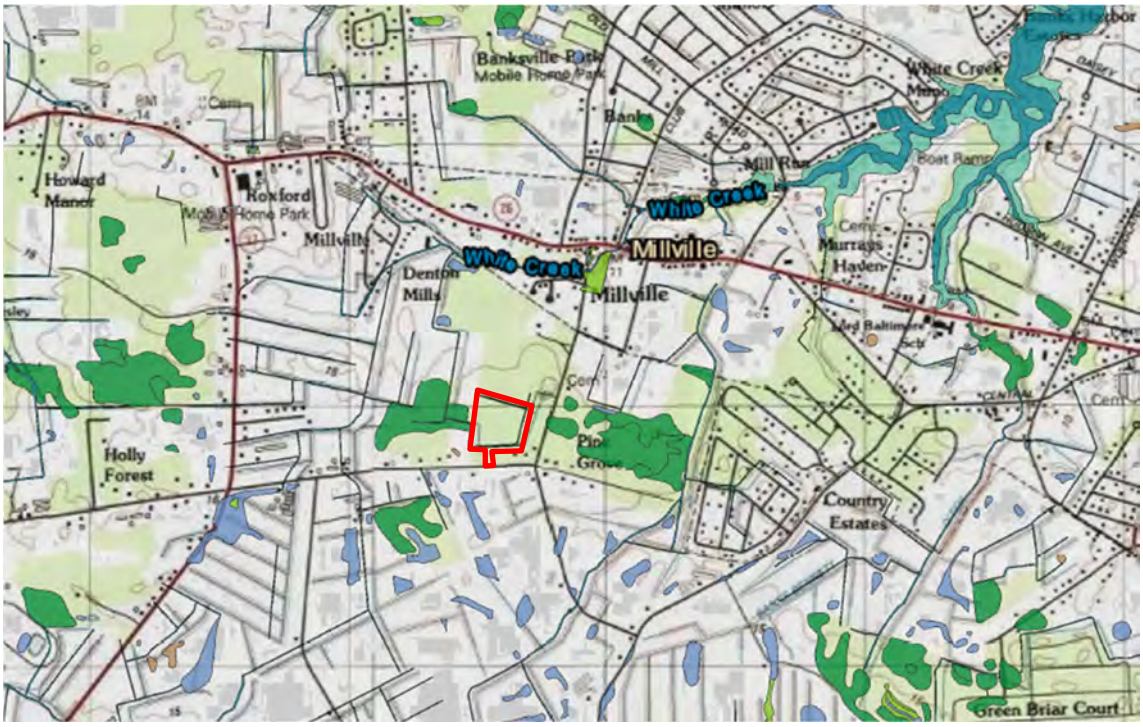



Figure 4: Topo Map

The current USDA Soil Survey Mapping (Figure 5) depicts the majority of the site is underlain with well-drained Rosedale loamy sand (RoA). Areas of very poorly-drained Mullica-Berryland complex (MuA) are identified in the northwestern and southern portions of the property and a small area of Klej loamy sand in the southwest.

**Figure 5: Soil Map**

Figure 6: Aerial Photograph

The subject property was dominated by a mixture of upland and facultative tree species consisting of northern red oak, southern red oak, white oak, and lobolly pine. Understory species observed included sweetgum, red maple, sassafras, and American holly. Common shrub-herbaceous species included sweet pepperbush, American holly, highbush blueberry, lowbush blueberry, and Virginia Creeper.

No visible indicators of standing water or saturated soil conditions were observed within the majority of the subject property. Standing water was limited to the man-made ditch in the south-central portion of the property.

The man-made drainage ditches observed within the property were constructed in uplands and no available mapping indicates these features were ever associated with a tributary stream. In addition, these ditches appear to be ephemeral in nature. No base flow of water was observed within any of the ditches at the time of the site investigation. Standing water was observed within the ditch in the south-central portion of the property. According to the U.S. Army Corps of Engineers Antecedent Precipitation Tool data, normal hydrological conditions were present at the time of the site investigation. Based on observations during the field investigation it

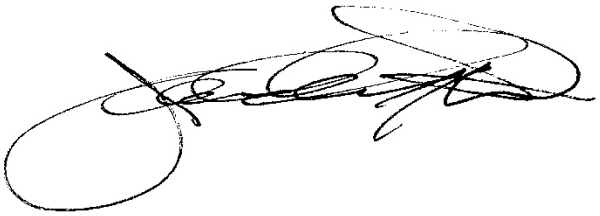
appears that the drainage ditches have silted in over time and no longer provide positive drainage off-site.

In conclusion and based on all of the evidence above and attached, Watershed Eco, LLC. has determined the no areas meeting the three wetland criteria were located within the subject property boundaries. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule which stated that ephemeral and man-made drainage features were not federally jurisdictional. At the present time there is no clear guidance from the Corps on ephemeral drainage features and the Corps is currently not issuing approved jurisdictional determinations. The U.S. Army Corps of Engineers Dover Field Office should be consulted prior to any impacts to the man-made ditches to avoid potential violations.

It is the professional opinion of Watershed Eco, LLC. that the man-made drainage ditches around the perimeter of the property are ephemeral in nature and would not be regulated by Delaware Department of Natural Resources and Environmental Control as Subaqueous Lands.

If you have any questions or concerns, please feel free to give me a call.

Sincerely,



James C. McCulley IV, PWS (#000471)
Environmental Scientist

## Site Photographs:

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

**Photo 3: Man-made drainage ditch along southern property boundary, facing east.**

**Photo 4: Man-made drainage ditch along southern property boundary, facing west.**

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

**Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.**

**Photo 10: Upland forest cover in the northeastern portion of the property.**

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-NWI

August 19, 2021

**Wetlands**

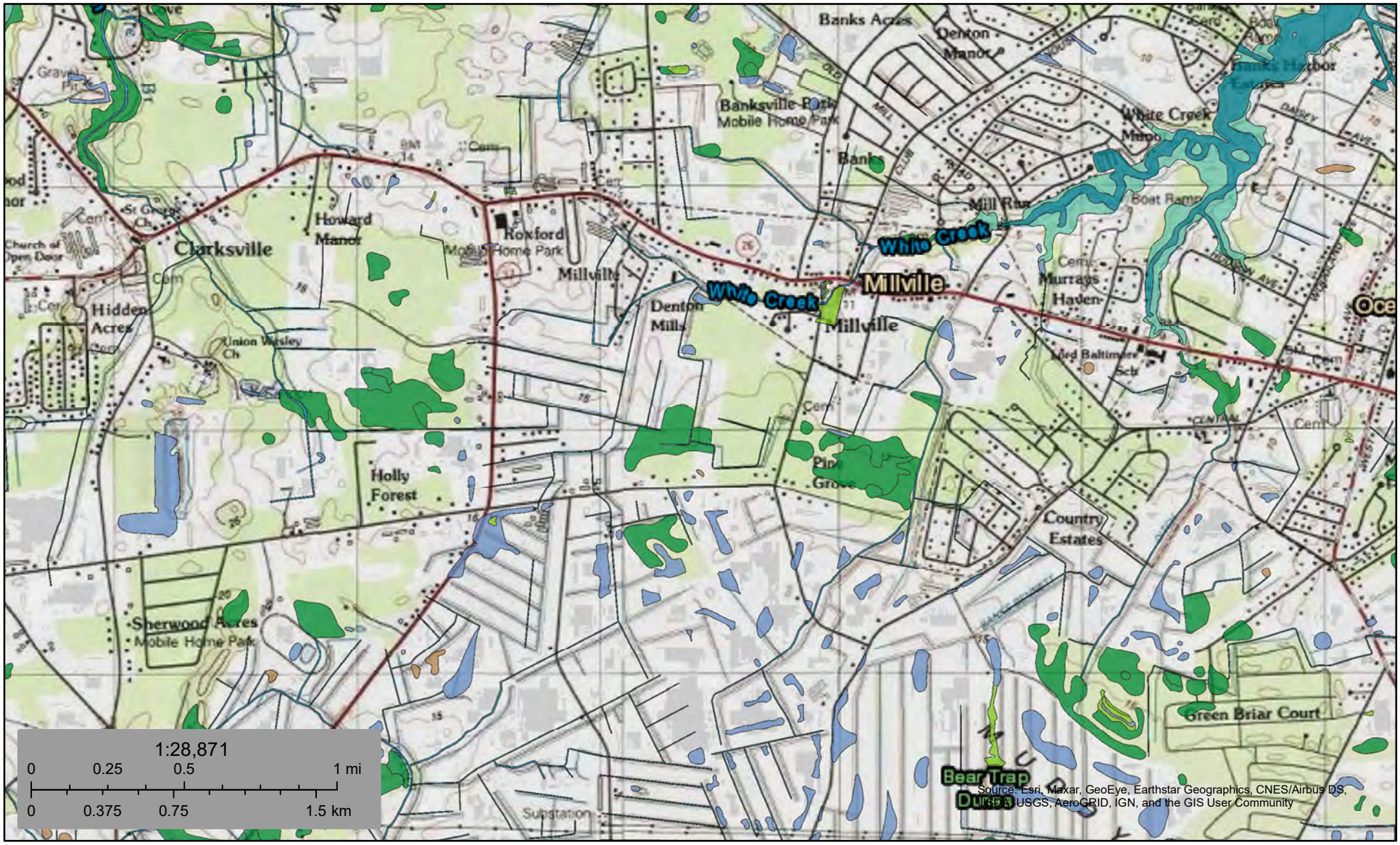
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-USGS




August 19, 2021

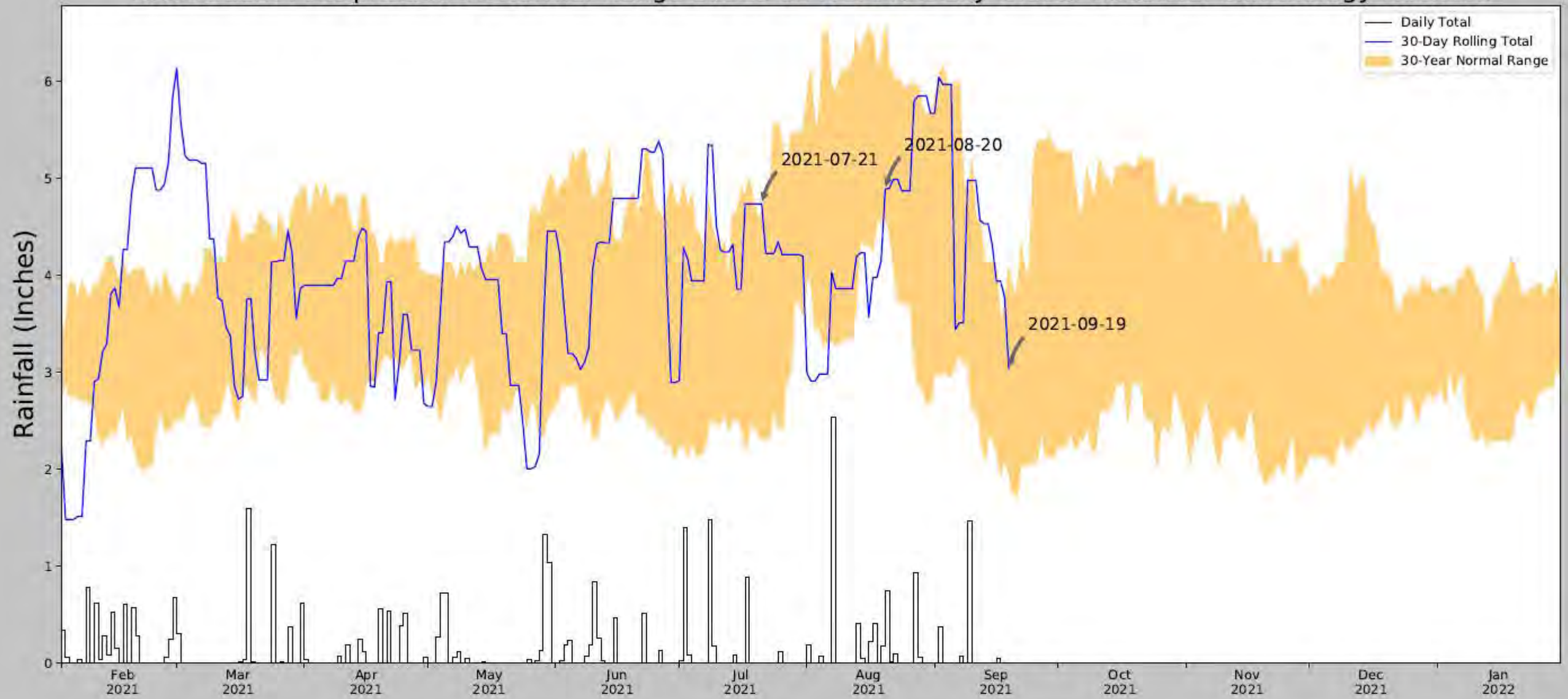
**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.166922, -75.351506 |
| Observation Date | 2021-09-19 |
| Elevation (ft) | 21.42 |
| Drought Index (PDSI) | Mild wetness (2021-08) |
| WebWIMP $H_2O$ Balance | Dry Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2021-09-19 | 1.959843 | 4.075591 | 3.031496 | Normal | 2 | 3 | 6 |
| 2021-08-20 | 4.583071 | 6.590945 | 4.889764 | Normal | 2 | 2 | 4 |
| 2021-07-21 | 2.323622 | 4.638189 | 4.740158 | Wet | 3 | 1 | 3 |
| Result | | | | | | | Normal Conditions - 13 |

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days (Normal) | Days (Antecedent) |
|---|---|---|---|---|---|---|---|
| SALISBURY WICOMICO RGNL AP | 38.3406, -75.5103 | 47.9 | 14.773 | 26.48 | 7.039 | 11350 | 83 |
| SNOW HILL 0.4 S | 38.167, -75.3921 | 20.997 | 2.205 | 0.423 | 0.993 | 0 | 7 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 4.671 | 8.436 | 2.141 | 3 | 0 |

# Glen Cove

Datapoint Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.542413 Long: -75.119833 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Young forested upland in the northwestern portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | yes | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 20 | yes | FAC |
| 2. *Liquidambar styraciflua* | 80 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Phytolacca americana* | 5 | yes | FACU |
| 2. *Parthenocissus quinquefolia* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 4-12 | 10YR 5/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 3/2 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Young forest at Datapoint UPL-1.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541774 Long: -75.119214 Datum: NAD 83

Soil Map Unit Name: Rosedale loamy sand (RoA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the central portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus rubra* | 30 | yes | FACU |
| 2. *Quercus falcata* | 20 | yes | FACU |
| 3. *Quercus alba* | 20 | yes | FACU |
| 4. *Sassafras albidum* | 20 | yes | FACU |
| 5. *Acer rubrum* | 10 | no | FAC |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 5 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Clethra alnifolia* | 10 | yes | FACW |
| 2. *Vaccinium corymbosum* | 5 | no | FACW |
| 3. *Vaccinium angustifolia* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-12 | 10YR 4/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 4/6 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at UPL-2 in the central portion of the property.

Non-hydric soils at UPL-2.

United States Department of Agriculture

NRCS

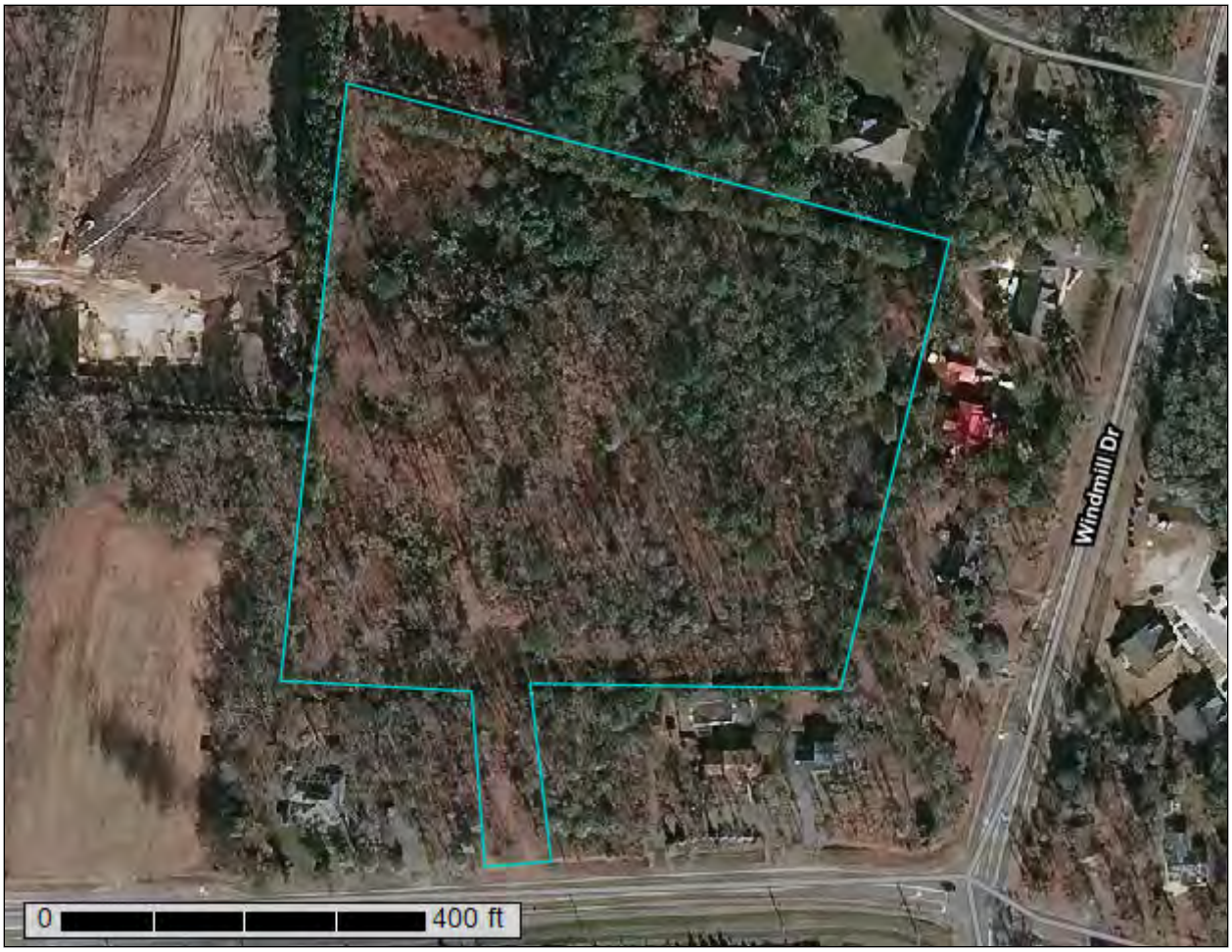
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Glen Cove 2




August 19, 2021

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:1,730 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Mar 12, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 0.2 | 1.9% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 2.5 | 28.0% |
| RoA | Rosedale loamy sand, 0 to 2 percent slopes | 6.3 | 70.1% |
| **Totals for Area of Interest** | | **8.9** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Flats, depressions, drainageways
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, flats, fluviomarine terraces, dunes
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* Yes

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

### Map Unit Composition
*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mullica, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear

#### Typical profile

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Berryland, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare

*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Mullica, Undrained

**Setting**

*Landform:* Drainageways, swales, flats, depressions
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Berryland, Undrained

**Setting**

*Landform:* Flats, depressions, drainageways, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

**Minor Components**

**Klej**

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Askecksy, drained**

*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Hydric soil rating:* Yes

## RoA—Rosedale loamy sand, 0 to 2 percent slopes

**Map Unit Setting**

*National map unit symbol:* 1qtjx
*Elevation:* 0 to 120 feet

*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rosedale**

**Setting**

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

**Typical profile**

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2s
*Land capability classification (nonirrigated):* 2s
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

**Minor Components**

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Fluviomarine terraces, flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

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# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

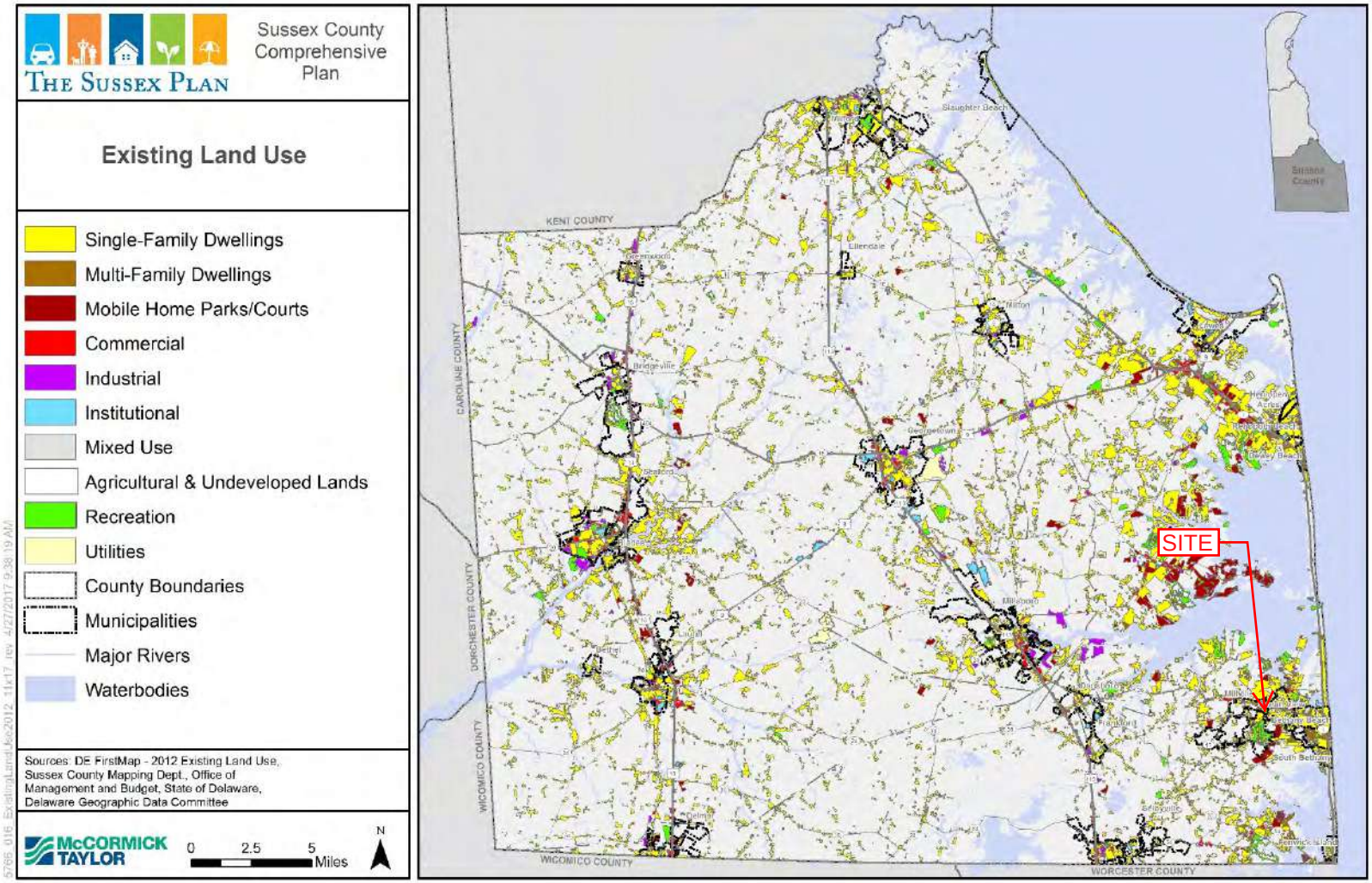
Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## ZONING & COMPREHENSIVE PLAN CONTEXT & MAPPING

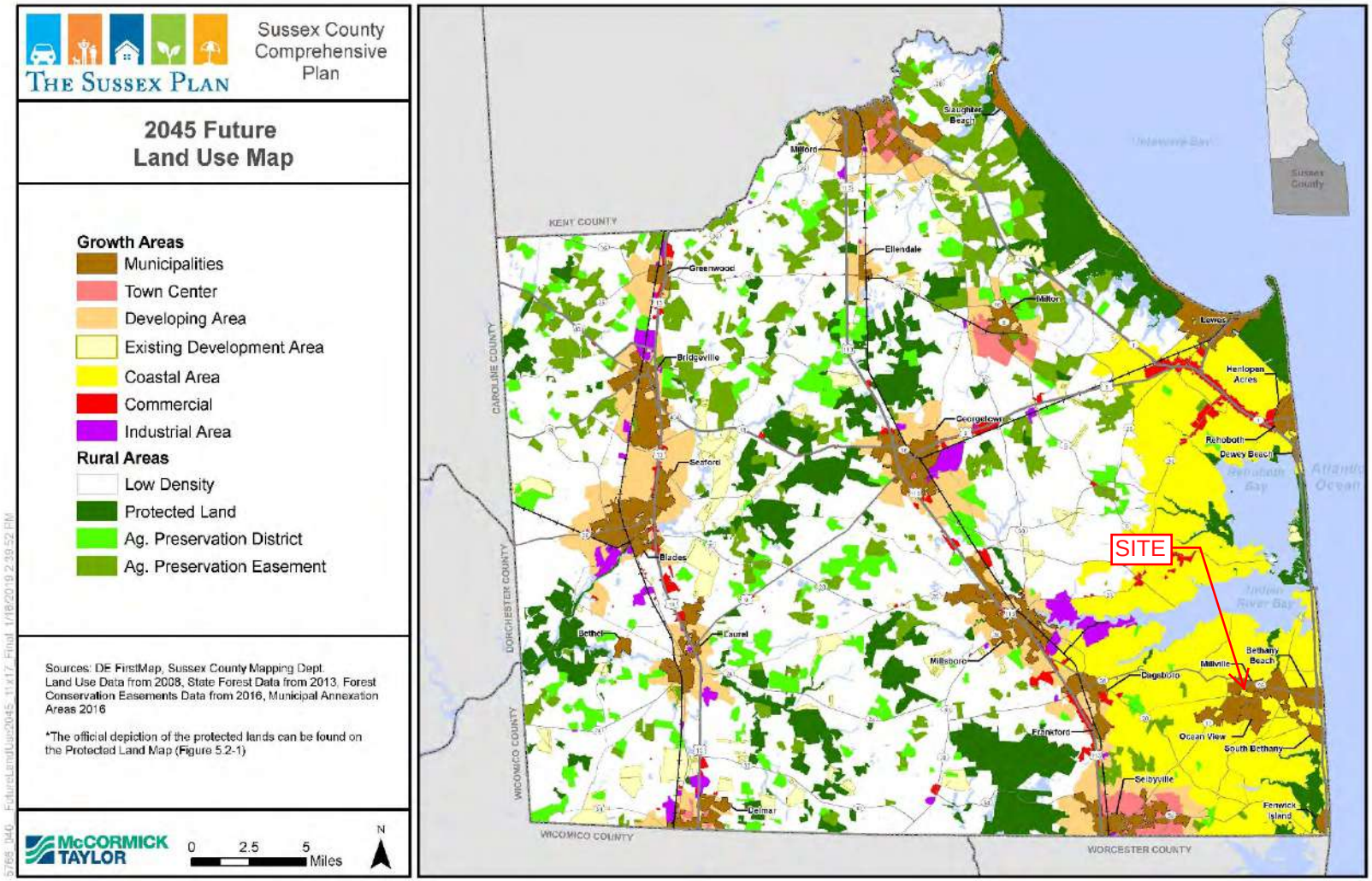
THE SUSSEX PLAN

**Figure 4.2-1 Existing Land Use**



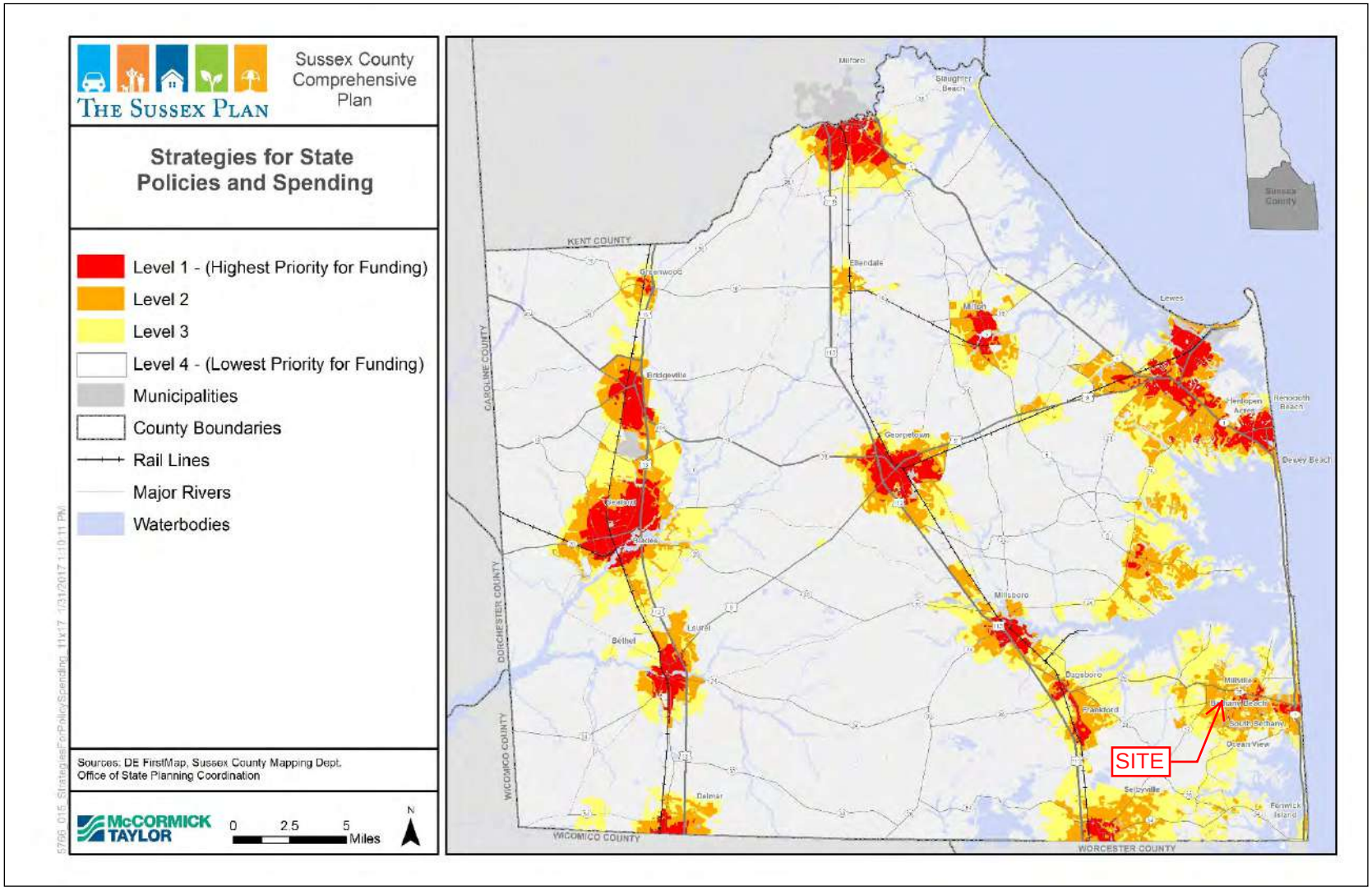
THE SUSSEX PLAN

**Figure 4.5-1 Sussex County 2045 Future Land Use**



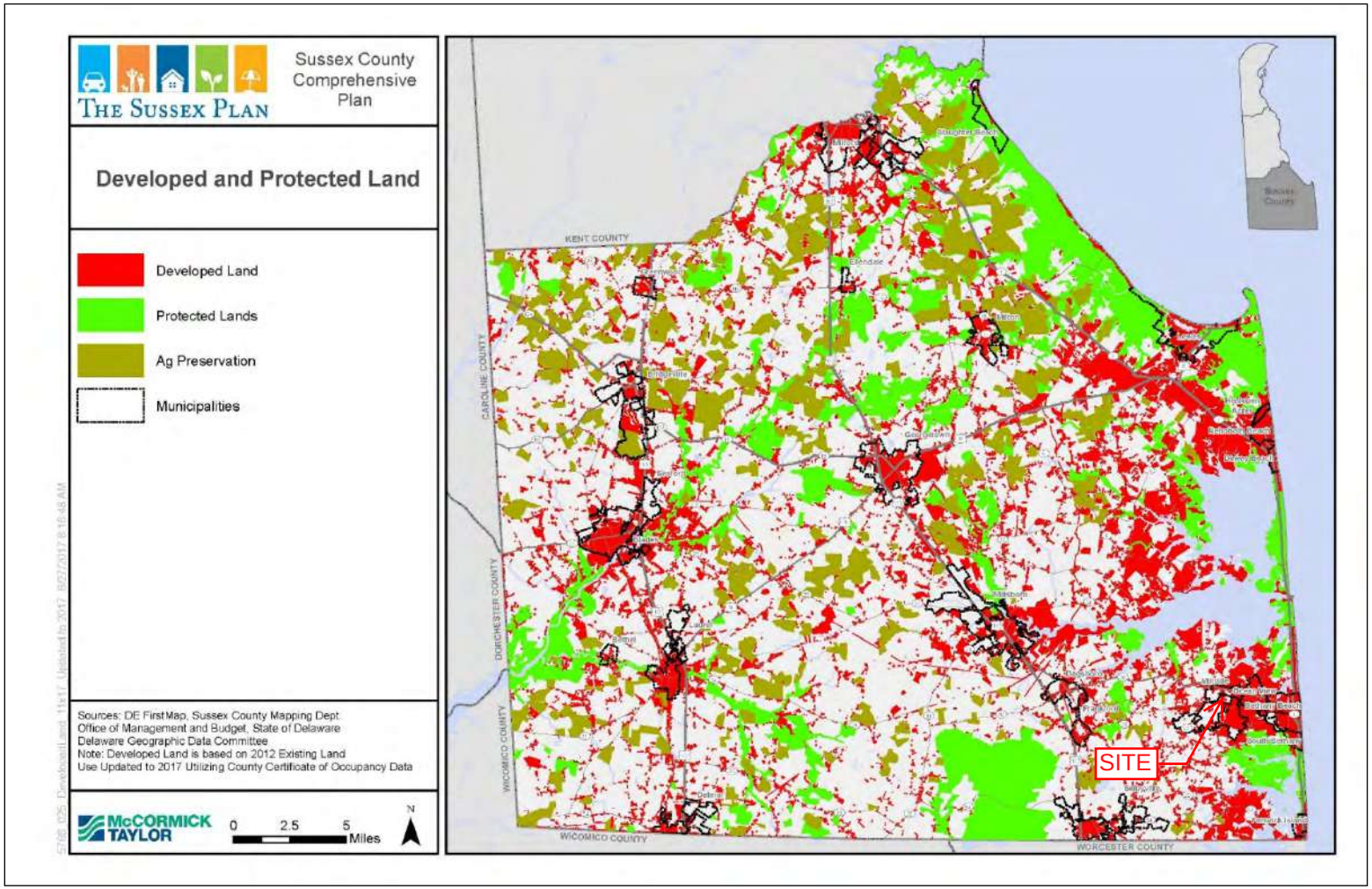
THE SUSSEX PLAN

**Figure 4.4-1 Strategies for State Policies and Spending**



THE SUSSEX PLAN

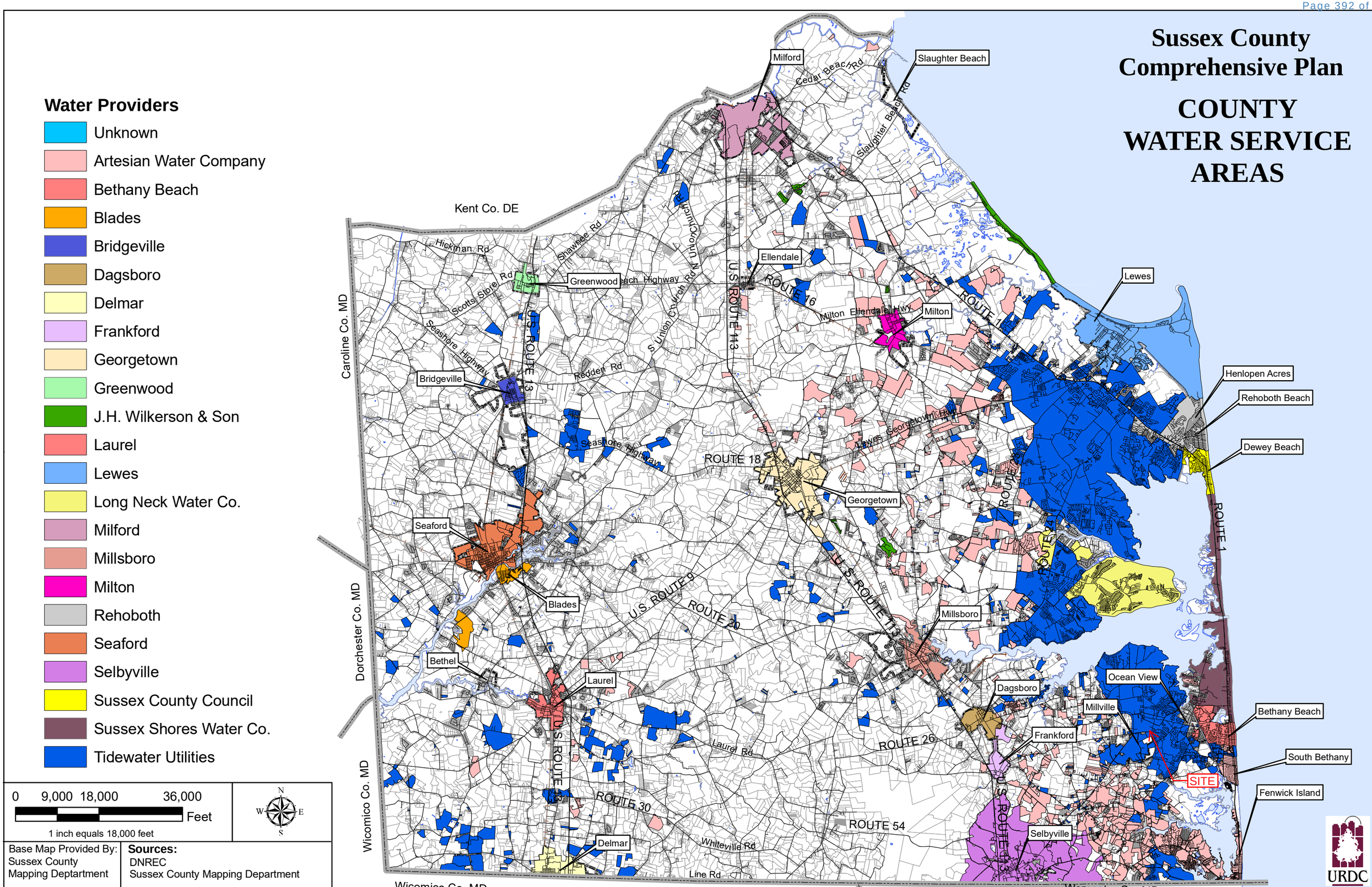
**Figure 4.2-2 Developed and Protected Land** *




* Parcels enrolled in the State's Agricultural Lands Preservation Program change frequently and that the Delaware Department of Agriculture can be contacted for latest update.

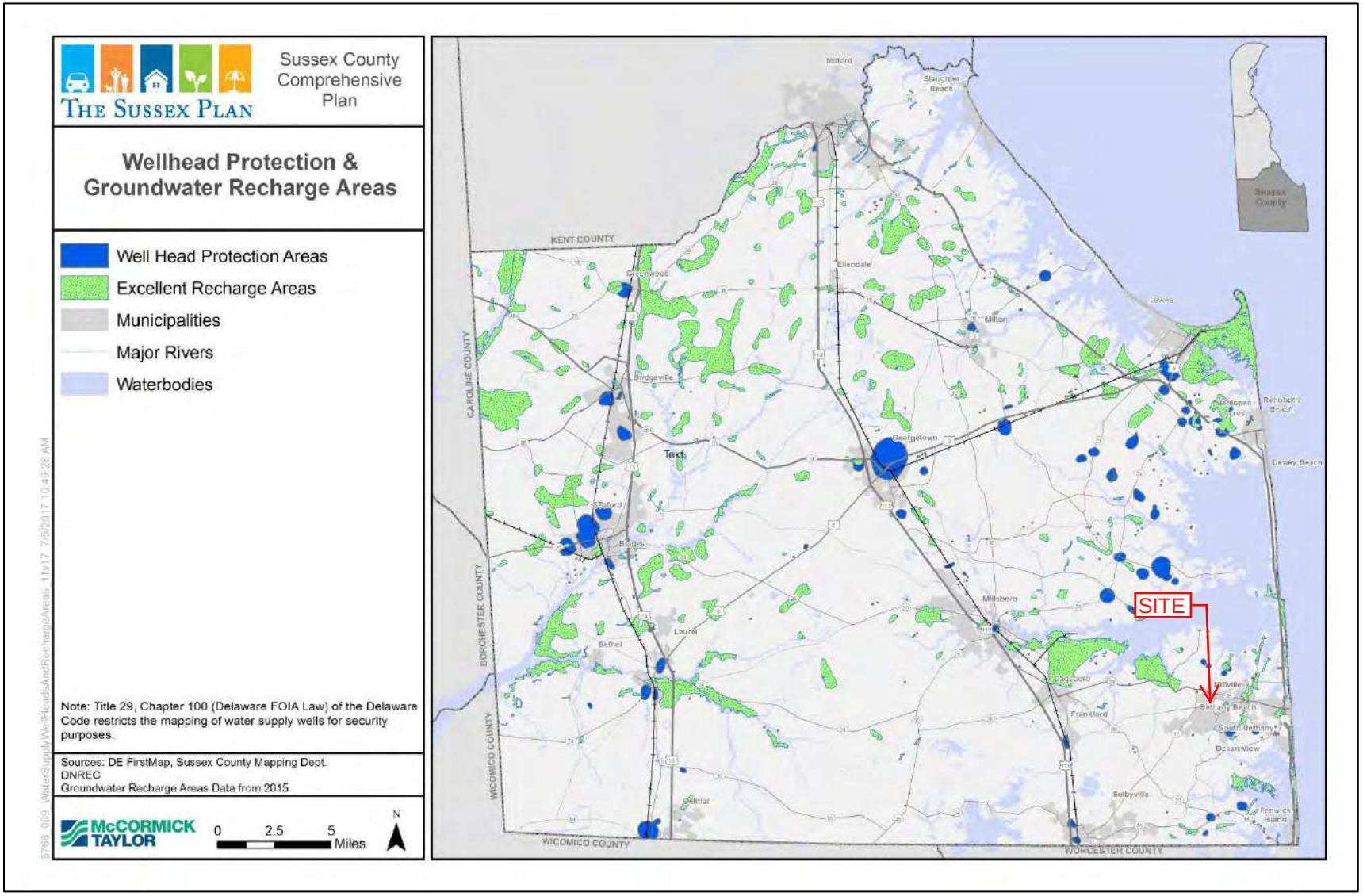
# Sussex County Comprehensive Plan

# COUNTY WATER SERVICE AREAS



THE SUSSEX PLAN

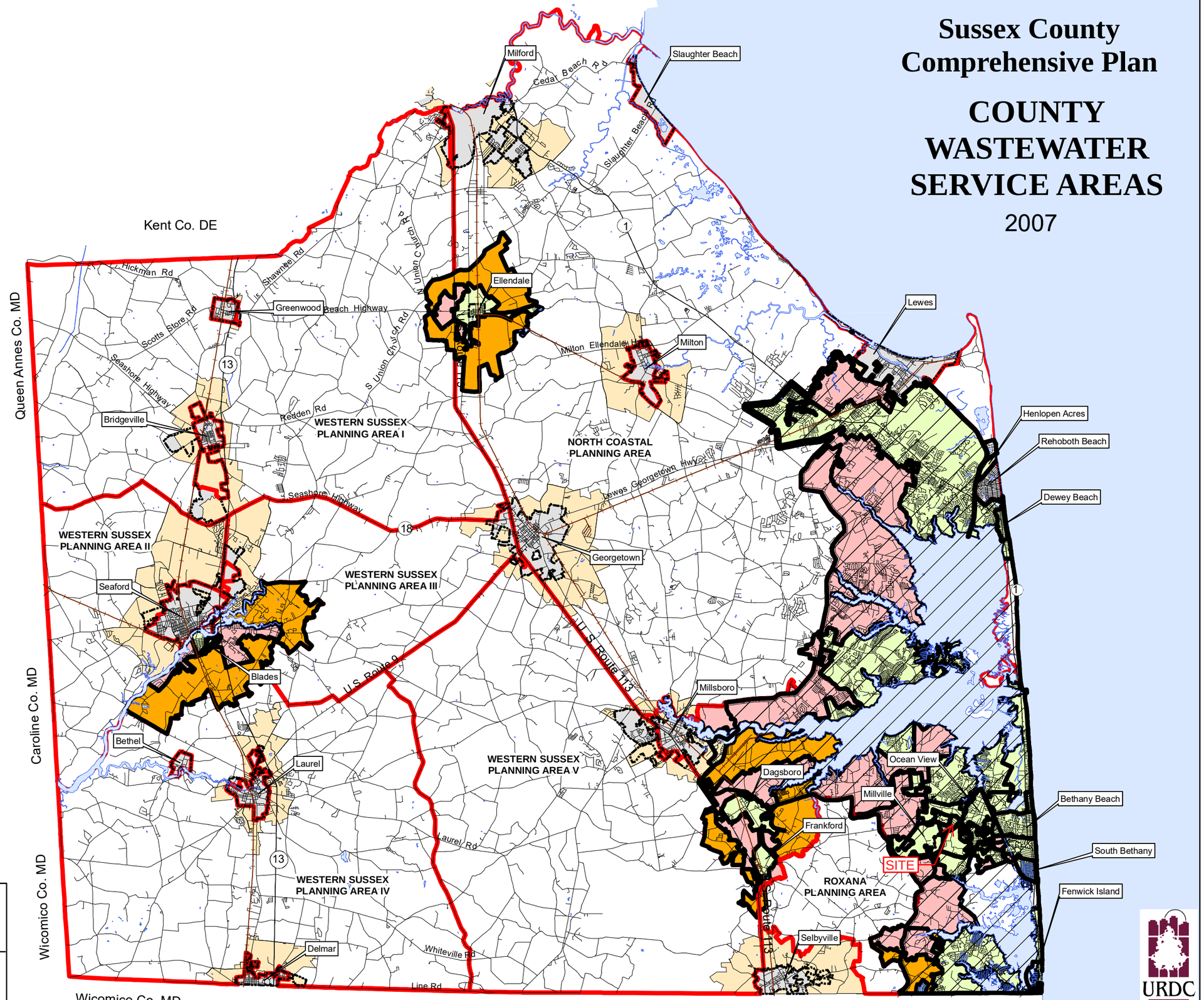
Figure 7.2-2 Wellhead Protection & Excellent Recharge Areas



# Sussex County Comprehensive Plan

# COUNTY WASTEWATER SERVICE AREAS

2007




Environmentally Sensitive Development Area (ESDA)

Roads

Boundaries of Sewer Planning Areas

Existing County Sewer Districts

Primary County Service Areas

Secondary County Service Areas

Unclassified Service Areas

Town/City Potential Annexation Areas (intended to be eventually served by Town/City in most cases.)

Municipal Boundaries

Please see text for planning area and service area definitions.

0 9,000 18,000 36,000 Feet

1 inch equals 18,000 feet

N W E S

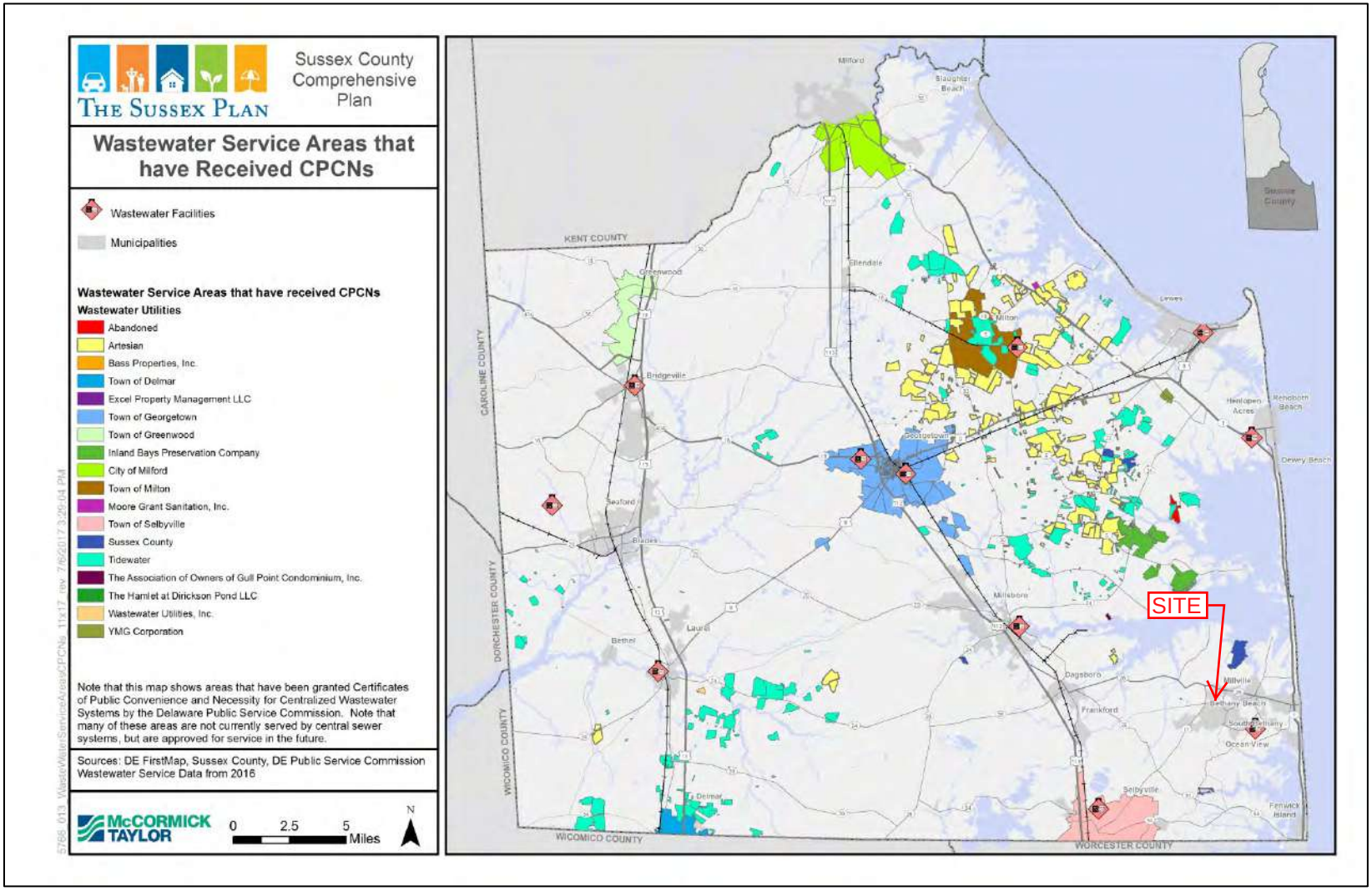
Base Map Provided By: Sussex County Mapping Deptartment

**Sources:** Sussex County Engineering Department

URDC

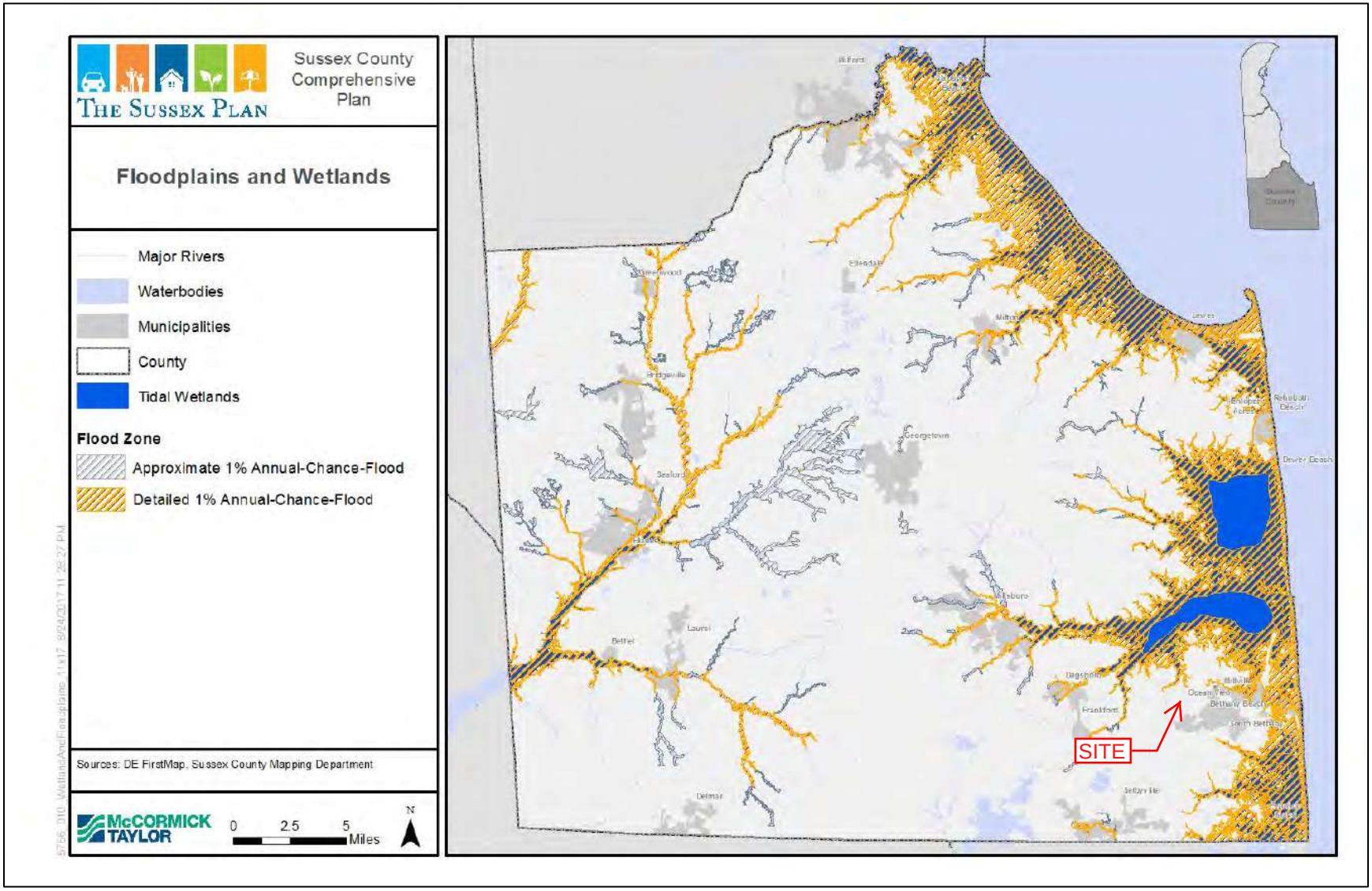
THE SUSSEX PLAN

Figure 7.3-1 Wastewater Service Areas that have Received Certificates of Public Convenience and Necessity



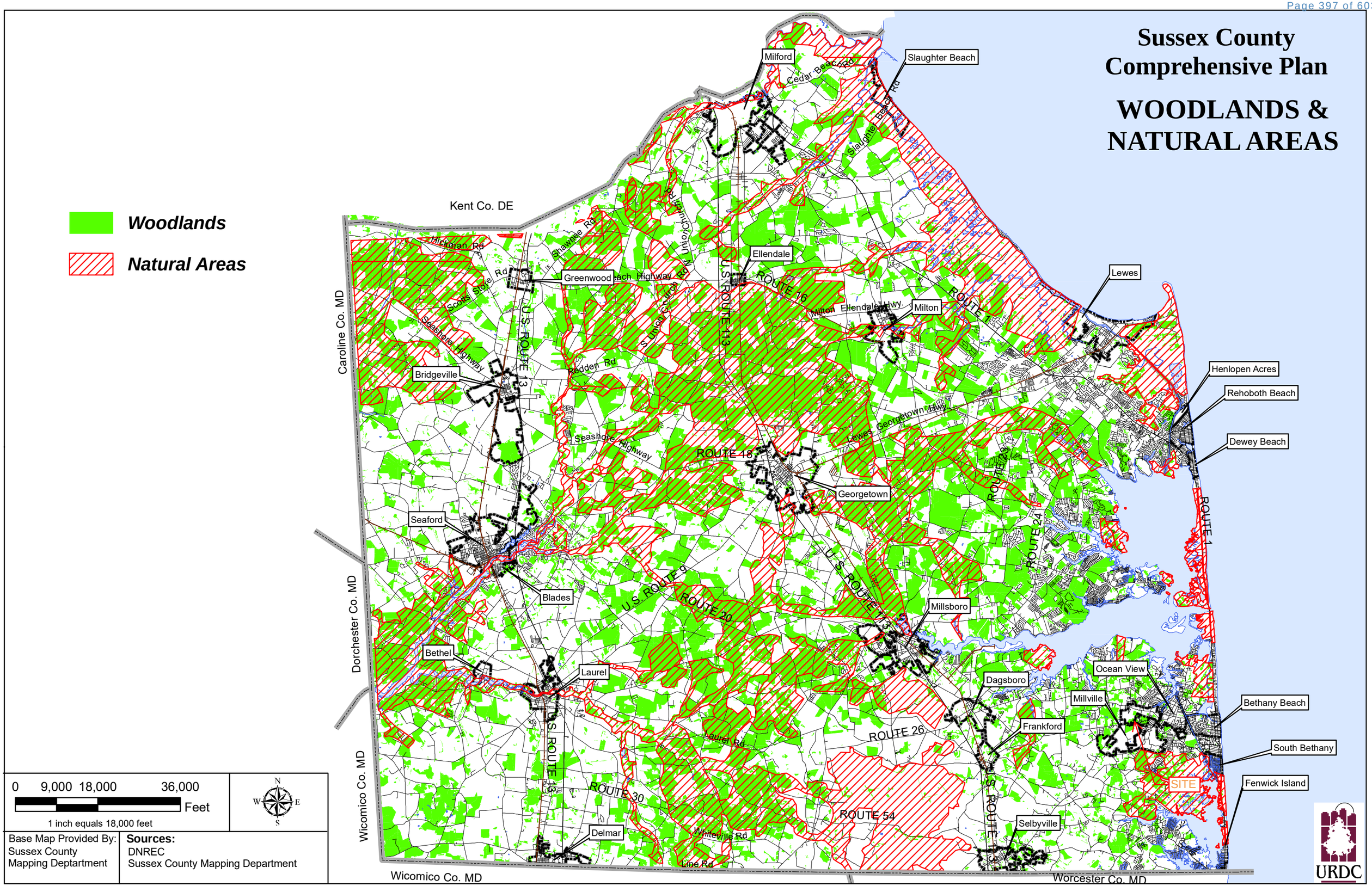
THE SUSSEX PLAN

Figure 5.2-4 Wetlands and Floodplains



# Sussex County Comprehensive Plan

## WOODLANDS & NATURAL AREAS



# APPENDIX H

## DELAWARE PLUS COMMENTS AND RESPONSES

**CIVIL ENGINEERING ASSOCIATES**
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 W. Main Street
Middletown, DE 19709

cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

October 9, 2024

Mr. David L. Edgell, AICP
Director
Office of State Planning Coordination
112 William Penn Street
Dover, DE 19901

**RE: PLUS Review Responses: 2024-08-02**
**Glen Cove 2**
**Sussex County, Delaware**

Dear Mr. Edgell:

This letter will serve as our response to the comments provided to us regarding the above-mentioned subdivision on September 17, 2024. In response to the review comments within the PLUS report that follows, ***we offer our answers highlighted in color.***

## Strategies for State Policies and Spending

This project is located in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. This site is also located in the Coastal Area of Sussex County.

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this **rezoning and site plan** provided it meets the relevant codes and ordinances of the Sussex County.

With that said, this parcel is adjacent to the Town of Millville and within their planned growth area. The developer should consider annexing or at least working with the town to ensure the planned development meets the desires of their comp plan.

***Acknowledged.***

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis and based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF). This project is located in an area anticipated to be in the future Roxana Transportation Improvement District (TID). This TID will not be operational for at least a year. If your development timeline allows participation in the TID may be an option in place of the AWSF.

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across any property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation.**"

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Department of Transportation (DelDOT).***

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Tax Ditches**
Prong 2 of the Derrickson Tax Ditch lies along several of the property boundaries and bisects the western and eastern parcels. Derrickson Canal Sub 2 Prong 2 runs along the property boundary in the northeast. Tax ditches are man-made channels created to move normal water flow off agricultural lands. These channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during maintenance. Tax ditch ROWs vary by channel size and location. Prong 2 and Sub 2 Prong 2 of the Derrickson Tax Ditch have a 20-foot to Top of Bank (TOB) ROW extending into the project boundary.

- The previous Court Order Change stipulates that a l5-foot by 285-foot Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.

- If the site and/or stormwater management features are designed to discharge into Prong 2 of the Derrickson Tax Ditch, design must consider existing conditions versus design specifications. Please consult with the DNREC Drainage Program for As-Built design information if necessary.

- Proposed structures or construction lies within the existing tax ditch ROW. Contact the DNREC Drainage Program to discuss the on-site tax ditch ROWs prior to the project application meeting with the appropriate plan review agency for construction stormwater management.

- The site plan appears to show a road crossing the tax ditch between Lots 16 and 17. The applicant must consult with the DNREC Tax Ditch Program on the elevation of the crossing. To reduce or change existing tax ditch ROWs, a Court Order Change must be submitted by the DNREC Drainage Program. The associated Land Development Project Review Request form is attached, as well as the aerial drainage map.

- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROWs.

- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channel should be cleared or excavated prior to the construction of the project if needed.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Stormwater Management**

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Wetlands and Waterways**

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the western portion of the site, as well as riverine wetlands associated with the canal that runs around the periphery of the site. The application indicates that wetlands have been delineated. According to the application, the U.S. Army Corps of Engineers sign-off is completed. The application states that the project does not propose direct impacts to the wetlands.

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.

- If road crossings are proposed in drainage features functioning as intermittent or perennial features, state permits from the DNREC Wetlands and Waterways Section may be required for disturbance proposed in state jurisdictional wetlands and waterways. To apply for a permit online, please visit their website at https://dnrec.delaware.gov/water/wetlands-subaqueous/permits/.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Wastewater Disposal Systems – Large Systems**

- For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Electric Vehicle Charging**

Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or
2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.
Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

***Acknowledged***

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Proposed Project Parcel Flood Concern**

- This parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within two Sussex County Evacuation Zones B (red) and D (yellow).

**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Emergency Management Agency.***

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There are no known archaeological sites or known National Register-listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance. Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

- If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the State Historic Preservation Office (SHPO).***

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Clubhouse)
- Where a water distribution system is proposed for single-family dwellings, it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)
- One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq. ft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Burbage Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn-around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.
- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware State Fire Marshall's Office.***

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.
- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Department of Transportation (DelDOT).***

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Forest**
The preliminary plan proposes the elimination of approximately 9 of 12 acres forest on the site. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

- Removing forested areas for development should be avoided to the greatest extent possible.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st. Likewise, avoid mowing open space areas and grass filter strips during the same timeframe, as various species of birds utilize these areas for nesting sites.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Forested Wetlands and Vegetated Buffer Zones**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of freshwater forested wetlands on the western portion of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb wetlands. Wetlands are a critical part of our natural environment. They reduce the impacts of flooding, improve water quality, and sequester carbon dioxide from the atmosphere. Wetlands also provide habitat for plants and animals that are uniquely adapted to saturated conditions.

- Maintain an upland buffer of at least 100 feet along all wetlands, except tax ditches, including those containing existing forest or natural vegetative cover.

- Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Maintain vegetated buffer zones as either meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Grass cutting for vegetated buffer zones if maintained as meadow should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Tax Ditches**

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.

Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Water Quality**
This site lies within the Indian River Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable.
- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.
- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939.
https://dnrec.alpha.delaware.gov/watershed-stewardship/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.

- Offer the option to install solar or geothermal systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities such as the proposed pool house, consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st

to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 23, though, with development, this will undoubtedly change. The 5 adjacent blocks aggregated bring the area to a total population of 404.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the

Expected Annual Loss
× Social Vulnerability
÷ Community Resilience
= Risk Index

Community Resilience.

- According to FEMA's National Risk Index, the parcel is considered relatively low for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-

enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated at relatively moderate whereas its social vulnerability is rated as very low.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Emergency Management Agency.***

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes electricity as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

***Acknowledged***

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

Preliminary meetings with Fire Protection Specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware State Fire Marshall's Office.***

If you have any questions or require any additional information, please do not hesitate to contact me at (302) 547-2444.

Sincerely,
**Civil Engineering Associates, LLC**

Ronald H. Sutton Jr.

Ronald H. Sutton Jr.
Principal

# APPENDIX I

## DELDOT SERVICE LEVEL EVALUATION REQUEST FORM/DELDOT RESPONSE

**PLANNING & ZONING**
Jamie Whitehouse, AICP ,MRTPI
Director
(302) 855-7878 T
(302) 854-5079 F

**Sussex County**
DELAWARE
sussexcountyde.gov

# Service Level Evaluation Request Form

This form **shall** be submitted to the Planning and Zoning Office and a response **shall** be received back from DelDOT prior to the applicant being able to submit an application to the Planning and Zoning Office.

Date: 8/5/24

**Site Information:**

Site Address/Location: northwest of Burbage Road + Windmill Drive intersection

Tax Parcel Number: 134-12.00-374.01, 134-12.00-3445.00-3460.00, + 134-12.00-375.00

Current Zoning: AR-1

Land Use Classification: Residential / Agriculture

Acreage: 12.32 AC

Subdivision: ☐

Conditional Use: ☒

Change of Zone: ☒ Proposed Zoning: MR

Proposed Use(s):

50 Condominiums - Residential

Square footage of any proposed buildings or number of units: 50 units

**Applicant Information:**

Applicant's Name: Foxlane Homes Delaware (John Murray)

Applicant's Address: 32191 Nassau Road, #2

City: Lewes State: DE Zip Code: 19958

Applicant's Phone Number: 302-344-1055

Applicant's e-mail address: jmurray@foxlanehomes.com

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

August 19, 2024

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray** (Burbage Road, Millville, DE 19967) proposed land use application, which we received on August 6, 2024. This application is for an approximate 12.32-acre assemblage of parcels (Tax Parcel: 134-12.00-374.01, 134-12.00-3445.00 Thru 3460.00, and 375. 00). All Parcels are located on the north side of Burbage Road (Sussex County Road 353) and approximately 460 feet west of the intersection of Windmill Drive (Sussex County Road 352) and Burbage Road. The parcels are currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a Conditional Use approval to place 50-Condos units, on the parcels.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road where the subject land is located, which is from Windmill Drive to Substation Road (Sussex County Road 366), is 3,224 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 50), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at annamaria.furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:bfm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Engineer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Engineer, Development Coordination
José Quixtan, Sussex County Subdivision Engineer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination

# APPENDIX J

## DELDOT AREA WIDE STUDY FEE MEMO

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

# MEMORANDUM

**TO:** John Pietrobono, Acting Sussex County Review Coordinator

**FROM:** Sireen Muhtaseb, TIS Group Manager

**DATE:** November 4, 2024
**Revised December 13, 2024**

**SUBJECT:** **Glen Cove**
**(Protocol Tax Parcel # 134-12.00-374.01)**
**Area Wide Study Fee (AWSF) and Off-site Improvements**

---

**Note Concerning Revision**: This document has been updated to revise the proposed trip generation of the development due to a reduction in the number of dwelling units of the proposed site. Specifically, the revision updates the number of single-family detached houses from 50 dwelling units to 49 dwelling units. As such, the trip generation and the Area Wide Study Fee has been updated to reflect this change. This document replaces our previous AWSF memorandum dated November 4, 2024, a copy of which is enclosed herein.

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 49 dwelling units of single-family detached houses. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 523 average vehicle daily trips (ADT) and 51 vehicle trips during the

p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be □5,230.

2. The developer shall improve the State-maintained Roads on which they front (Burbage Road, Sussex Road 353), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

SAM: km
Enclosure
cc: John Murray, Foxlane Homes Delaware
Scott Roberts, Civil Engineering Associates, LLC
Jamie Whitehouse, Sussex County Planning □ Zoning
Lauren DeVore, Sussex County Planning □ Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming □ Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tijah Jones, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

# APPENDIX K

## DELDOT ENTRANCE CORRESPONDENCE

## Scott Roberts

**From:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Sent:** Friday, November 15, 2024 6:30 AM
**To:** John Murray
**Cc:** Mackenzie Peet
**Subject:** Re: Glen Cove Entrance Location

Good morning John,

The DCM regulations described below will suffice.

John

---

**From:** John Murray <jmurray@foxlanehomes.com>
**Sent:** Thursday, November 14, 2024 4:21 PM
**To:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** RE: Glen Cove Entrance Location

John,

Thank you for the detailed response. Would it be acceptable to state that, in this instance, a design deviation would likely not be approved by DelDOT to have the entrance at that location for the reasons stated?

Thank you,
John

John Murray
Land Development Manager
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055 (cell)
www.foxlanehomes.com

---

**From:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Sent:** Thursday, November 14, 2024 3:27 PM
**To:** John Murray <jmurray@foxlanehomes.com>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** Re: Glen Cove Entrance Location

John,

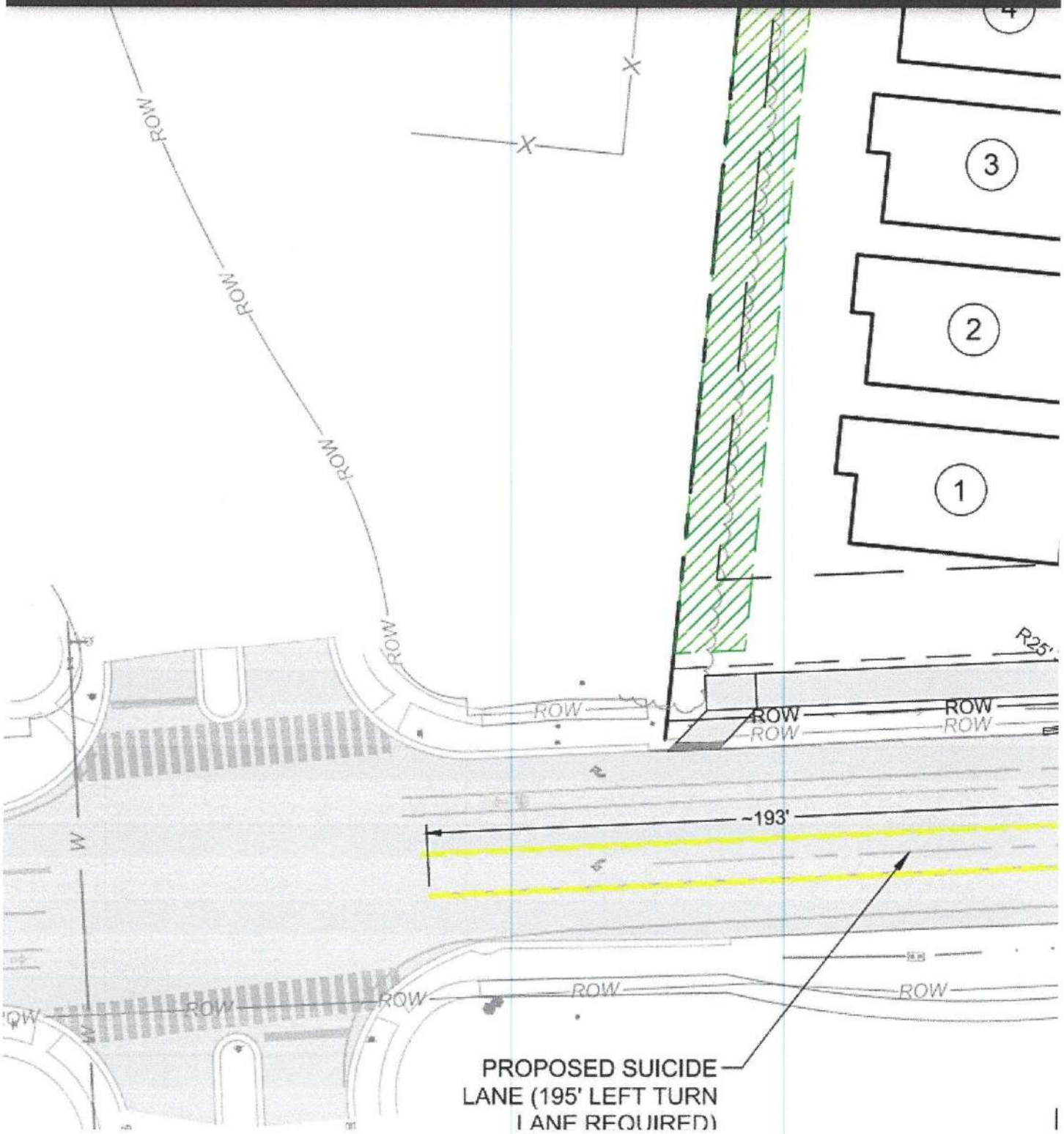
As was discussed during the 11/06/24 presubmittal meeting, the location of the proposed entrance that was shown on the plan presented at the meeting is not acceptable, as it violates both DCM 1.6.1; entrance location in a deceleration lane, which, in this case, is the existing right turn lane for the adjacent site and DCM Fig. 1.5.1, access spacing, as the proposed location is less than 250', required for a major collector.

The screen shot below is the plan that was presented at the presubmittal meeting.

Home | Development | Planning & D | Planning & D

pdcaprod.blob.core.windows.net/pdca-files/3453/2024101610

C-1



John Pietrobono

Delaware Department of Transportation
Division of Planning
Development Coordination Section
Acting Sussex County Review Coordinator

---

**From:** John Murray <jmurray@foxlanehomes.com>
**Sent:** Thursday, November 14, 2024 2:18 PM
**To:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** Glen Cove Entrance Location

Good afternoon John,

When we had our pre-submittal meeting last week for the Glen Cove project, you made mention on multiple occasions that the development entrance would not be permitted where it was originally proposed. This was due to the proposed location being within the limits of the right-turn deceleration lane for the Bishop's Landing community, which would be in conflict with the DCM. We will be working with our design engineer to relocate the proposed entrance but, when we have our public hearing before the Sussex County Planning Commission, we expect members of the commission to have questions about why the entrance is not located where more frontage to Burbage Road is available. While we can explain the reasoning to the Planning Commission, we expect them to include in any motion for preliminary approval that the entrance be relocated to the location where more frontage is available. We have experienced this very same situation on other projects.

In order to prevent a conflict between the County and DelDOT, we were hoping that you could provide a statement in writing for us that DelDOT would not support an emergency/alternate access for this project. We would then be able to put that statement into the project record so that the Planning Commission understand, officially, why the entrance is located where it is. If you or someone else at DelDOT could help us with this, it would be greatly appreciated!

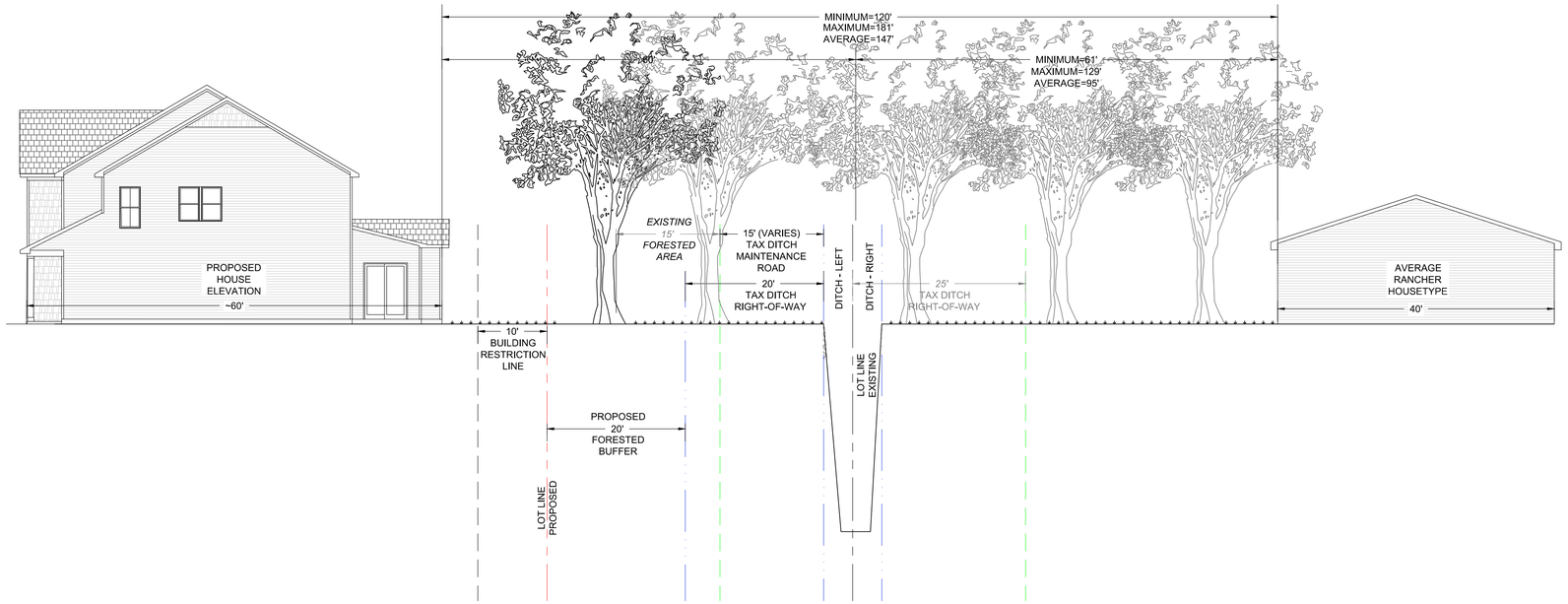
Thank you for your consideration and feel free to contact me at your earliest convenience if you have any questions.

Thank you,
John

John Murray
Land Development Manager
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055 (cell)
www.foxlanehomes.com

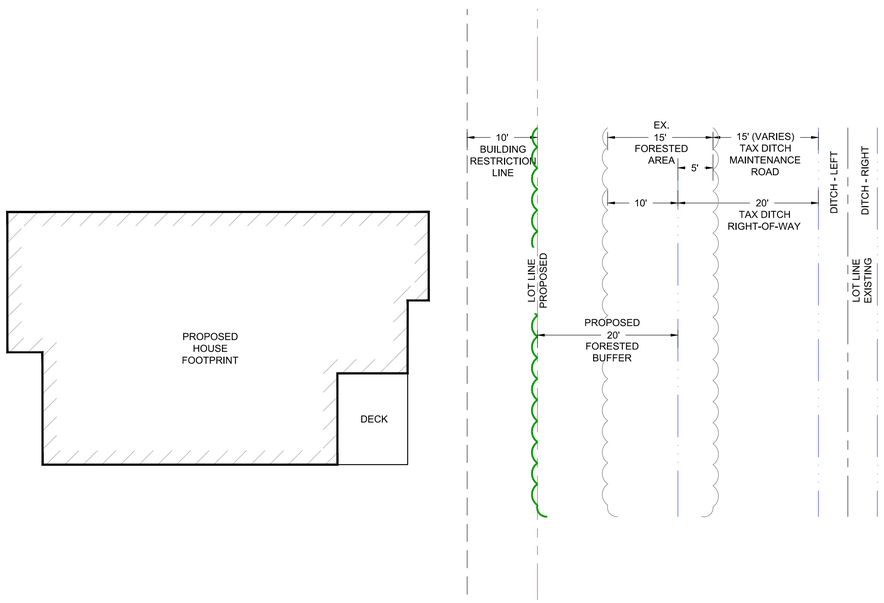
# APPENDIX L

## TAX DITCH BUFFER EXHIBIT




**CROSS SECTION: TAX DITCH & BUFFER**

SCALE: 1" = 10'




**PLAN: TAX DITCH & BUFFER**

SCALE: 1" = 10'

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# TAX DITCH & BUFFER EXHIBIT

FOR

## GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: JANUARY 14, 2025

DESIGNED BY:

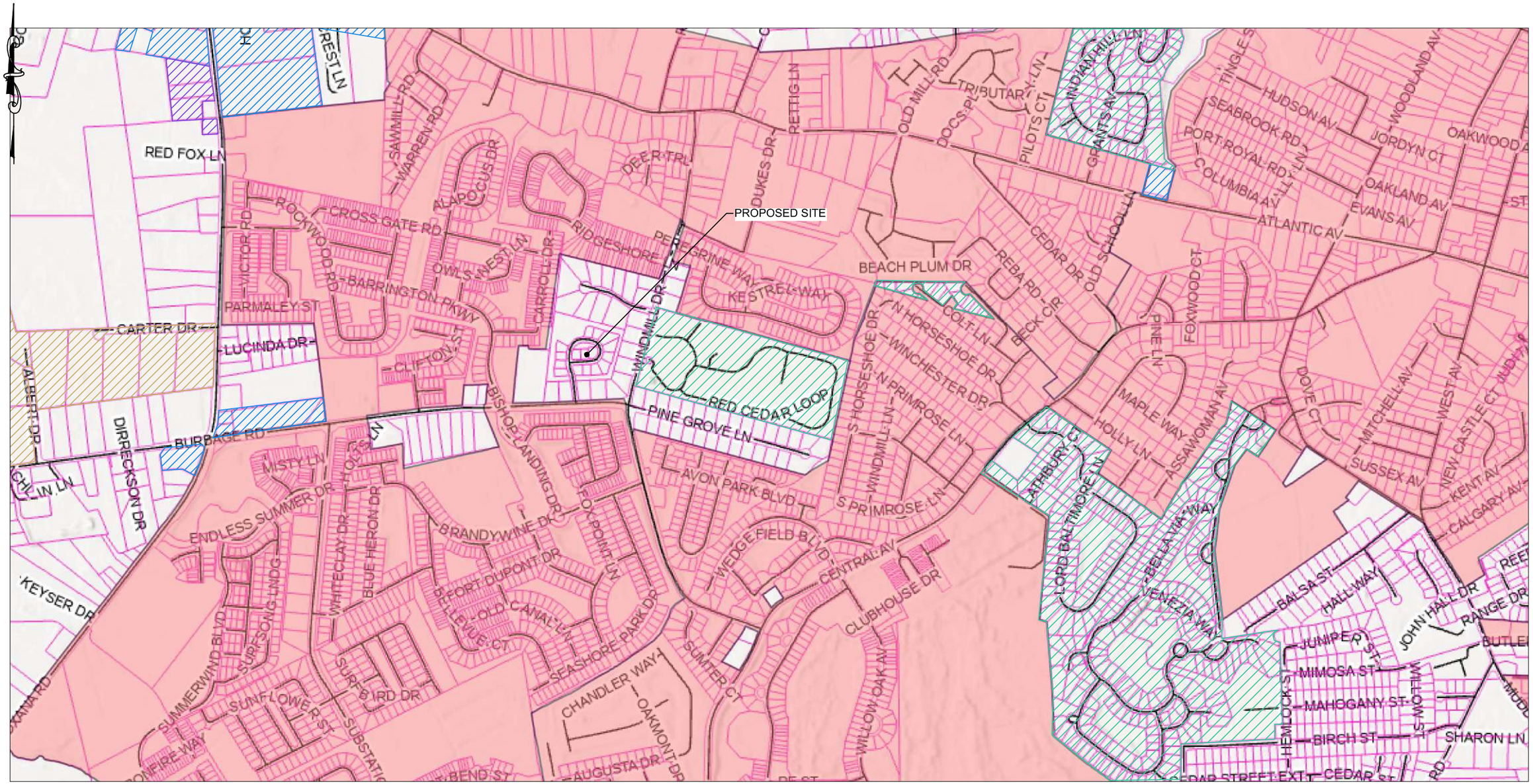
APPROVED BY: RHS

FILE: P23101-TD EXHIBIT

SHEET NO.: **TD-1**

# APPENDIX M

## MAP OF SURROUNDING COMMUNITIES




MR ZONING

AR-2 ZONING

C1 ZONING

AR-1 ZONING

CR-1 ZONING

MBTS BOUNDARY

# GLEN COVE 2
# SURROUNDING USE MAP

SUSSEX COUNTY, DELAWARE
BALTIMORE HUNDRED

DATE: 1/17/25

CIVIL ENGINEERING ASSOCIATES, LLC
ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 WEST MAIN STREET
MIDDLETOWN, DE 19709
(302) 376-8833
FAX (302) 376-8834
CEA-DE.COM

# APPENDIX N

## SUSSEX COUNTY SSCE COMPLETED FORM

CIVIL ENGINEERING ASSOCIATES
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 West Main Street
Middletown, DE 19709

cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

# GLEN COVE
# SEWER SERVICE CONCEPT EVALUATION
# SUSSEX COUNTY, DELAWARE

**Engineer:**
Civil Engineering Associates
55 W. Main Street
Middletown, De 19709
Scott Roberts
302-584-6632

**Developer:**
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055

**Project Name:**
Glen Cove 2

**Tax Maps:**
134-12.00-374.01, 134-12.00-3445.00 through 3460.00; 134-12.00-375.00

**Proposed EDUs:**
49 Single Family Units = 49 EDUs (1.0 EDU/SF Unit)

**Current Zoning:**
AR-1

**Proposed Zoning:**
MR

**Acreage:**
~12.32 Acres

# ENVIRONMENTAL ASSESSMENT
# &
# PUBLIC FACILITY EVALUATION REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
January 2025

_____
Seal

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# A. EXECUTIVE SUMMARY

## Introduction

This Report has been prepared in accordance with Chapter 115 – Zoning: Article XXV Supplementary Regulations, 194.3 Coastal Area of the Sussex County Code. This Report provides a summary of site-specific information and accompanies the Preliminary Plans submittal, dated April 30, 2024. This report is not required however the Applicant is voluntarily providing this information as they are proposing less than 50 units.

## Scope of Project:

The proposed project will include forty-nine (49) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 49 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by one (1) stormwater management area (Wet detention pond).

## B. ENGINEER'S REPORT

### Drainage and Stormwater Runoff

Stormwater quality will be met by managing the Resource Protection Event (RPv) and quantity management will be met by managing the Conveyance Event and the Flooding Event (Cv and Fv) this will be achieved through the proposed stormwater management area and will be denoted on the plans as Stormwater Management Area. The proposed Stormwater Management Area will be a wet detention pond that will collect all of the runoff from the site. It will discharge into an existing ditch that is in good working condition.

The runoff from the areas that are being developed will be collected by several methods. Road runoff will be collected by the proposed storm drain system which outlets into the proposed stormwater management area. The runoff from the proposed lots will also be collected and directed to the proposed stormwater management areas by downspouts or by grass lined swales.

### Potable Water

A connection to the existing 12-inch waterline at the intersection of Doves Landing and Burbage Road is expected. During the Sussex County approval process Water Plans will be submitted to Tidewater Utilities for approval as well. Once the Tidewater Utilities approves the connection, both domestic and fire flows will be provided.

Since 49 condominium units are being proposed an estimated consumption of 12,500 GPD is anticipated. (49 lots * 250 GPD = 12,250 GPD)

As it is expected to be served by the extension of the existing Tidewater Utilities facilities, no private wells are expected to be impacted.

### Wastewater Treatment and Disposal

The proposed site lies within an existing Sussex County Sanitary Sewer District, it is anticipated to connect and be served by an existing gravity sewer line situated within Burbage Road. Ordinance No. 38 Plans will be submitted to the County for approval.

As it is anticipated to be served by the extension of the existing gravity sewer line situated in the road, no impacts to the surrounding surface or ground waters are expected.

## Impacts to Surrounding Roadways

The Glen Cove development is proposed to contain 49 single family condominium units. Based upon the latest Institute of Transportation Engineers Traffic Generation Manual, a single-family home (Land Use 210) is anticipated to generate approximately 9.43 vehicle trips per day (1/2 entering the site, 1/2 leaving the site), and the site is anticipated to generate approximately 524 vehicle trips per day (262 entering, 262 leaving).

Per DelDOT's Service Level Evaluation Report (SLER), dated August 19, 2024, the project will generate less than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day and therefore the traffic impact was determined to be negligible. Due to this, an Area Wide Study (AWS) will be required in lieu of a Traffic Impact Study (TIS). Based upon the 2023 DelDOT Traffic Counts, Burbage Road currently carries 3,224 average annual daily vehicles within the project area. Therefore, it is anticipated that the Glen Cove development will not cause any adverse impacts to the surrounding road network.

## Endangered or Threatened Species

Field investigations were performed by Watershed Eco, LLC. on the Glen Cove and OT Collins parcels. Based upon field investigations, the existence of any endangered or threatened species is not expected. In addition, A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property.

## Preservation and Protection of Tidal and Non-Tidal Wetlands

A wetland delineation was performed by Watershed Eco Inc. in January 2024. Based on the delineation it was determined that approximately 0.20 Acres of wetlands exist on the site. Subsequently, there will be no disturbance of wetlands associated with development of this project. Per the Drainage and Buffer Ordinance, a wetland buffer will be established on the plans.

## Open Space and Buffers

Under the designed layout of the proposed Glen Cove development approximately 7.96 acres are provided as open space. The total area of the site is 12.32 acres, which produces 65% of provided open space.

In addition, forested buffer strips are proposed around the project site. These forested buffers strips will be composed of a mix of 70% deciduous shade trees and 30% evergreen trees. They will also follow the Sussex County code requirement of having a minimum total of 15 trees for every one-hundred-foot length of buffer.

## Proposed Public and Private Infrastructure

The surrounding properties are currently provided with sewer and water.

## Economic & Recreational Benefits

The proposed development is anticipated to provide several economic benefits including:

- Increase to the tax base of Sussex County.

The proposed development is anticipated to provide several recreational benefits including:

- Amenity area with pool.
- An aesthetic wet pond.

## Historic and Cultural Resources

There is no known presence of any historic or cultural resources listed on the National register of Historic Places at the site.

## Affirmation of Conformance with Sussex County Comprehensive Plan

The proposed development has been designed in accordance to the current Sussex County Comprehensive Plan. The site is located within the Coastal Area, a designated Growth Area, which is among the most desirable locations in Sussex County for new housing and the proposed multifamily use is permitted within this Future Land Use Designation. Furthermore, the site is located within a Level 2 Investment Area, where growth is anticipated by local, county, and State plans, and the project is therefore consistent with the 2020 Strategies for State Policies and Spending.

## Actions Taken to Mitigate Proposed Impacts of the Development

All mitigation measures, where required, have been discussed in their foregoing, respective section.

# DRAINAGE ASSESSMENT REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
January 2025

_____
Seal

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E. FOREST STAND AERIAL IMAGERY

F. IPAC LETTER

G. WETLAND DELINEATION – COLLINS PROPERTY

H. WETLAND INVESTIGATION SUMMARY LETTER

## A. EXECUTIVE SUMMARY

Sussex County Code Section 115-193-F specifically states, “If a resource buffer abuts or contains features such as ephemeral, intermittent or perennial streams which are not part of an established tax ditch and which convey drainage from or through a site proposed for development, a drainage assessment report shall be prepared by a registered Delaware Professional Engineer.” The wetland resource buffer directly abuts the Derickson Canal Tax Ditch system. Therefore, it is our opinion that the Drainage Assessment Report is not required due to the resource buffer’s proximity to the tax ditch.

However, we are providing this Drainage Assessment Report on a voluntary basis for Sussex County’s use. This Drainage Assessment Report has been prepared in accordance with Sussex County Code Section 115-193-F and the county provided checklist.

## B. PROJECT NARRATIVE

### Introduction:

The proposed Glen Cove project will include forty-nine (49) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 49 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by one (1) stormwater management area (Wet detention pond).

### Existing Conditions:

The existing properties are located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The property is bound by existing single-family homes on the north, south, and east, and the Bishops Landing Community to the west. The project consists of approximately 12.32 acres and is primarily woodlands with some grassed areas. The existing woodlands are not mature, as referenced in the Forest Stand History section below. There are existing wetlands to the northwest and tax ditches located along the perimeter of the site. The tax ditches outfall west offsite to the Derrickson Ditch via offsite tax ditches.

### Field Investigations and Findings

Field investigations were performed by Watershed Eco, LLC. in September 2021 on the Glen Cove parcel. The site is surrounded by the Derrickson Canal Tax Ditch which appears to be ephemeral in nature. There are no other wetlands or drainage conveyance features within the subject property. An additional wetland investigation was conducted by Watershed Eco, LLC. on the adjacent Collins property to the west on January 22, 2024. This investigation identified an intermittent ditch and palustrine forested wetlands which drain off-site to the north.

No signs of stream bank erosion, debris, or any impediments to conveyance were observed throughout the surrounding tax ditches. In addition, no sand or gravel deposits were observed. As such, no remedial action is necessary regarding the structural integrity of the surrounding tax ditch system. State and federal permitting may be required for the ditch crossing for the connector

road to the west. See Section C. regarding documentation of the investigations.

## C. SITE INVESTIGATION AND DOCUMENTATION

### Photographs:

Photographs of the site are provided in Appendix A.

### Channel Cross-Sections:

Cross-sections of the surrounding tax ditch are provided in Appendix B.

## D. ENVIRONMENTAL CONDITIONS AND HABITAT ASSESSMENT REPORT

### Land Types:

Active Agricultural Fields, hedgerows, drainage ditches, and mixed deciduous/coniferous forest.

### Period of Investigation:

Glen Cove: Wetland Investigation-September 20, 2021

Collins Property: Wetland Investigation-January 22, 2024

### Soil Conditions:

According to the USDA Soil Survey, the majority of the subject property is underlain with well drained Rosedale loamy sand (RoA) with lesser areas of poorly drained Mullica-Berryland complex (MuA) and Klej loamy sand (KsA) in the western portion of the property. The perimeter ditches were likely excavated to facilitate drainage of the property.

Additional Geo-technical borings were conducted by Hardin Kight Associates, Inc. in 2021. Based on the soil boring logs, the site consists of loamy sand soils with seasonal high groundwater ranging from 4.7 to 6.2 feet below the existing surface. The geotechnical investigation report is provided in Appendix D.

### Forest Stand History:

The Glen Cove parcel is predominantly wooded with mixed deciduous/coniferous forest cover. Based on aerial imagery the western portion of the property was cleared around 2012 and now consists of sapling loblolly pine and sweetgum. The eastern portion of the property is dominated by (12-24"DBH) northern red oak, southern red oak, and white oak with red maple, sassafras, and American holly in the understory. Shrub/herbaceous species consisted of highbush blueberry, sweet pepperbush, lowbush blueberry, Virginia creeper, and common greenbrier. A small, wooded area was observed in the northern portion of the Collins property. This area was dominated by 12-18" DBH loblolly pine and sweetgum. The understory consisted of red maple and black gum. Common shrub species observed included lowbush blueberry, common greenbrier, sweet pepperbush, and loblolly pine saplings.

Based on historical aerial imagery, neither parcel is part of a larger contiguous forested area. The on-site forest would not qualify as Forest Interior Dwelling Bird Habitat and would not be classified as mature or old growth. Aerial imagery is provided in Appendix E.

## Wetland Identification:

As stated above, there is evidence of wetlands existing on the project site. Watershed Eco, LLC. identified and flagged a palustrine forested wetland on the Collins property during the January 2025 field investigation. The area of wetlands is approximately 0.20 acres. The wetland directly abuts an intermittent ditch and drains off-site to the north.

Per Sussex County Code, the wetland area will be protected by a future Resource Buffer. Access to the resource buffer and wetland area will be available at the end of Private Drive 1 for future maintenance as illustrated on the Preliminary Plans. A Resource Buffer Management Report has been created to establish the protocol for protection of the resource.

Please see Appendix G for the Wetland Delineation – Collins Property and Appendix H for the Wetland Investigation Summary Letter performed by Watershed Eco, LLC.

## Endangered Species:

A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property. A copy of the IPAC is provided in Appendix F.

## E. EXISTING CONDITIONS MAPPING

Please see Appendix C for Existing Conditions Mapping.

# APPENDIX A

## SITE PHOTOGRAPHS

GLEN COVE PROPERTY

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

Photo 3: Man-made drainage ditch along southern property boundary, facing east.

Photo 4: Man-made drainage ditch along southern property boundary, facing west.

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.

Photo 10: Upland forest cover in the northeastern portion of the property.

OT COLLINS PROPERTY

PHOTO 1: View looking east at southern portion of the property bordering Burbage Road.

PHOTO 2: View looking west at mowed field area in the southern portion of the property.

PHOTO 3: View looking north across mowed field in the central portion of the property.

PHOTO 4: View looking southeast across mowed field from the northwestern portion of the property.

PHOTO 5: Forest cover in the northwestern portion of the property.

PHOTO 6: Forested wetland in the northeastern portion of the property looking west.

PHOTO 7: Drainage ditch along the eastern boundary of the property.

PHOTO 8: View looking west at drainage ditch along the northern boundary of the property.

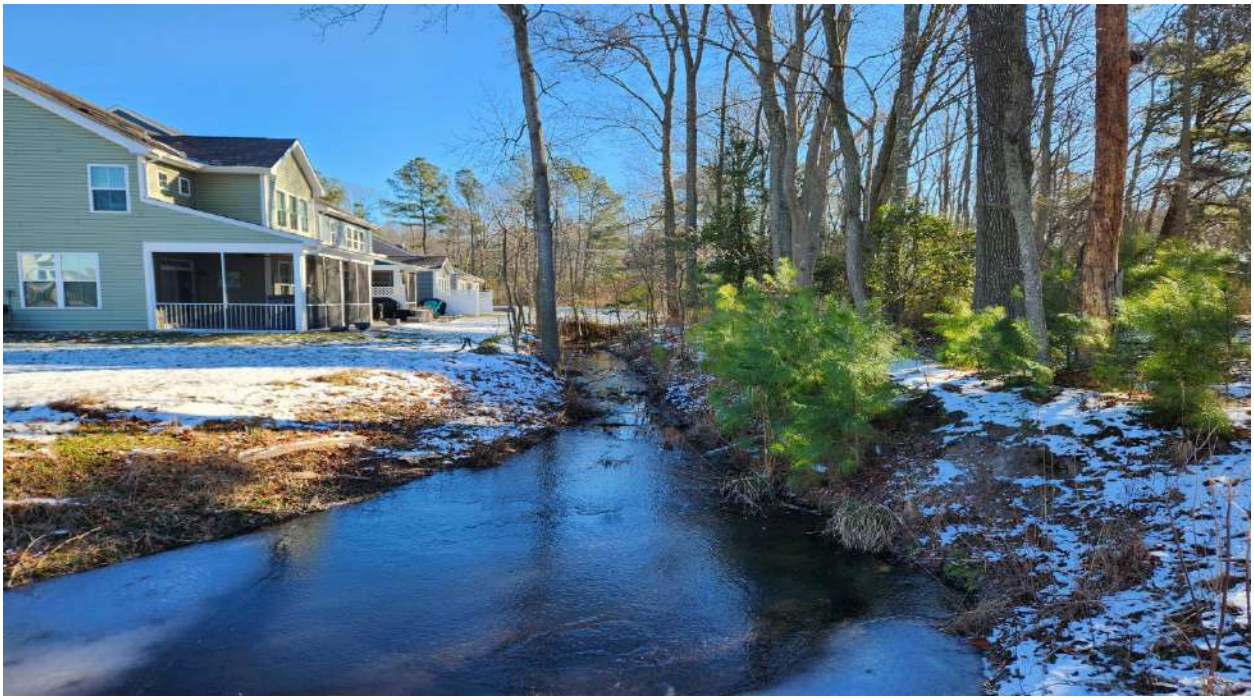

PHOTO 9: Residential properties north of the subject property, looking east.

PHOTO 10: View looking south across mowed field area bordering woodlands along the eastern property boundary.

# APPENDIX B

## DITCH CROSS SECTIONS

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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# DITCH CROSS-SECTIONS
## PLAN VIEW
FOR
# GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

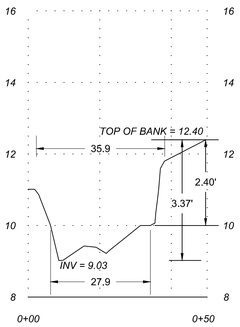
DATE: APRIL 30, 2024

DESIGNED BY:

APPROVED BY: RHS

FILE: P23101 - CONST DITCH

SHEET NO.: **CS-1**

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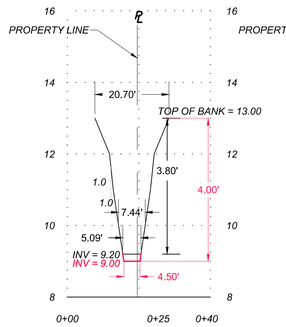


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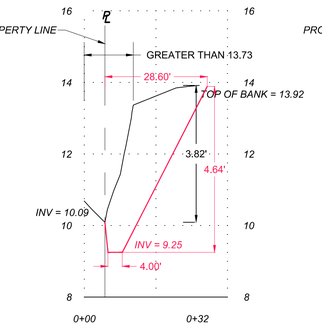


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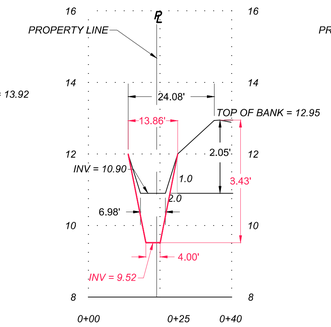


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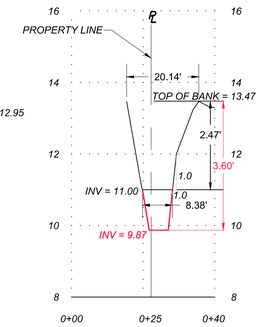


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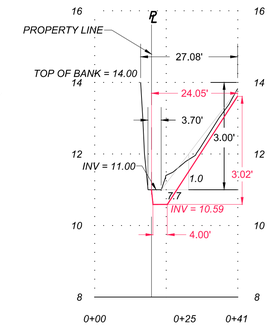


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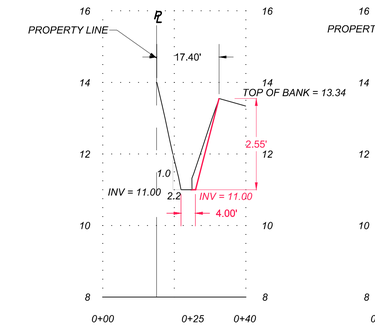


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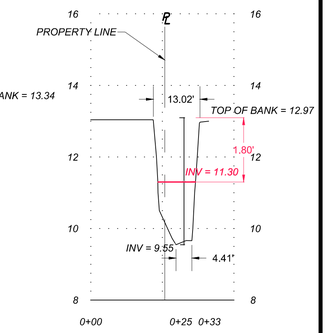


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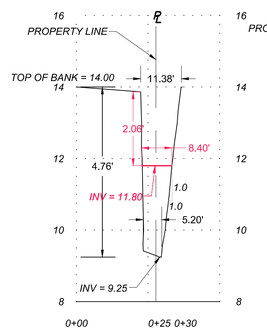


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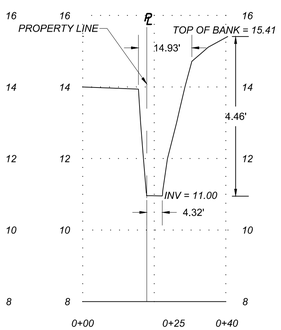


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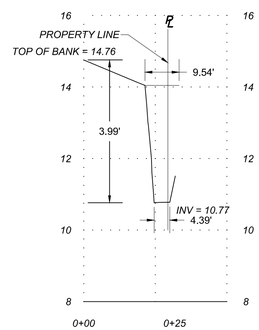


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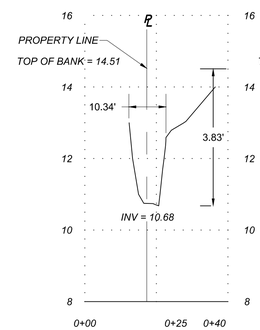


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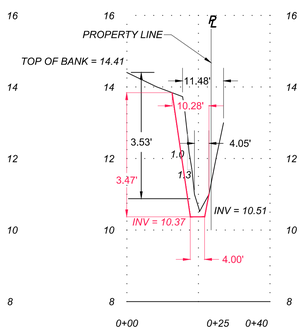


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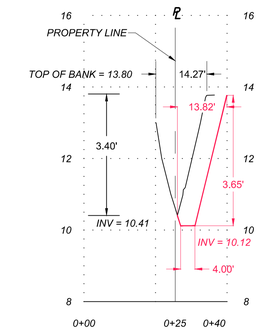


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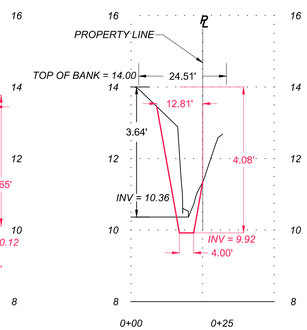


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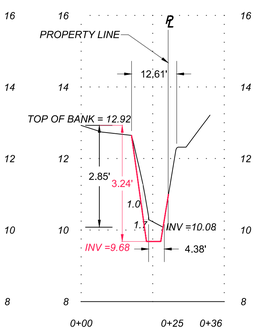


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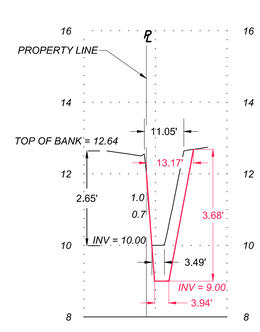


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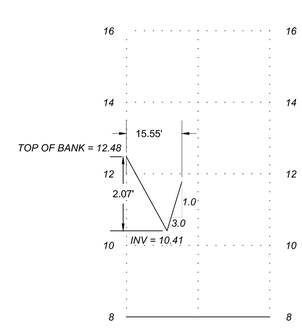


PROFILE
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SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
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# DITCH CROSS-SECTIONS

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY:
APPROVED BY: RHS
FILE: CONST-DITCH
SHEET NO.: CS-2

# APPENDIX C

## EXISTING CONDITIONS MAPPING

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

# APPENDIX D

## GEOTECHNICAL INVESTIGATION LETTER

HARDIN
KIGHT
ASSOCIATES,
INC.

December 30, 2021 Our Job Number: 21855

**GULFSTREAM DEVELOPMENT, LLC**
**27 Atlantic Avenue**
**Ocean View, Delaware 19970**

Attention: Mr. Bob Harris

Reference: Glen Cove II
SWM Geotechnical Investigation
Sussex County – Millville, Delaware

Dear Mr. Harris:

As requested by Mr. Al Ruble, we have completed a limited subsurface investigation of the soil and groundwater conditions for the stormwater management (SWM) pond proposed for construction in the Glen II Community, planned for development in Millville, Delaware. This investigation was performed to determine the depth to estimated seasonal high groundwater (SHG) and analyze the characteristics of the underlying soils with respect to the design of the stormwater management pond. This investigation included drilling five (5) hand auger probes, and review of available geological and soil survey literature for the subject site. Our findings and analysis are presented herein.

For this investigation we were provided with an electronic copy of a site plan entitled *Soil Testing Locations for Glen Cove II*, prepared by Civil Engineering Associates (CEA), dated November 1, 2021. The site plan illustrates the layout of the proposed development and roadways, the location of the SWM Pond, and includes existing and proposed grades. The site plan was used in preparation of this report.

## SITE DESCRIPTION

The site is located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The site consists of approximately 10 acres, most of which is wooded and contains light underbrush. The property is bound by existing single-family homes on the north, south and east, and the Bishops Landing Community to the west. The SWM Pond is proposed in the northwest corner of the site.

From review of the ground surface elevations provided, topographically, the site is relatively flat in surface elevation, at approximately 13 feet above Mean Sea Level (MSL). The natural site surface drainage is generally from south to north. At the time of this investigation, the ground surface was dry and stable.

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## PROPOSED CONSTRUCITON

One SWM Pond is proposed. The pond is proposed as a wet pond, with a top of berm at El. 13 and a pond bottom at El. 6. The pond will receive water from 2 stormwater pipes, and includes an outfall, discharging into an existing drainage ditch located along the west property boundary. From review of the proposed grades shown on the previously referenced site plan, excavations of approximately 7 to 8 feet will be required for pond construction.

## INVESTIGATION

In order to evaluate the soil and groundwater conditions in the area of the pond, five (5) hand-auger probes were drilled. The auger probes were advanced within the proposed SWM ponds at locations established by survey, provided by CEA. The auger probes are labeled as Auger Probes T-1 through T-5. Ground surface elevations were provided by CEA at each staked location. The auger probes were drilled to depths ranging from 6.5 to 8 feet below the existing ground surface. The soil conditions encountered were visually identified in general accordance with the Unified Soil Classification System (USCS), and United States Department of Agriculture (USDA) classification system. The locations of the auger probes are shown on the attached Auger Probe Location Plan, labeled as Figure 1, which is an altered version of the previously referenced site plan prepared by CEA.

Additionally, we have reviewed the monthly depth to groundwater readings for Monitoring Well Qi31-03, taken from the *Delaware Geological Survey* website. The depth to groundwater was at the normal seasonal high in January 2021. The depth to groundwater at Well Qi31-01, located approximately 5 miles west of the site, was approximately 5 feet below the normal SHG in September 2021. The monthly well report is attached for your reference.

## GEOLOGY

Based on the *Geologic Map of the Bethany Beach and Assawoman Bay Quadrangles GM-18* (Ramsey and Tomlinson, 2012), the the geologic unit underlying the site at the surface is the Ironshire Formation.

The Ironshire Formation is described as pale yellow to light gray, fine to very coarse sand. Very coarse sand to fine gravel are a common constituent of the unit, especially near its base. Thin, light gray, silty clay beds occur but are not present at all localities. Based on the profile provided in the above referenced map, it unconformably overlies the Omar Formation. Where the Ironshire Formation overlies the Omar Formation, the boundary is not always clear, but is commonly marked by a coarse sand or pebbly sand at the base of the Ironshire Formation. The estimated thickness at the site location is about 20 feet thick.

The top of the Omar formation is described as a gray to pale yellow, fine to very fine, clean to slightly silty Sand, with rare very fine beds of silt. These silty sands are underlain by a gray to light greenish gray, silty clay to silty fine sand with scattered thin beds of oyster shells. In places, there is a 2- to 10-foot thick bed of medium to coarse, relatively clean sand

underlying the shelly, silty clay. Underlying the shelly, silty clay or the medium to coarse sand, where present, in the areas where the Omar is thickest, there is a 10- to 40-foot-thick layer of greenish-gray, compact, silty clay to clayey silt. Beneath this silty clay, if present, is a 3- to 5-foot-thick bed of very dark-gray to black, organic-rich, sandy silt to silty clay. The bottom, up to 5 feet of the unit, normally consists of 1 to 3 feet of gray to very dark-gray fine to coarse silty sand with scattered laminae, to thin beds of peat composed of sand to gravel-size plant fragments, overlying light to dark gray, coarse to very coarse, sand.

## SOIL SURVEY

The information in this section is from the *Web Soil Survey* which was accessed on December 29, 2021. Soil Survey information can be used for general planning, onsite investigation is needed to supplement this information. Soil Survey information is limited to the upper most 6 feet in any given location.

Based on the Sussex County, Delaware survey the soils units on site are:

- The Klej loamy sand, 0 to 2 percent slopes (KsA) has one major component, the Klej component which makes up 70 percent of the unit. The minor components in the Klej loamy sand are the: Galloway (10%), Berryland, drained (5%), Hammonton (5%), Hurlock, drained (5%), and Runclint (5%). This soil does not meet hydric criteria.

- The Mullica-Berryland complex, 0 to 2 percent slopes (MuA) has four major components: the Mullica, drained (26%), the Mullica, undrained (16%), the Berryland, drained (24%), and the Berryland, undrained (14%). The minor components are: Klej (10%), Askecksy, drained (5%), and Galloway (5%). This soil meets hydric criteria.

- Rosedale loamy sand, 0 to 2 percent slopes, (RoA). It has one major component, the Rosedale (75%). The minor components include: Evesboro (10%), Klej (5%), Hambrook (5%), and Galloway (5%). This soil does not meet hydric criteria.

The following descriptions, properties, and limitations are based on Sussex County, Delaware survey area data, Version 22, August 26, 2021, with aerial images photographed between November 21, 2018 and March 12, 2019. The major components (greater than 10%) are described below. The minor components are not addressed in this report.

The Klej component parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. The natural drainage class is described as somewhat poorly drained with water movement in the most restrictive layer being moderately high. It has an apparent water table that exists at 12 inches during February. This soil typically does not flood or pond. The normal upper limit of the water table from June through October is greater than 6.0 feet. It typically has a seasonal upper limit of water saturation between 0.8 to 1.7 feet from December to April. The pH is typically between 4.3 and 5.5, and the organic matter content in the surface horizon is about 0 percent.

The Mullica parent material consists of sandy and loamy fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content in the surface horizon is about 16 percent. The pH is typically between 4.0 and 6.5. The shrink-swell potential is low. The potential for frost action is low.

The drained component has rare ponding events throughout the year. It typically has a seasonal zone of water saturation from January through March between 0 and 8 inches. The undrained component has frequent ponding events for long periods during January through April, and occasionally during the remaining part of the year. It typically has a seasonal zone of water saturation from December through April, between 0 and 8 inches. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 66 percent.

The Berryland, parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content of the surface horizon is about 11 percent. The pH is typically between 4.3 and 6.5. The shrink-swell potential is low as is the potential for frost action.

The drained component has rare ponding events during November through May. It typically has a seasonal zone of water saturation between 0 and 8-inches during January, February, and March. The undrained component has frequent ponding events for long periods during January through April, and occasionally for the remaining part of the year. It typically has a seasonal zone of water saturation between 0 and 8 inches, from December through May. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 68 percent.

The Rosedale parent material consists of sandy eolian deposits over fluviomarine sediments. The undisturbed hydrologic soil group is A. The natural drainage class is described as well drained. Water movement in the most restrictive layer is moderately high. This unit is typically not flooded, nor does it pond. The upper limit of the water table is greater than 6 feet, and typically has a seasonal upper limit of water saturation between 3.3 to 6.0 feet during January, February, March, and April. The pH is typically between 4.3 and 6.5. Organic matter content in the surface horizon is about 1 percent.

The following limitations and restrictions described below may be mitigated by following the recommendations provided in this report and our recommendations during construction.

| Limitations for | Klej | Mullica | Berryland | Rosedale |
|---|---|---|---|---|
| Infiltration Systems | Severely Limited<br>Wetness<br>adsorptive capacity | Severely Limited<br>wetness<br>water movement | Severely Limited<br>wetness<br>water movement | Deep -Severely<br>Shallow – Somewhat<br>wetness<br>water movement<br>adsorptive capacity |
| Unlined Retention Systems | Somewhat Limited<br>water movement<br>wetness interfering with installation | Somewhat Limited<br>wetness interferes with installation<br>water movement | Somewhat Limited<br>water movement<br>wetness interferes with installation | Somewhat Limited<br>wetness interferes with installation<br>insufficient groundwater<br>water movement |
| Lined Retention Systems | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface,<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement<br>insufficient groundwater |
| Embankments | Very Limited<br>depth to saturated zone<br>piping<br>seepage | Very Limited<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Very Limited<br>piping<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Somewhat Limited<br>Seepage<br>depth to saturated zone |
| Aquafer Fed Excavated Ponds | Very Limited<br>Unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls<br>Depth to saturated zone |
| Pond Reservoir Areas | Very Limited<br>seepage | Very Limited<br>Seepage | Very Limited<br>seepage | Very Limited<br>seepage |
| Shallow Excavations | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls | Very Limited<br>depth to saturated zone<br>unstable excavation walls<br>Undrained areas are subject to ponding. | Very Limited<br>depth to saturated zone | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls |
| Shrink-swell Potential | Low | Low | Low | Low |
| Frost Action Potential | Low | Low | Low | Low |
| Corrosion Risk Uncoated Steel | High | High | High | Moderate |
| Corrosion Risk Concrete | High | High | High | High |

## FINDINGS

The findings at the auger probes are consistent with the geology and soil survey as described above. Approximately 3 to 20 inches of topsoil was present at the existing ground surface. Below the topsoil, the soil conditions consist of sand with varying amounts of silt. The soils generally consist of material visually classified as predominately Poorly-graded Sand with Trace Silt (USCS SP/SM; USDA Loamy Sand), Poorly-graded Sand with Silt (USCS SM; USDA Sandy Loam), Silt (USCS ML; USDA Silt Loam), and Poorly-graded Sand (USCS SP;

USDA Sand). Detailed descriptions of the soil conditions encountered can be found on the attached auger probe logs.

At the time of drilling the probes, water was encountered at a depth ranging from approximately 5 to 6 feet below the existing ground surface. Subsequent groundwater readings were taken after 7 days, with groundwater recorded at depths of 4.7 to 6.2 feet below the existing site surface, corresponding to elevations ranging from 7.5 to 8.4 feet above MSL.

**ANALYSIS / DISCUSSION**

Based on our findings, the seasonal high groundwater (SHG) is estimated to be approximately 2.7 to 4.5 feet below the existing site surface, corresponding to approximately elevation 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Our estimate of the SHG at the auger probe locations are based on the field measurements of the depth to groundwater, soil coloring and mottling, and should be considered approximate. The results of the groundwater readings and Hardin-Kight Associates professional opinion of the estimated SHG depth are summarized as follows:

| Auger Probe Number | Existing Surface Elevation (MSL) | Depth To Water Below Surface At Completion (Ft.) | Depth To Water Below Surface After 7 Days (Ft. - MSL) | Estimated Depth Below Surface to SHG (Ft. - MSL) | Estimated Depth Below Surface To Normal Water (Ft. – MSL) |
|---|---|---|---|---|---|
| T-1 | 13.32 | 6.25 | 5.71 – 7.61 | 3.3 – 10.0 | 4.0 – 9.3 |
| T-2 | 12.59 | 5.00 | 4.75 – 7.84 | 3.0 – 9.6 | 3.5 – 9.1 |
| T-3 | 12.76 | 5.50 | 5.26 – 7.50 | 2.7 – 10.0 | 3.5 – 9.3 |
| T-4 | 12.85 | 5.75 | 5.30 – 7.55 | 3.0 – 9.8 | 4.5 – 8.9 |
| T-5 | 14.64 | 5.25 | 6.19 – 8.45 | 4.5 – 10.1 | 5.0 – 9.6 |

Considering that the normal SHG is estimated to be within a few feet of the existing site surface, wet pond construction is feasible. Based on our findings, we do not anticipate that an impervious liner will be required to maintain water within a few feet of the existing surface. Although, seasonal groundwater variations of approximately 2 feet should be anticipated between the traditional wet and dry seasons.

From our analysis, and assuming wet pond construction, the groundwater levels found on this site will likely be above the pond bottom during construction. The contractor should be prepared to control groundwater during pond excavation. Cut subgrades below the groundwater will be susceptible to instability and softening. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

**PRELIMINARY RECOMMENDATIONS**

In consideration of the above data, we have prepared the following preliminary recommendations for your review and consideration. These recommendations are considered preliminary, pending our review of the final grading plans and construction drawings. Once the grading plans and construction drawings are finalized, our office should be contacted for additional review and comment.

1. We recommend that wet pond storage practices be used for stormwater collection on this site.

2. We recommend that the SWM ponds be designed and constructed in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

3. We recommend that both permanent fill and cut slopes be constructed on a maximum gradient of 3:1 (horizontal to vertical). Flatter slopes are suggested where possible to aid in the establishment of vegetative cover, reduce the potential for erosion, and facilitate maintenance.

4. We recommend that the contractor be prepared to control groundwater during pond basin excavation.

5. We recommend that the SWM pond excavation be monitored by Hardin-Kight Associates, Inc. (HKA) for slope seepage and stability. If slope seepage resulting in slope instability is observed, supplemental stabilization practices (ie; underdrains, drainage blankets, and rip-rap) may be required. HKA will provide recommendations and details during construction, as needed.

6. We recommend that the material proposed for use backfill placed around stormwater inflow and outfall pipes, meet the USC classification of SP, SM SP/SM, SC, CL, CL/ML or CH, be free of deleterious materials, and be approved by Hardin-Kight Associates, Inc. (HKA).

7. We recommend that the pipe trench backfill be placed in uniform 8-inch thick layers and be compacted to a minimum of 95% of the maximum dry density as determined in accordance with the standard moisture density relationship test (ASTM D-698/AASHTO T99).

8. We recommend that each layer of trench backfill, be tested and approved prior to placement of the succeeding layer. We recommend that fill which fails to meet the minimum compaction requirements be compacted and reworked, until satisfactory compaction is obtained.

9. We recommend that the construction of the SWM Ponds be monitored by HKA.

## CONCLUSIONS

Based on our findings, the SHG at the auger probe locations is estimated to be at an elevation of approximately 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Groundwater will likely be encountered above the pond bottom during construction. The contractor should be prepared to control groundwater during pond basin excavation. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378,* latest editions.

## LIMITATIONS

This preliminary report was prepared in accordance with generally accepted practice for geotechnical engineering in this area. It is intended for the use of the client for the specific site, as shown on the Auger Probe Location Plan.

The soil and water conditions discussed herein represent the conditions encountered at the locations of the exploratory auger probes as shown on the Auger Probe Location Plan. Variations in the soils and groundwater between the auger probe locations, and below the depths explored, should be anticipated.

A copy of the auger probe logs and location plan are enclosed for your reference. If you have any questions concerning this report, or if we can be of any further assistance at this time, please feel free to contact us.

Very truly yours,

**HARDIN-KIGHT ASSOCIATES, INC**

Paul M. Till

Justin A. Frizzell, P.E.

JUSTIN AMASA FRIZZELL
LICENSE
No. 16715
DELAWARE
PROFESSIONAL ENGINEER

Cc: Al Ruble – Awruble@aol.com
Ron Sutton - CEA

# APPENDIX E

## FOREST STAND AERIAL IMAGERY

1937 Aerial Photograph.

1954 Aerial Photograph.

1968 Aerial Photograph.

1992 Aerial Photograph.

1997 Aerial Photograph.

2002 Aerial Photograph.

Glen Cove

Sussex County, DE

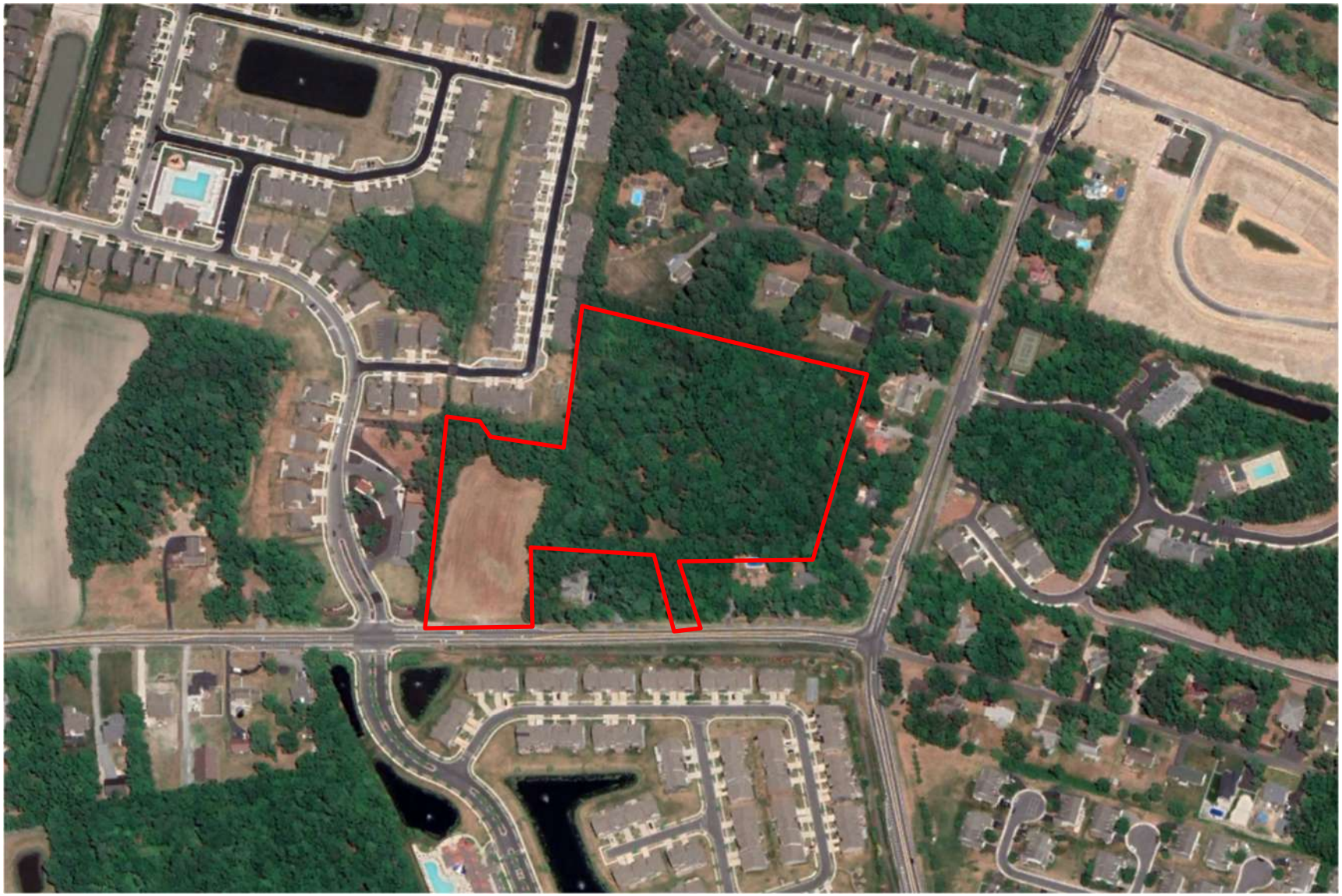
2012 Aerial Photograph

Glen Cove Sussex County, DE

2017 Aerial Photograph

Glen Cove

Sussex County, DE



2021 Aerial Photograph

Glen Cove

Sussex County, DE

2024 Aerial Photograph

# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

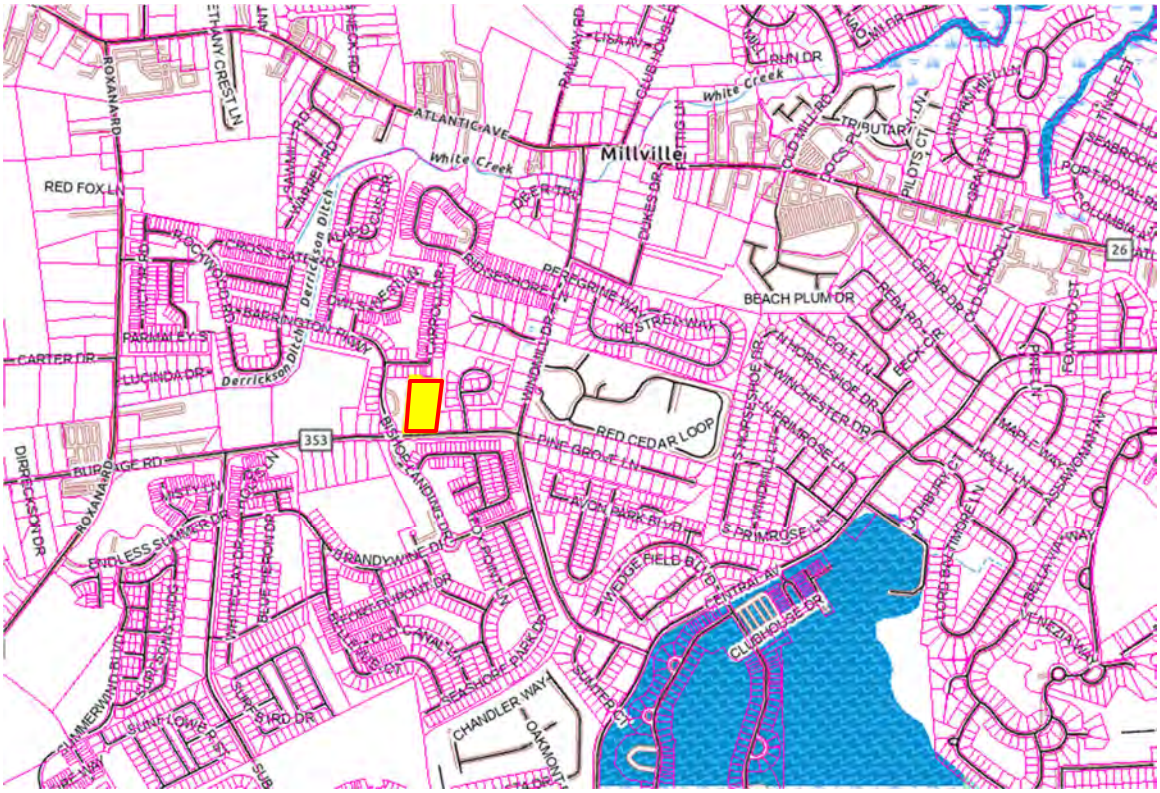



Figure 1: Location Map

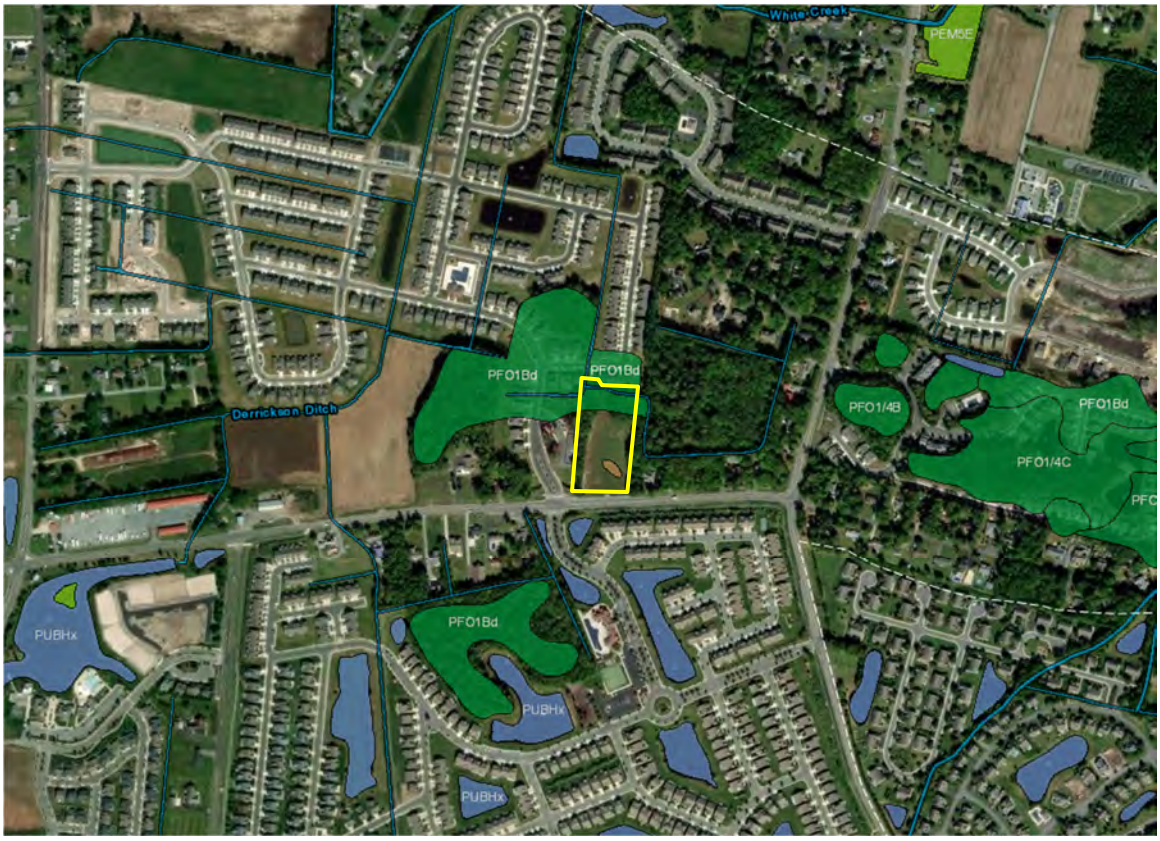



Figure 2: National Wetland Inventory Map.

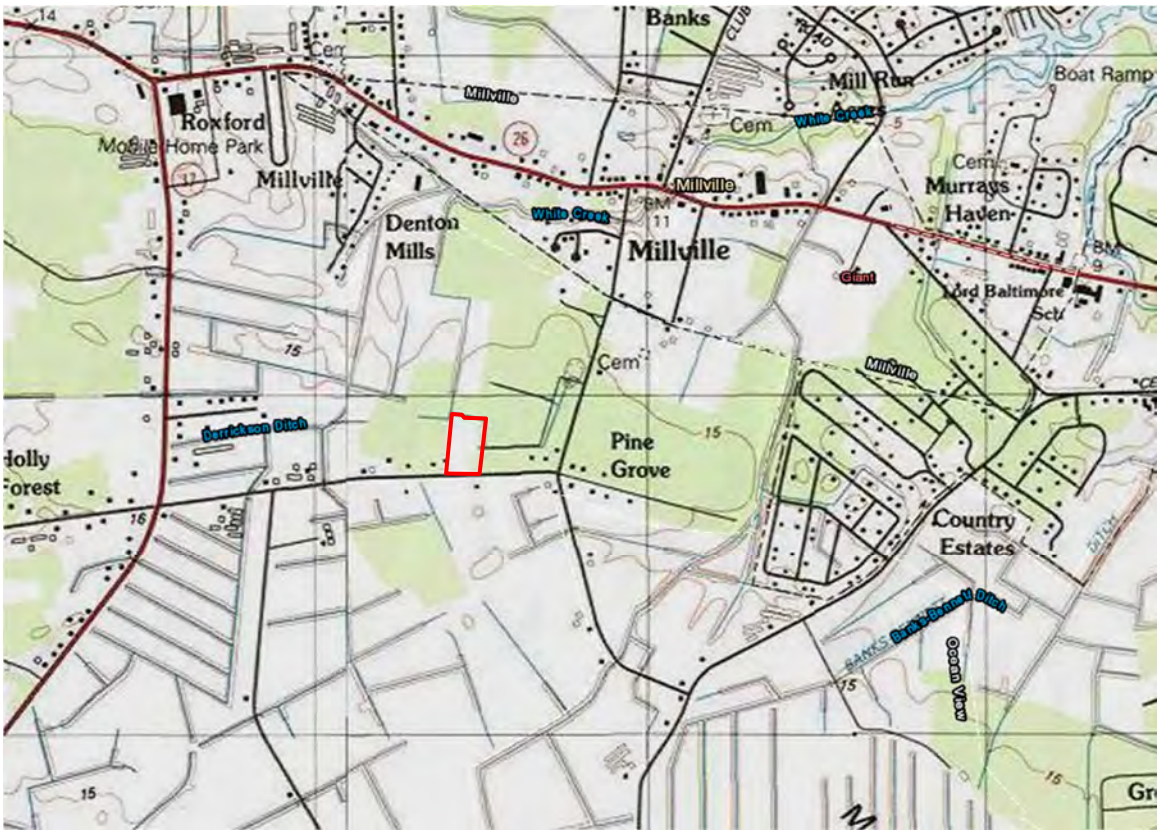



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

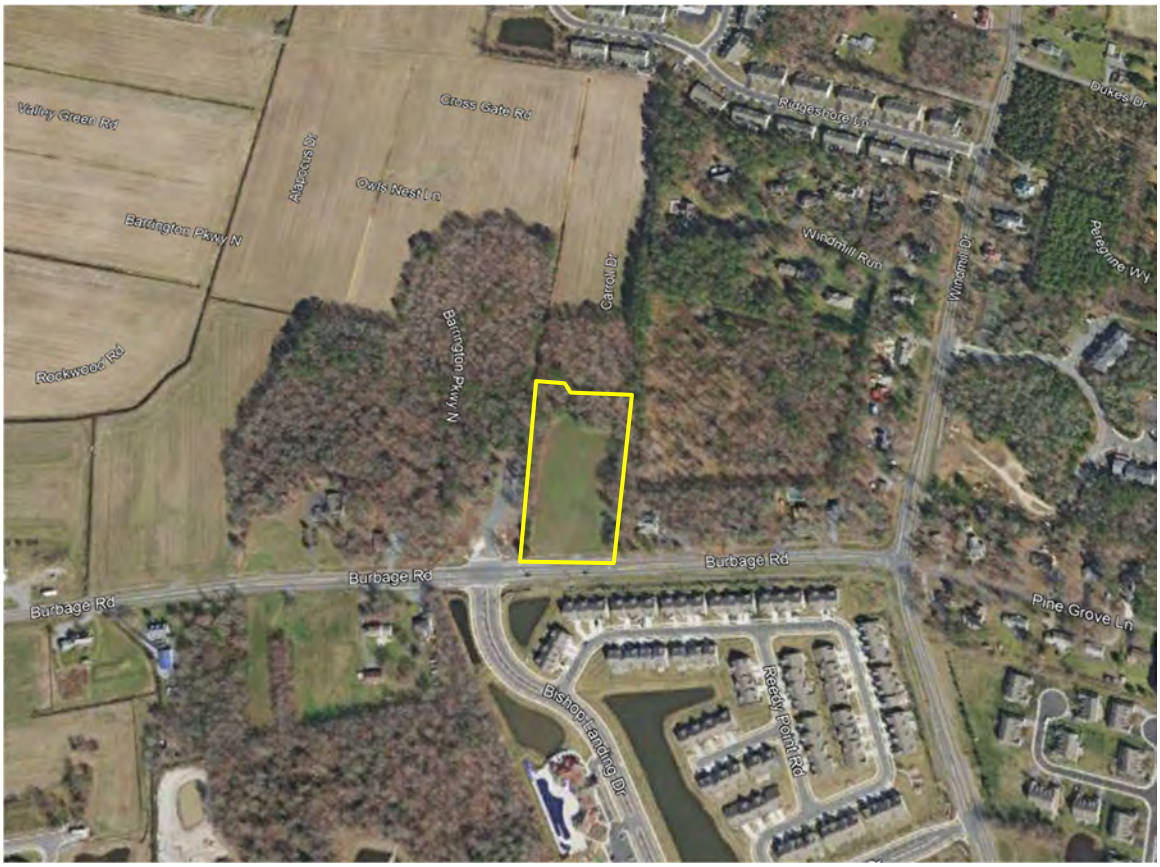



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

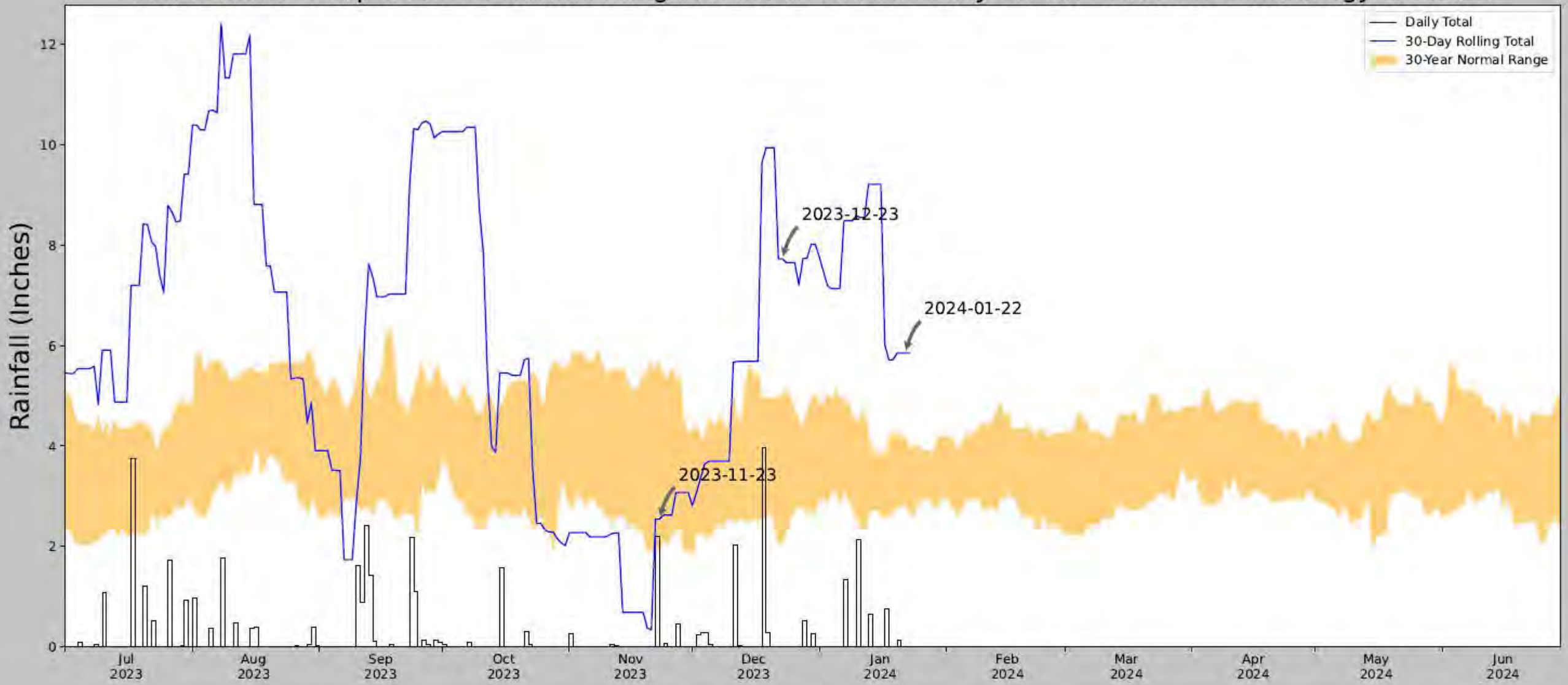
View looking west at intermittent ditch at the northwestern boundary of the property.

Intermittent ditch draining northerly, off-site.

# Appendices

Collins Property
Wetland Delineation Map
Legend
Flag ID#
Property Boundary
Waters
Wetlands
Barrington Pkwy N
Burbage Rd
Burbage Rd
Burbage Rd
Google Earth
Image © 2024 Airbus
N
200 ft

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ___ No ✓ |
| Hydric Soil Present? | Yes ___ | No ✓ | |
| Wetland Hydrology Present? | Yes ___ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

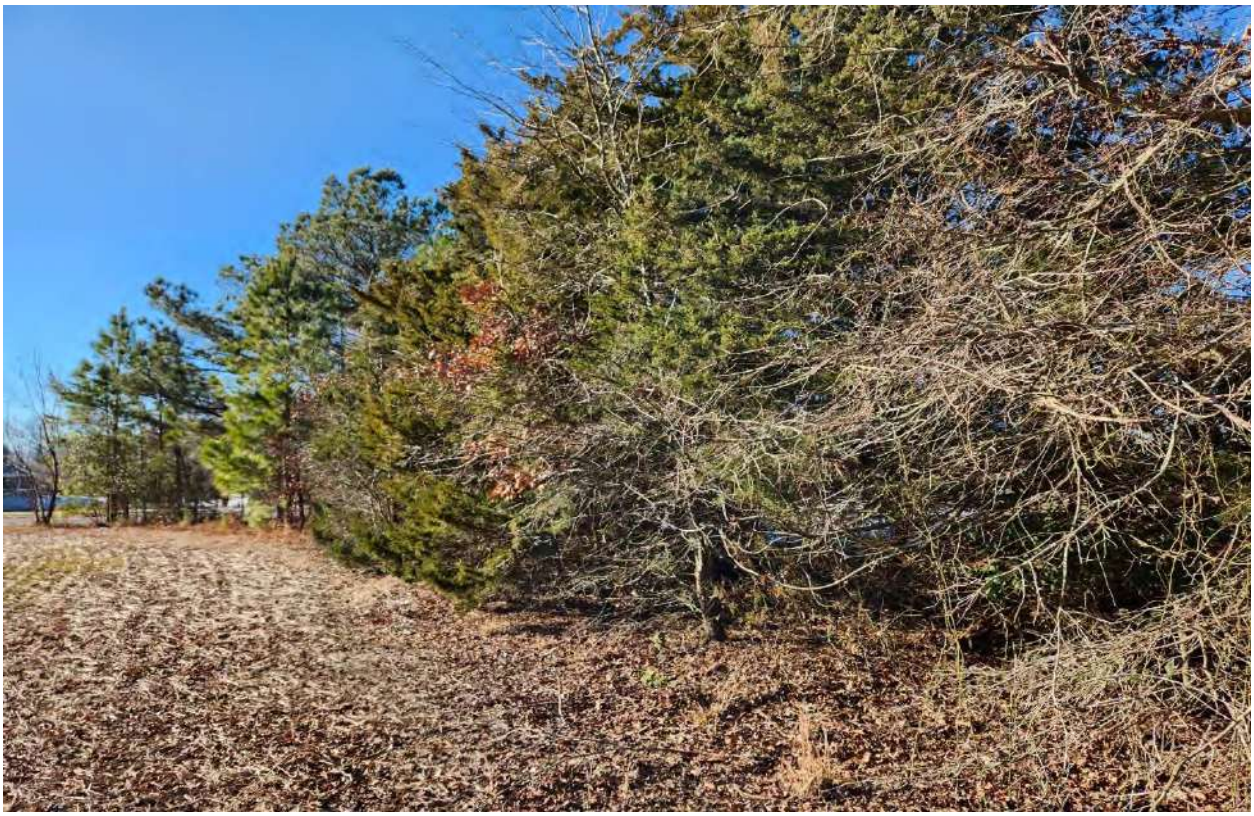
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

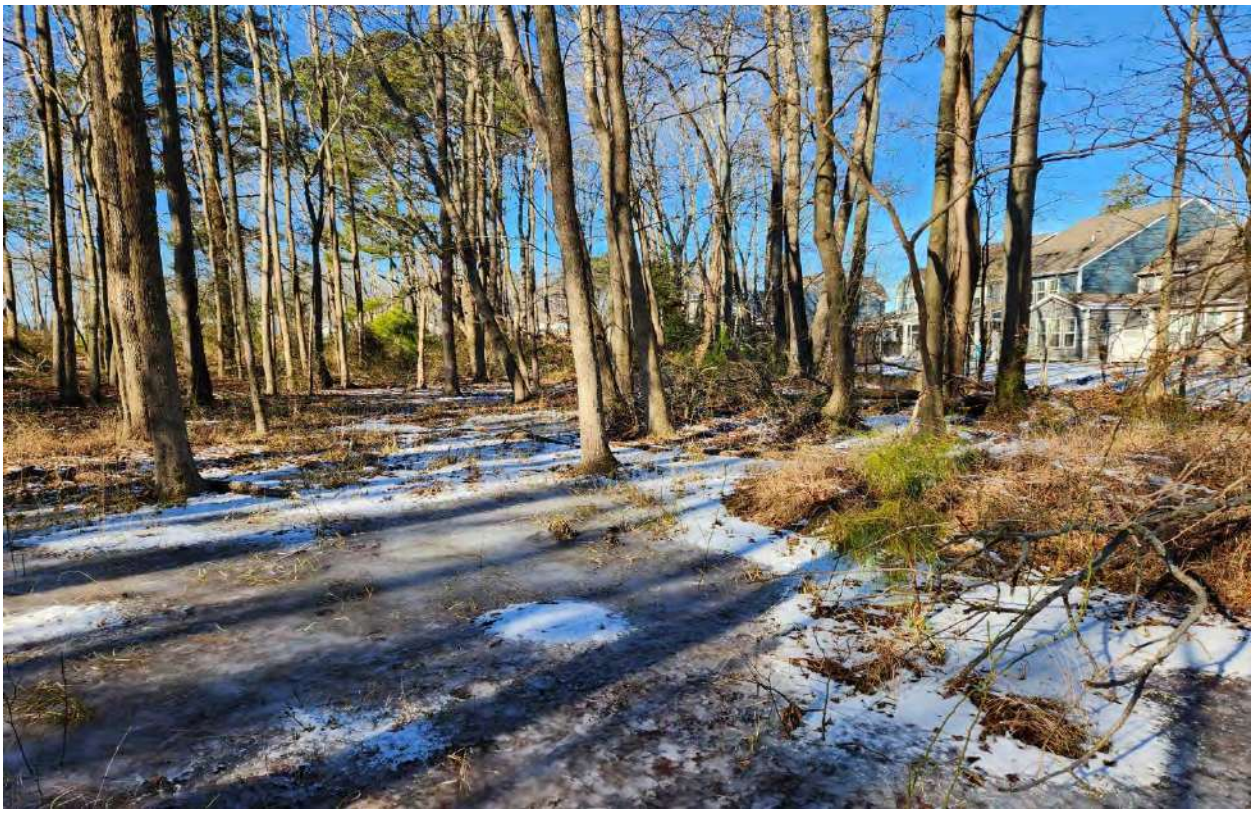
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

NRCS

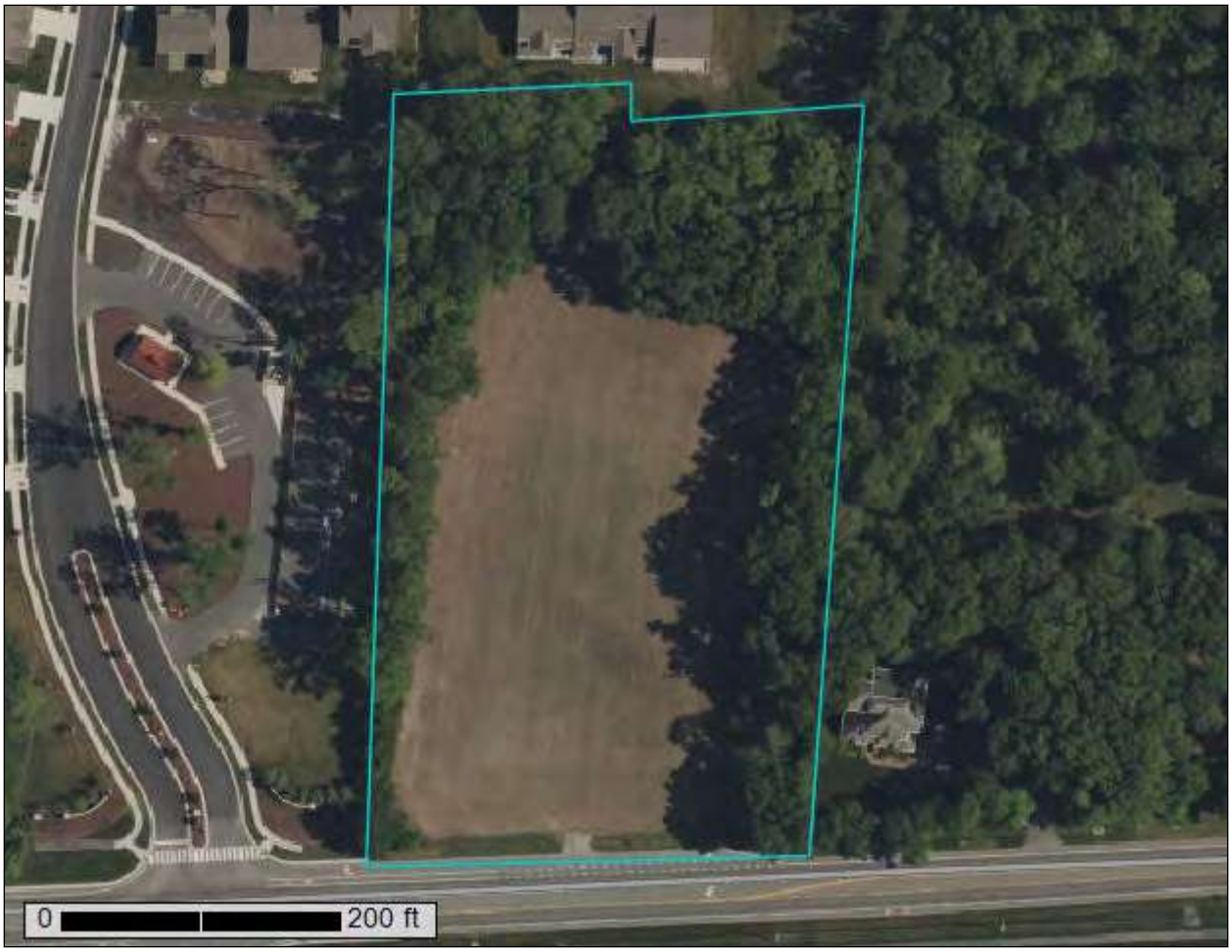
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

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# APPENDIX H

## WETLAND INVESTIGATION SUMMARY LETTER

*www.WatershedEco.com*
*Creating Value*

September 23, 2021

Gulfstream Glen Cove, LLC.
27 Atlantic Avenue
Ocean View, DE 19970

Attention: Mr. Robert Harris

Subject: Wetland Investigation Summary Letter
Glen Cove
36199 Burbage Road, Ocean View, DE 19970
Tax Parcel: 134-12.00-374.01

Dear Bob:

Watershed Eco, LLC. investigated the above referenced property on September 20, 2021 for the purpose of conducting a wetland delineation within the 3.88 acres subject property. The wetland delineation followed the criteria in the 1987 Corps Delineation Manual (Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Additionally, I have reviewed the National Wetland Inventory Map, National Hydrographic Dataset, U.S. Geological Survey mapping, and USDA Soil Survey mapping.

The field investigation and review of mapping confirmed that the site is entirely wooded with a man-made ditch excavated around the perimeter of the property as depicted on the National Hydrography Dataset, NWI and USGS maps (Figures 2-4). This ditch network drains westerly off-site then north to White Creek, a tributary of Indian River Bay. No wetland features were observed within the boundaries of the subject property.

*302-464-0831*
*Jim@WatershedEco.com*

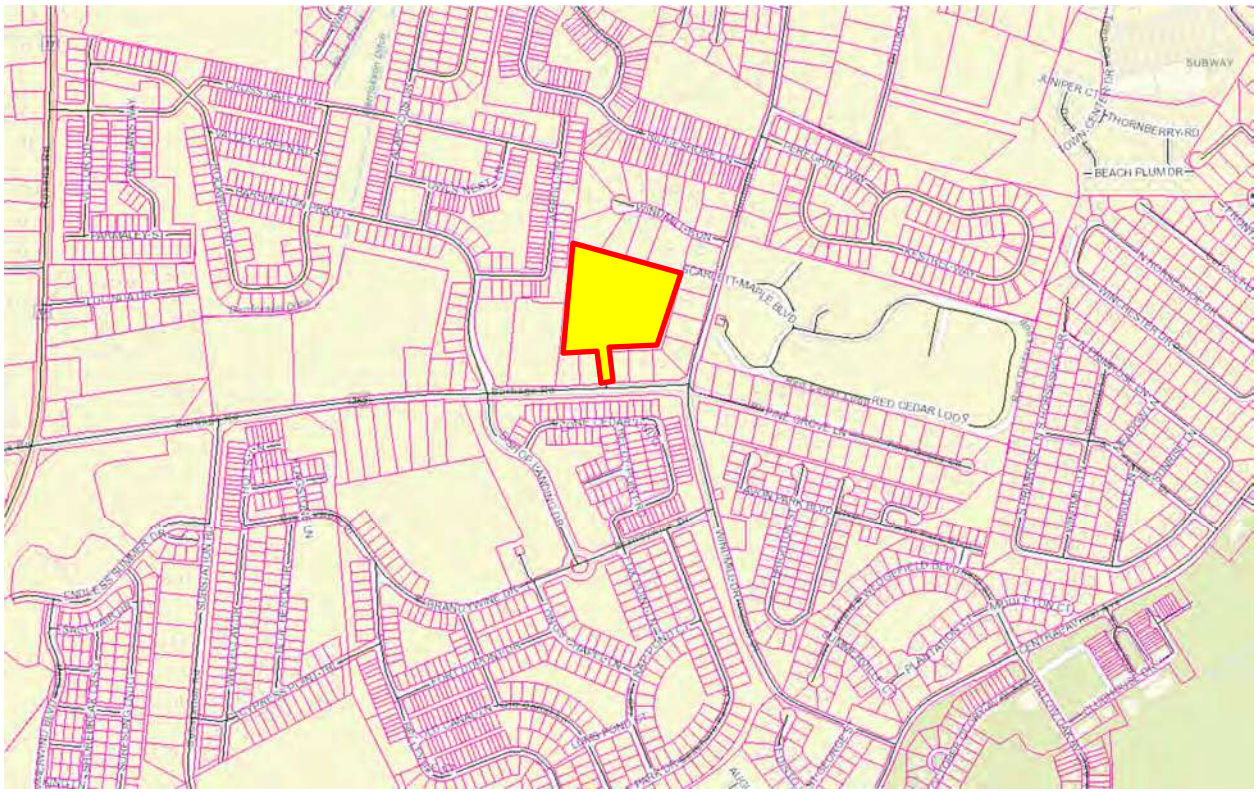



**Figure 1: Location Map.**

**Figure 2: National Hydrography Dataset Map.**

The National Wetland Inventory Map depicts a blue-line drainage feature along the northern, eastern, southern and southwestern property boundaries. This ditch extends off-site to the west, then drains north to White Creek.

Figure 3: NWI Map

The USGS topo map depicts a similar ditch network to the NWI and NHD map.

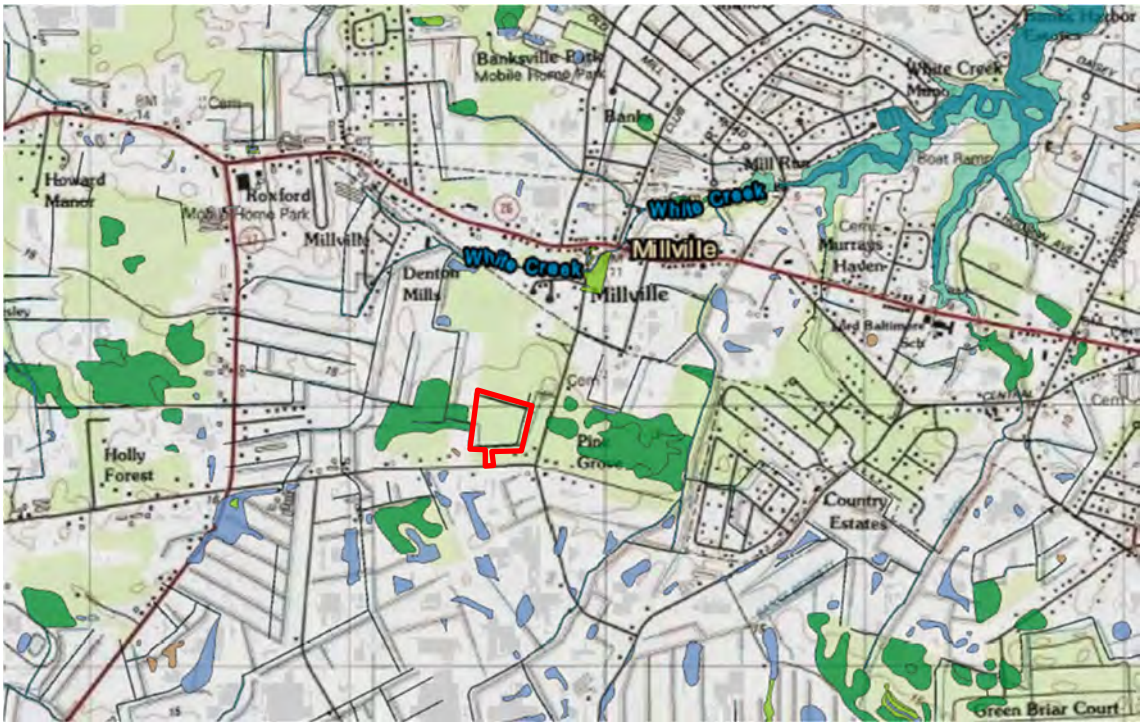



Figure 4: Topo Map

The current USDA Soil Survey Mapping (Figure 5) depicts the majority of the site is underlain with well-drained Rosedale loamy sand (RoA). Areas of very poorly-drained Mullica-Berryland complex (MuA) are identified in the northwestern and southern portions of the property and a small area of Klej loamy sand in the southwest.

**Figure 5: Soil Map**

Figure 6: Aerial Photograph

The subject property was dominated by a mixture of upland and facultative tree species consisting of northern red oak, southern red oak, white oak, and lobolly pine. Understory species observed included sweetgum, red maple, sassafras, and American holly. Common shrub-herbaceous species included sweet pepperbush, American holly, highbush blueberry, lowbush blueberry, and Virginia Creeper.

No visible indicators of standing water or saturated soil conditions were observed within the majority of the subject property. Standing water was limited to the man-made ditch in the south-central portion of the property.

The man-made drainage ditches observed within the property were constructed in uplands and no available mapping indicates these features were ever associated with a tributary stream. In addition, these ditches appear to be ephemeral in nature. No base flow of water was observed within any of the ditches at the time of the site investigation. Standing water was observed within the ditch in the south-central portion of the property. According to the U.S. Army Corps of Engineers Antecedent Precipitation Tool data, normal hydrological conditions were present at the time of the site investigation. Based on observations during the field investigation it

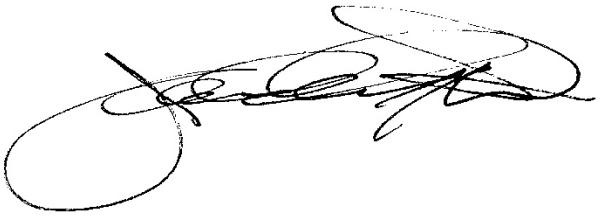
appears that the drainage ditches have silted in over time and no longer provide positive drainage off-site.

In conclusion and based on all of the evidence above and attached, Watershed Eco, LLC. has determined the no areas meeting the three wetland criteria were located within the subject property boundaries. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule which stated that ephemeral and man-made drainage features were not federally jurisdictional. At the present time there is no clear guidance from the Corps on ephemeral drainage features and the Corps is currently not issuing approved jurisdictional determinations. The U.S. Army Corps of Engineers Dover Field Office should be consulted prior to any impacts to the man-made ditches to avoid potential violations.

It is the professional opinion of Watershed Eco, LLC. that the man-made drainage ditches around the perimeter of the property are ephemeral in nature and would not be regulated by Delaware Department of Natural Resources and Environmental Control as Subaqueous Lands.

If you have any questions or concerns, please feel free to give me a call.

Sincerely,



James C. McCulley IV, PWS (#000471)
Environmental Scientist

## Site Photographs:

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

**Photo 3: Man-made drainage ditch along southern property boundary, facing east.**

**Photo 4: Man-made drainage ditch along southern property boundary, facing west.**

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

**Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.**

**Photo 10: Upland forest cover in the northeastern portion of the property.**

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-NWI

August 19, 2021

**Wetlands**

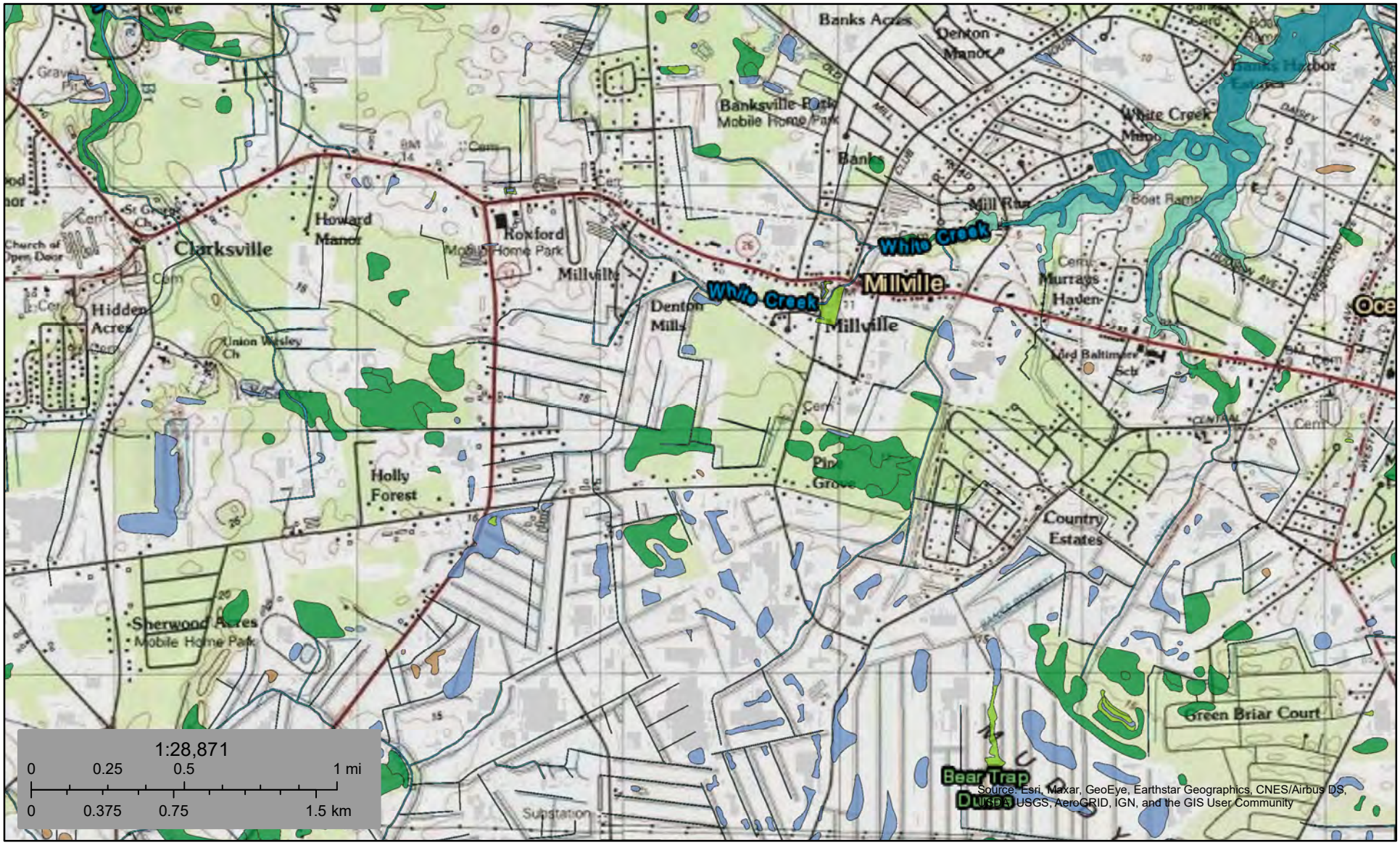
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-USGS




August 19, 2021

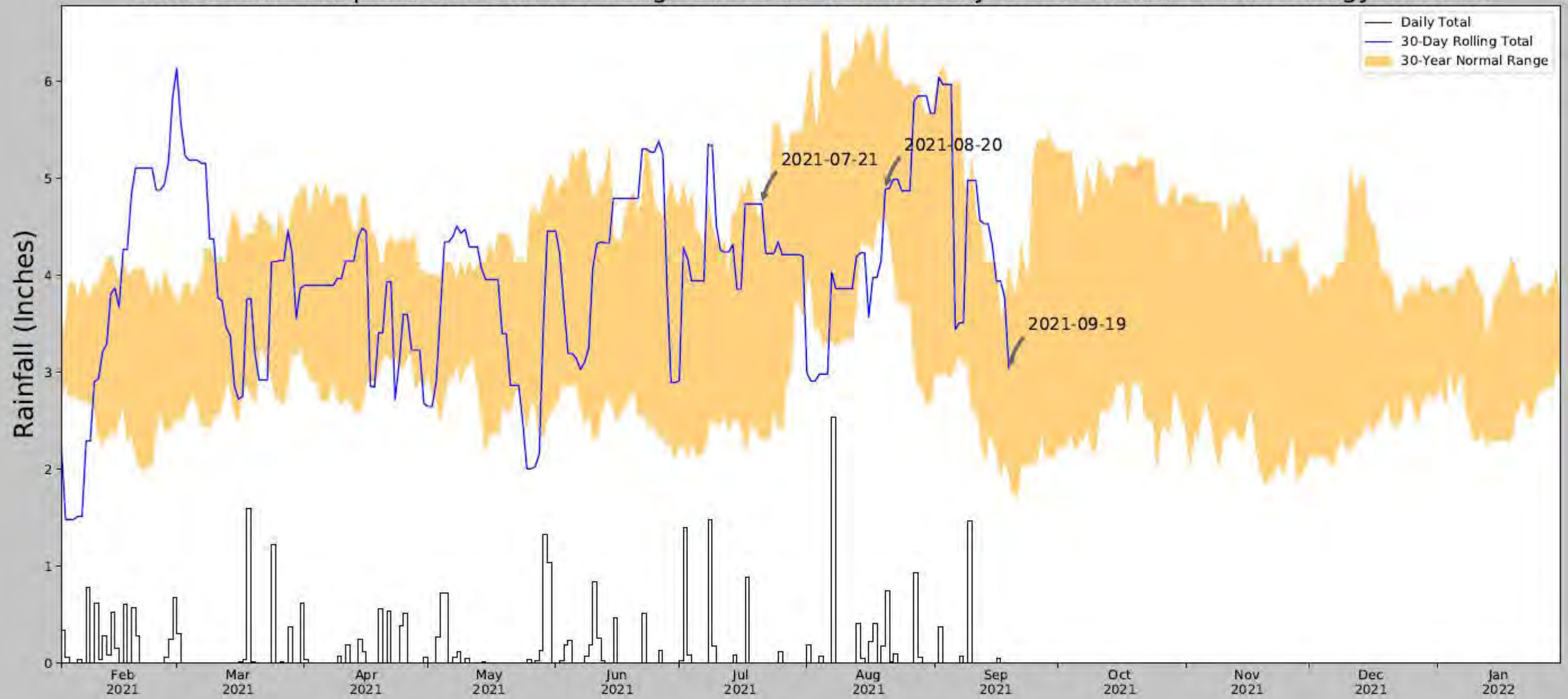
**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.166922, -75.351506 |
| Observation Date | 2021-09-19 |
| Elevation (ft) | 21.42 |
| Drought Index (PDSI) | Mild wetness (2021-08) |
| WebWIMP $H_2O$ Balance | Dry Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2021-09-19 | 1.959843 | 4.075591 | 3.031496 | Normal | 2 | 3 | 6 |
| 2021-08-20 | 4.583071 | 6.590945 | 4.889764 | Normal | 2 | 2 | 4 |
| 2021-07-21 | 2.323622 | 4.638189 | 4.740158 | Wet | 3 | 1 | 3 |
| Result | | | | | | | Normal Conditions - 13 |

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days (Normal) | Days (Antecedent) |
|---|---|---|---|---|---|---|---|
| SALISBURY WICOMICO RGNL AP | 38.3406, -75.5103 | 47.9 | 14.773 | 26.48 | 7.039 | 11350 | 83 |
| SNOW HILL 0.4 S | 38.167, -75.3921 | 20.997 | 2.205 | 0.423 | 0.993 | 0 | 7 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 4.671 | 8.436 | 2.141 | 3 | 0 |

# Glen Cove

Datapoint Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.542413 Long: -75.119833 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Young forested upland in the northwestern portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | yes | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 20 | yes | FAC |
| 2. *Liquidambar styraciflua* | 80 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Phytolacca americana* | 5 | yes | FACU |
| 2. *Parthenocissus quinquefolia* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ | x 1 = ____ |
| FACW species | ____ | x 2 = ____ |
| FAC species | ____ | x 3 = ____ |
| FACU species | ____ | x 4 = ____ |
| UPL species | ____ | x 5 = ____ |
| Column Totals: | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 4-12 | 10YR 5/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 3/2 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Young forest at Datapoint UPL-1.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541774 Long: -75.119214 Datum: NAD 83

Soil Map Unit Name: Rosedale loamy sand (RoA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the central portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus rubra* | 30 | yes | FACU |
| 2. *Quercus falcata* | 20 | yes | FACU |
| 3. *Quercus alba* | 20 | yes | FACU |
| 4. *Sassafras albidum* | 20 | yes | FACU |
| 5. *Acer rubrum* | 10 | no | FAC |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 5 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Clethra alnifolia* | 10 | yes | FACW |
| 2. *Vaccinium corymbosum* | 5 | no | FACW |
| 3. *Vaccinium angustifolia* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ | x 1 = ____ |
| FACW species | ____ | x 2 = ____ |
| FAC species | ____ | x 3 = ____ |
| FACU species | ____ | x 4 = ____ |
| UPL species | ____ | x 5 = ____ |
| Column Totals: | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-12 | 10YR 4/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 4/6 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at UPL-2 in the central portion of the property.

Non-hydric soils at UPL-2.

United States Department of Agriculture

NRCS

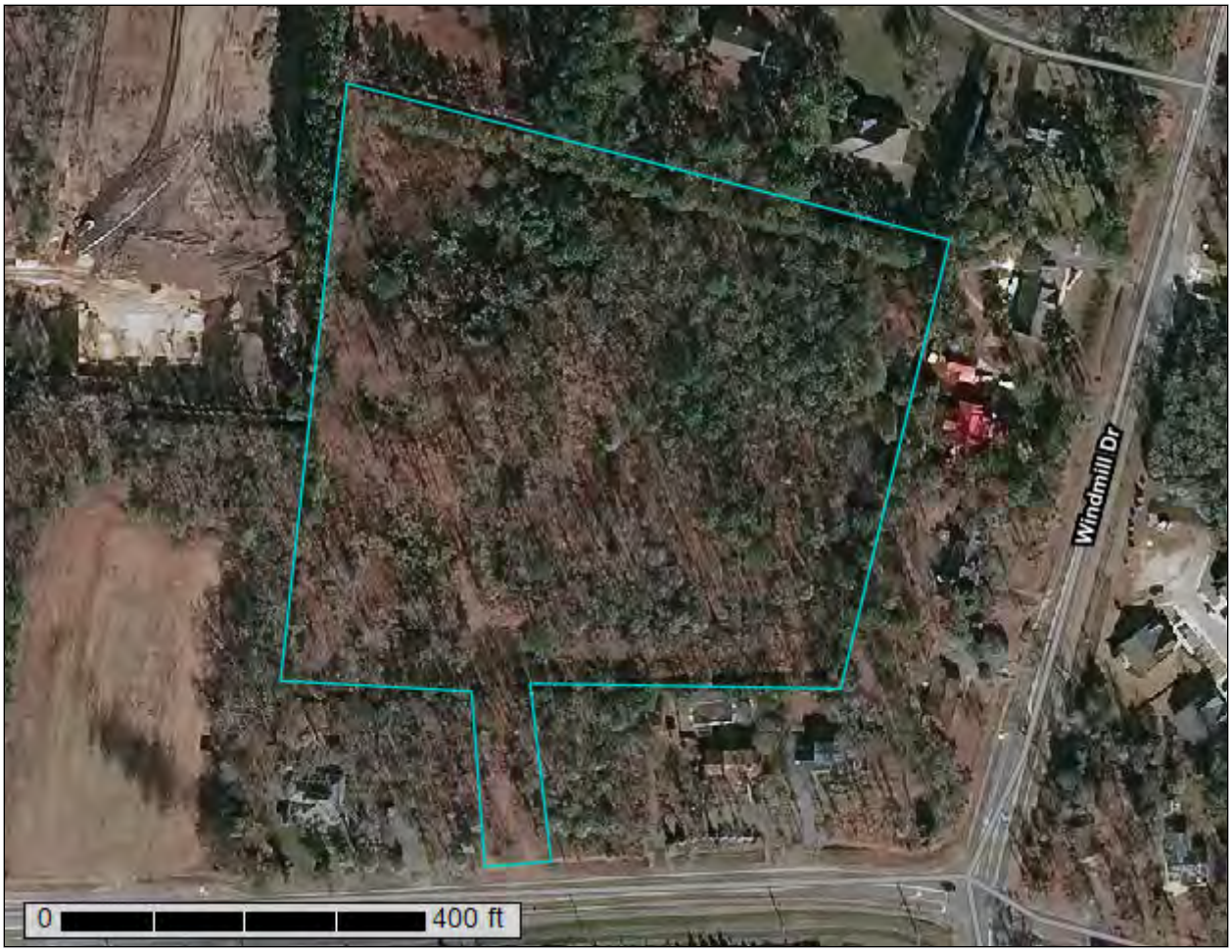
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Glen Cove 2




August 19, 2021

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:1,730 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Mar 12, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 0.2 | 1.9% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 2.5 | 28.0% |
| RoA | Rosedale loamy sand, 0 to 2 percent slopes | 6.3 | 70.1% |
| **Totals for Area of Interest** | | **8.9** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Flats, depressions, drainageways
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, flats, fluviomarine terraces, dunes
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* Yes

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

### Map Unit Composition
*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mullica, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear

#### Typical profile

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Berryland, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare

*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Drainageways, swales, flats, depressions
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

**Setting**

*Landform:* Flats, depressions, drainageways, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

**Minor Components**

**Klej**

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Askecksy, drained**

*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Hydric soil rating:* Yes

## RoA—Rosedale loamy sand, 0 to 2 percent slopes

**Map Unit Setting**

*National map unit symbol:* 1qtjx
*Elevation:* 0 to 120 feet

*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rosedale**

**Setting**

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

**Typical profile**

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2s
*Land capability classification (nonirrigated):* 2s
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

**Minor Components**

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Fluviomarine terraces, flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

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**Legal Description**
**Glen Cove Subdivision**

All that certain parcel of land being Lots 1 through 16, Open Space, and Winfield Lane (50.00 foot private right-of-way), situate in Baltimore Hundred, according to the Record Plan for Glen Cove Subdivision, recorded in the office of the Recorder of Deeds in and for Sussex County, State of Delaware at Plot Book 219, Page 93, prepared by Civil Engineering Associates LLC, dated June 23, 2015, as follows to wit:

BEGINNING at a point located along the northerly right-of-way line of SHR 353 a.k.a. Burbage Road (at varying widths), a common corner for the herein described parcel and lot # 3 of Windmill Subdivision Phase I, being first mentioned POINT AND PLACE OF BEGINNING, THENCE,

Continuing along said northerly right-of-way line of Burbage Road, and with the southerly side of a 5 feet wide DelDOT permanent easement, South 86 degrees, 15 minutes, 19 seconds West, 61.40 feet to a point of curvature, a common corner for the herein described parcel and lot # 2 of Windmill Phase I, THENCE, along the division line for the herein described parcel and lot # 2, the following two (2) described courses and distances:

1. Crossing said DelDOT easement, along the arc of a circle curving left, described by a radius of 25.00 feet, an arc distance of 20.19 feet to a point of tangency, THENCE,
2. North 08 degrees, 08 minutes, 49 seconds West, 173.37 feet to a point located along the center of a prong of the Derrickson Canal Tax Ditch, THENCE,

Continuing along or near the center of said tax ditch, and with lot # 1 and 2 of Windmill Phase 1, South 87 degrees, 33 minutes, 54 seconds West, crossing over said tax ditch at 205.64 feet, more or less, a total distance of 231.92 feet to an iron pin in line of lands now or formerly of O.T. Collins Family LP, THENCE, with said lands of Collins, in part, and lands now or formerly of Dove Barrington Development, LLC, in part, North 06 degrees, 57 minutes, 37 seconds East, crossing a prong of the Derrickson Canal tax ditch at 303.73 feet, more or less, and continuing along or near the center of said tax ditch, a total distance of 679.87 feet to a point, a common corner for the herein described parcel and lot # 16 of Windmill Subdivision Phase II, THENCE, along the division line for the herein described parcel and lots 16, 15, 14, and 13 of Windmill Phase II, still along or near the centerline of said tax ditch, South 74 degrees, 52 minutes, 04 seconds East, 689.04 feet to a point, a common corner for the herein described parcel and in line of lands of lot # 9 of Windmill Phase I, THENCE, with lots # 9, 8, 7, 6, 5, 4, and 3, and still along or near the center of a prong of the Derrickson Canal tax ditch, the following two (2) described courses and distances:

1. South 87 degrees, 33 minutes, 49 seconds West, 485.40 feet to a point, THENCE,
2. South 15 degrees, 07 minutes, 56 seconds West, 339.23 feet to a point, a common corner for the herein described lot and said lot # 3 of Windmill Phase I, THENCE,

Along the division line for the herein described parcel and lot # 3 of Windmill Phase I the following two (2) described courses and distances:

1. South 08 degrees, 08 minutes, 49 seconds West, 178.38 feet to a point of curvature, THENCE,
2. Along the arc of a circle curving to the left, described by a radius of 25.00 feet, re-crossing said 5 feet wide DelDOT easement, an arc distance of 13.41 feet to a point, said point being first mentioned POINT AND PLACE OF BEGINNING.

Containing within the said described metes and bounds 385,257 square feet (8.84 acres) of land be the same more or less. Subject to all restrictions and easements as noted or shown in Plot Book 219, Page 93, prepared by Civil Engineering Associates LLC, dated June 23, 2015.

13641 #02482 2125

Tax Parcel 1-34-12.00-4.00
1-34-11.00-176.00
1-34-12.00-1.00
1-34-12.00-375.00
1-34-13.00-68.00
RETURN TO GRANTEE
Prepared by: David N. Baker, Esq., P.A.
P O Box 551, 109 S. Race St.
Georgetown, Delaware 19947

NO TITLE OR LIEN SEARCH
PERFORMED - NONE REQUESTED

# This Deed, made this 5th day of May

in the year of our Lord Two Thousand.

BETWEEN OMEDA T. COLLINS, TRUSTEE OF THE OMEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, of Rt. 2, Box 23, Clarksville, Delaware 19970, party the first part,

-and-

O. T. COLLINS FAMILY LIMITED PARTNERSHIP, a limited partnership organized and existing under the laws of the State of Delaware, with offices at Rt. 2, Box 23, Clarksville, Delaware 19970, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of One Dollar ($1.00) and other valuable consideration, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, its Successors and Assigns,

Parcel No. 1: 1-34 12.00 4.00

Tract No. 1:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in

Consideration : 0 0.00 Exempt Code: A

| County | State | Total |
|---|---|---|
| 0.00 | 0.00 | 0.00 |
| Grantor | Date: 05/05/2000 | |

Baltimore Hundred, Sussex County, Delaware, lying on the north side of the State Highway leading from Clarksville to Bethany Beach adjoining lands now or formerly of Charles Aydelotte, Manaen Robinson and Roland West, bounded and described as follows, to wit:

BEGINNING at a fence post at the edge of the aforesaid highway; thence running with the same 88-3/4° West 4.12 chains to the center of the outlet road; thence with same North 4-1/4° East 14.50 chains to a post; thence South 85-3/4° East 4.61 chains to a stake in line of a row of cedars; thence with same South 6° West 12 chains to a post; thence South 17-3/4° West 1.64 chains; thence South 7-1/2° West 65 links or 52 feet home to the place of beginning, containing six acres and 97 square perches more or less.

Tract No. 2:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in Baltimore Hundred, Sussex County and State of Delaware and being on the North side of Stone Road leading from Millville to Clarksville, bounded and described as follows, to wit:

BEGINNING at an iron bolt, driven at right of way of said stone road, and corner of lands formerly owned by Edward Hammonds thence running with said lines N. 8-1/2° East 52 feet, N. 17-3/4° E. 108-1/4 feet to a stake in line with row of cedars, thence N. 6° 55' E. 792 feet N. 85° W. 303-3/5 ft. to center of an outlet road thence down said Road N. 5° 10' E. 365 feet to lands now or formerly of Manehn Robinson thence with same down center of Ditch S. 80-3/4° E. 557 feet to land formerly owned by Frank Howard, thence with said Howard line S. 2-3/4° E. 1268 feet to the aforesaid stone road right of way, thence with said right of way 339 feet home to the place of beginning, containing 10-1/2 acres more or less.

Parcel No. 2: 1-34 11.00 176.00

ALL that certain piece, parcel or tract of land lying and being situate in Baltimore Hundred, Sussex County, and State of Delaware, joining lands now or formerly of Smith Murray, Manaen Robinson, Loving Aydelotte and Elmer Murray, bounded and described as follows to wit:

BEGINNING at stone in middle of county road leading from Millville to Clarksville running N. 7 1/2 degrees E. 17.08 chs. to stake; thence S. 85 E. 7.47 chains to cedar stake; thence S. 8 degrees W. 10.14 chs. to stake and lands now or formerly of Elmer Murray; thence with same S.82 degrees E. 3.28 chains to cedar

post and Graveyard lot; thence with said lot S. 5 degrees E. 1.00 ch. to small pine; thence S 88 1/2 W. 1.61 chs. to stake corner of said graveyard; thence S. 4 degrees W. 1.54 chs. to stake; thence S. 84-5/8 degrees E. 1.39 chs. to outlet road; thence with same S. 7-2/5 degrees W. 9.20 chs. to middle of aforesaid county road; thence down same N. 46 1/2 degrees W. 5.03 chs. to stone, home place of beginning, containing ten acres and one hundred and twenty square perches be the same more or less, said outlet road to graveyard is ten feet wide.

WITH THE EXCEPTION of 2.47 acres of land which was conveyed by Herbert Williams and wife to William Clifford Wilson by indenture dated the 18th day of March, 1952, and of record in the aforesaid Office in Deed Record No. 409, Page 347

Parcel No. 3: 1-34 12.00 1.00

ALL that certain triangular lot, piece or parcel of land, situate, lying and being near Clarksville, Baltimore Hundred, Sussex County, Delaware, more particularly bounded and described as follows, to-wit:

BEGINNING at a concrete marker found near the intersection of two ditches; thence, by and with other lands now or formerly of Harold H. Collins and wife, North 11° 00' 55" East, 266.00 feet to a point; thence, by a new line through the lands now or formerly of Calvin C. McComrick and wife, South 35° 12' 33" East, 368.06 feet to a point in the center of a ditch, a corner for this land and other lands now or formerly of Harold H. Collins and wife; thence, by and with the line of the ditch and lands of Harold H. Collins and wife, North 81° 26' West, 266.00 feet, home to the point and place of beginning, containing 35,346.875 square feet of land, more or less. The foregoing description is taken from a survey made by C. Kenneth Carter & Associates, Professional Land Surveyors, dated December 28, 1983, a copy of which survey is of record in the aforesaid Office in Plot Book 27, Page 901.

Parcel No. 4: 1-34 12.00 375.00

ALL that certain lot, piece, parcel or tract of land, lying and being situate in Baltimore Hundred, Sussex County, State of Delaware, bounded as follows: On the North by lands now or formerly of Harry N. Dukes, Jr., on the East by lands now or formerly of Jack Tubbs, on the South by a 30 foot County Road that leads from the Clarksville to Selbyville Road to Millville, on the West by lands now or formerly of the aforementioned Dukes and being more particularly described as follows to wit:

BEGINNING at an oak hub in the Northern right-of-way line of the said County Road, a corner for these lands and lands now or

formerly of Jack Tubbs; thence with the Tubbs line along and with a ditch, North 15° 50' East 506 feet to where a cross ditch intersects the line; thence with the cross ditch, a new division line, 3 courses; North 79° 15' West 213 feet, North 3° 45' East 23 feet, North 81° 45' West 87 feet to where a small ditch intersects the cross ditch, a new corner now established between these lands and lands now or formerly of the aforementioned Dukes; thence with a new division line now established, South 14° 10' West 549 feet to an oak hub in the Northern right-of-way line of the line of the said 30 foot County Road; thence with the Northern right-of-way line, South 84° 15' East 287.9 feet, home to the place of beginning and containing 3.57 acres, be the same more or less.

Parcel No. 5: 1-34 13.00 68.00

ALL that certain piece, parcel or lot of land, lying and being situate in Cedar Neck, Baltimore Hundred, Sussex County, State of Delaware and lying on the westerly side of the slag road leading from Ocean View to Cedar Grove, bounded and described as follows, to-wit:

BEGINNING at a bounder settled on westerly edge of aforesaid slag road right-of-way and corner for land now or formerly of Harry H. Dukes, Jr.; thence with land now or formerly of said Dukes, westerly 345-3/4 feet to a bounder corner for said Dukes, and said described land, thence, with said Dukes land northerly 97-1/3 feet to an iron bolt corner for land now or formerly of Peter Cunningham, thence, with land now or formerly of said Cunningham easterly 345-3/4 feet to an iron bolt driven on westerly side of said slag road right-of-way; thence, with westerly side of said slag road right-of-way southerly 129 feet to Beginning.

BEING a part of the lands conveyed unto Omeda T. Collins, Trustee of the Omeda T. Collins Revocable Trust by deed of Omeda T. Collins dated April 23, 1993 and filed of record in the Office of the Recorder of Deeds, in and for Sussex County, State of Delaware, in Deed Book 1908 at page 335.

#02482 #129

IN WITNESS WHEREOF, the party of the first part has hereunto set her Hand and Seal the day and year first above written.

Witness

Witness

Oneda T. Collins (Seal)
ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 5th day of May, A.D. 2000, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, party to this indenture, known to be personally to be such, and acknowledged this Indenture to be her act and deed.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

DAVID W. BAKER
ATTORNEY AT LAW
NOTARY PUBLIC STATE OF DELAWARE
MY COMMISSION HAS NO EXPIRATION DATE
29 Del.C § 4323 (a) (3)

Notary Public (SEAL)

Received
MAY 08 2000
ASSESSMENT DIVISION
OF SUSSEX CTY

RECORDER OF DEEDS
RICHARD H. BELL, II
00 MAY -5 PM 2:42
SUSSEX COUNTY
DOC. SURCHARGE PAID

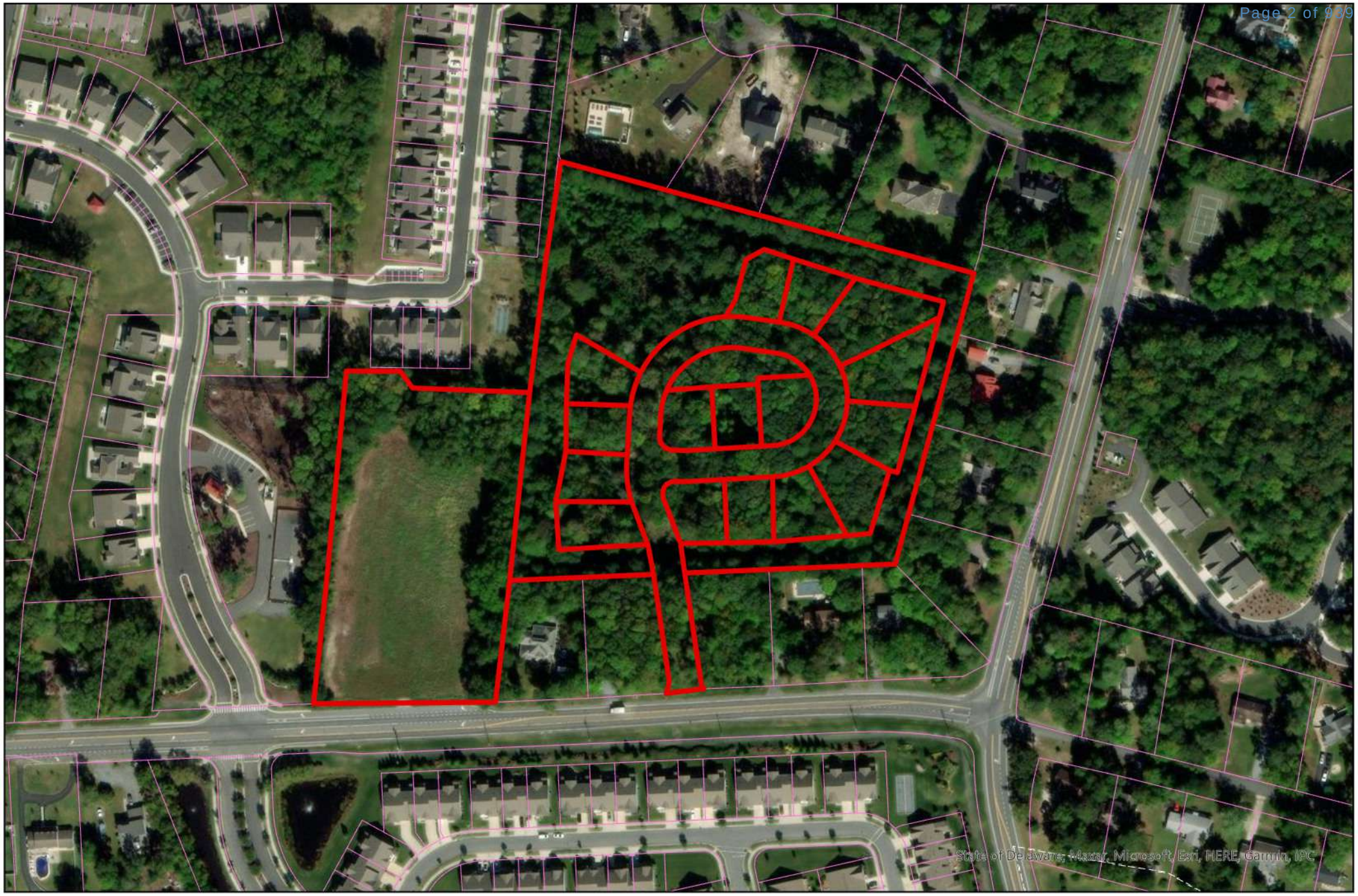
5,30/00

PLANNING & ZONING COMMISSION
ROBERT C. WHEATLEY, CHAIRMAN
BRIAN BUTLER
GREGORY SCOTT COLLINS
J. BRUCE MEARS
HOLLY WINGATE

Sussex County
DELAWARE
sussexcountyde.gov
(302) 855-7878 T
(302) 854-5079 F
JAMIE WHITEHOUSE
DIRECTOR

2462PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: March 5th, 2025
Sussex County Council Public Hearing Date: May 13th, 2025

| | |
|---|---|
| Application: | C/U 2462 Gulfstream Glen Cove |
| Applicant: | Gulfstream Glen Cove, LLC<br>27 Atlantic Avenue<br>Ocean View, DE 19970 |
| Owner: | Gulfstream Glen Cove, LLC<br>OT Collins Family Limited Partnership<br>27 Atlantic Avenue / 30782 Cedar Neck Road<br>Ocean View, DE 19970 |
| Site Location: | The Parcels are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352) |
| Current Zoning: | AR-1 (Agricultural Residential) |
| Proposed Use: | Multi-Family Dwellings (50 Units)<br>(Single-family detached condominiums) |
| Comprehensive Land Use Plan Reference: | Coastal Area |
| Councilmanic District: | Mr. Hudson |
| School District: | Indian River School District |
| Fire District: | Millville Fire Company |
| Sewer: | Public – Sussex County |
| Water: | Tidewater |
| Site Area: | 12.32 aces □/- |
| Tax Map ID(s): | 134-12.00-374.01, 374.02, 375.00, □ 3445.00 through 3460.00 |

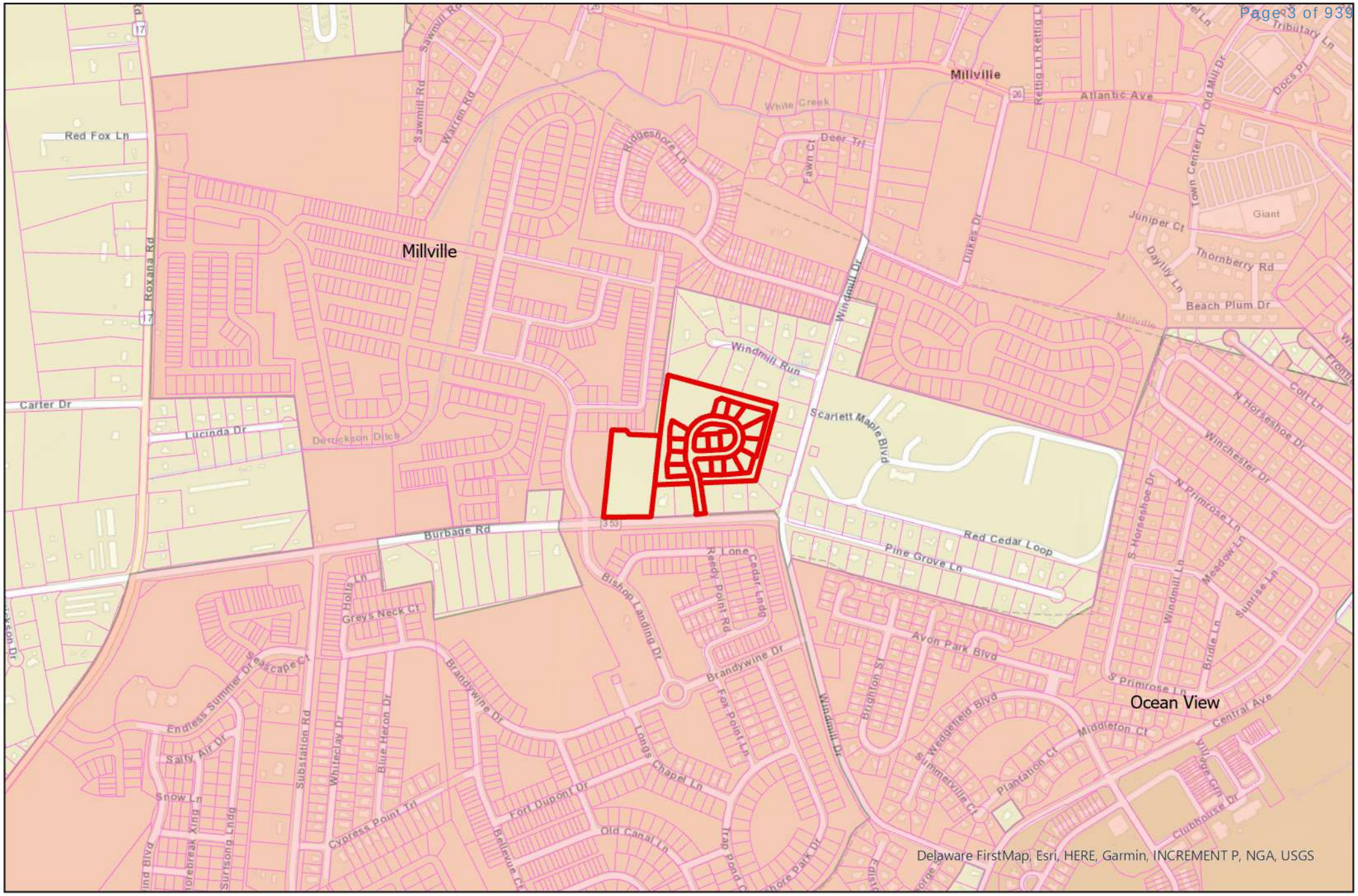



**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Aerial Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
0 150 300

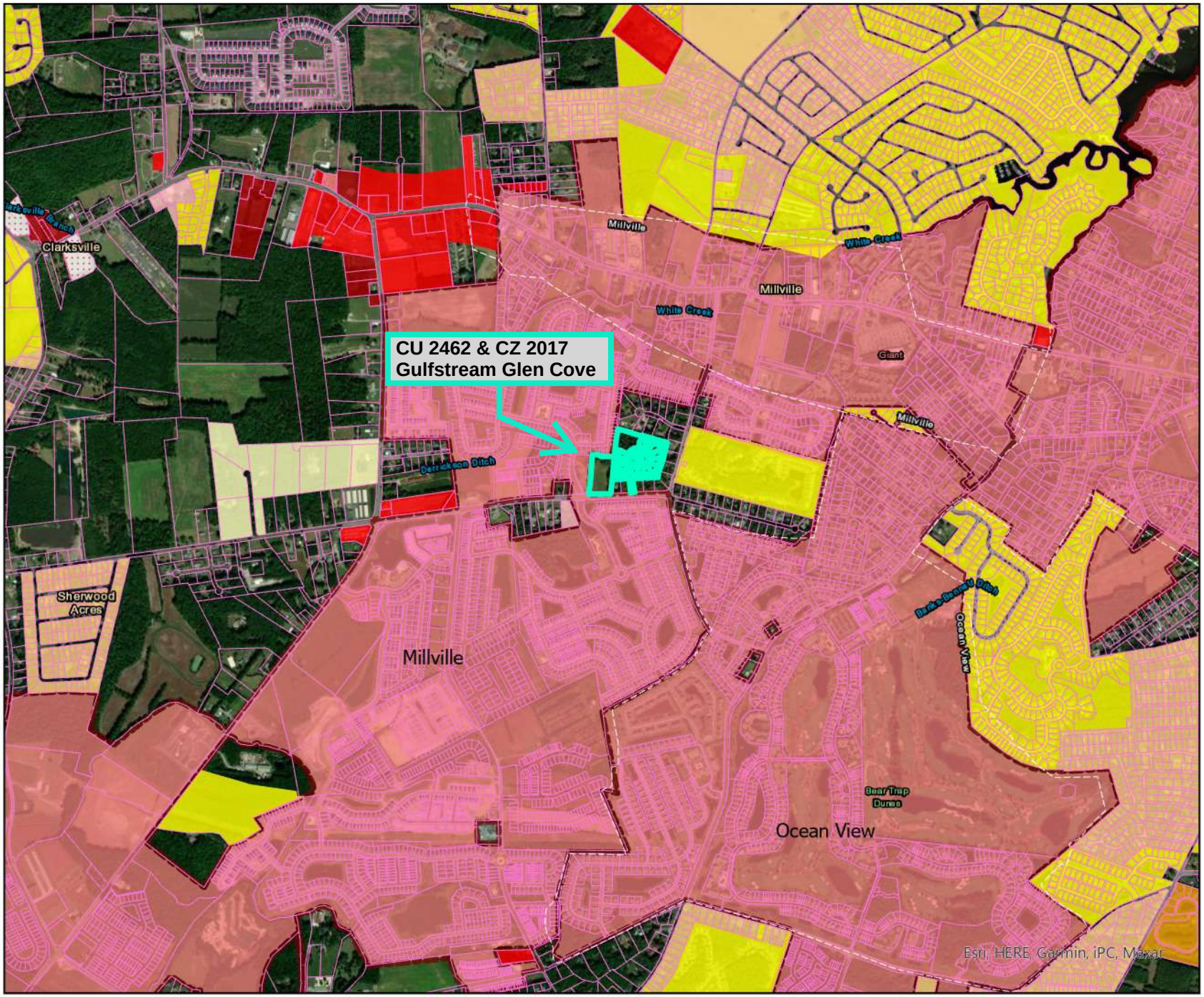



**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Street Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

**CU 2462 & CZ 2017**
**Gulfstream**

N

Feet
0 500 1,000




## Zoning

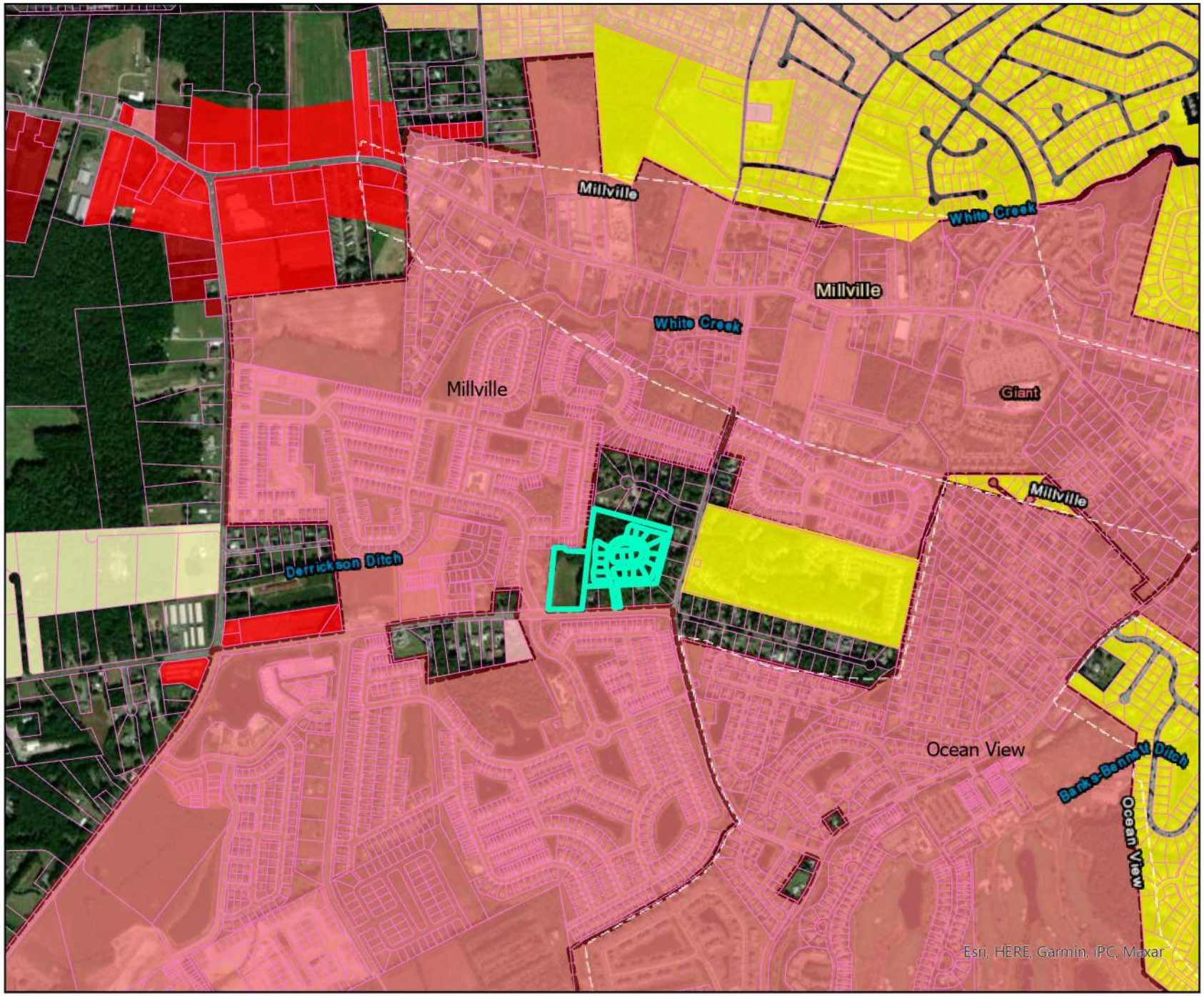
- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.25 0.5 1 Miles




## Zoning

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**CU 2462 & CZ 2017- Gulfstream Glen Cove, LLC**
**Zoning Map**
**TM#s 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00**

- CU 2462 & CZ 2017 Gulfstream
- Municipal Boundaries

N

0 0.13 0.25 0.5 Miles

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Sussex County
DELAWARE
sussexcountyde.gov

# Memorandum

To: Sussex County Planning and Zoning Commission Members
From: Mr. Michael Lowrey, Planner III
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: February 24th, 2025
RE: Staff Analysis for C/U 2462 Gulfstream Glen Cove

The purpose of this memo is to provide background and analysis for the Planning and Zoning Commission to consider as a part of Application for C/U 2462 Gulfstream Glen Cove to be reviewed at the March 5th, 2025, Planning and Zoning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

**Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.**

**Tax Parcel ID:** 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00

**Proposal:** The request is for a Conditional Use for Tax Parcels: 134-12.00-374.01, 374.02, 375.00, & 3445.00-3460.00 to allow for Multi-Family Dwellings (Single-family detached condominiums – 50 Units) to be located on Parcels located on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352). The Parcels are comprised of a total of 12.32 aces □/-

**Zoning:** The Parcels are zoned Agricultural Residential (AR-1) Zoning District with the boundary with the Town of Millville immediately adjacent to the north and west of the Parcels and just beyond the adjacent properties to the east and south as well. The multifamily use at the site is the also the subject of accompanying Change of Zone Application (C/Z 2017) requesting a change from Agricultural Residential (AR-1) District to Medium-Density Residential (MR) District.

In terms of permitted residential density, if this Conditional Use for multifamily use and the accompanying Change of Zone (C/Z 2017 AR-1 to MR) were to be approved, the proposed density of ≈ (4.1) dwelling units per acre would comply with the County Code requirements for multifamily improvement in an (MR) District which allows up to (12) multifamily dwelling units per acre when serviced by a central sewer system (§115-Attachment 2 – Table II)(§115-31).

Should the Conditional Use (CU 2462) and/or Change of Zone (CZ 2017) Applications be approved, any site plan will be required to be reviewed by Planning & Zoning Commission. Staff reviewed the conceptual site plan submitted as part of the application relating to the requirements of (§115- Attachment 2 – Table II) & (§115-188 *Townhouses and multifamily dwellings*). Staff offer the following comments on the Conditional Use Site Plan to be applied as part of any future site plan review:

- Staff will request the Plan and any proposed HOA/Deed Documents include the minimum lot area allocation for each unit if in separate ownership to include any (LCE) *Limited Common Elements* or (LDA) *Limited Developable Areas*.
- Staff will review the requirements relating to side yard, aggregate front/rear yard, and building separation per (§115-188(E)) to ensure all multifamily dimensional requirements are within Code.

**Future Land Use Map Designation w/in Comprehensive Plan:** Coastal Area

The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map in the plan indicates that the parcel has a designation of "Coastal Area" with all adjacent parcels also categorized under the Future Land Use Map designation of "Coastal Area" or "Municipalities" with the boundary of the jurisdiction of the Town of Millville bordering immediately to the west and south of the site.

As outlined within the 2018 Sussex County Comprehensive Plan, *Coastal Areas* are growth areas that the County encourages only the appropriate forms of concentrated new development, especially when environmental features are in play. The *Coastal Area* designation is intended to recognize the characteristics of both anticipated growth and ecologically important and sensitive characteristics. The Plan notes, "this region contains ecologically important and sensitive characteristics as well as other coastal lands which help to absorb floodwaters and provide extensive habitat for native flora and fauna. This area also has significant impact upon water quality within the adjacent bays and inlets as well as upon natural the region's various habitats. And, these factors are themselves part of the reason that this Area is so desirable - making the protection of them important to both the environment and the economy" (2018 Sussex County Comprehensive Plan, 4-15).

In terms or residential/dwelling improvements, the Plan notes, "A range of housing types should be permitted in *Coastal Areas,* including single-family homes, townhouses, and multi-family units" (2018 Sussex County Comprehensive Plan, 4-15). In terms of density the Plan notes:

Medium and higher density could be supported in areas:
- Where there is central water and sewer
- Near sufficient commercial uses and employment centers
- Where it is in keeping with the character of the area
- Where it is along a main road or at/or near a major intersection
- Where there is adequate Level of Service
- Or where other considerations exist that are relevant to the requested project and density (2018 Sussex County Comprehensive Plan, 4-16).

In terms of the related Change of Zone (C/Z 2017) Application, Table 4.5-2 "Zoning Districts Applicable to Future Land Use Categories" in the 2018 Sussex County Comprehensive Plan notes that the proposed zoning of Medium Commercial (MR) in an applicable Zoning Districts within the "Coastal Area" Future Land Use Map Designation.

**Further Site Considerations:**

- **Density:** In terms of permitted residential density, if this Conditional Use for multifamily use and the accompanying Change of Zone (C/Z 2017 AR-1 to MR) were to be approved, the proposed density of ≈ (4.1) dwelling units per acre would comply with the County Code requirements for multifamily improvement in an (MR) District which allows up to (12) multifamily dwelling units per acre when serviced by a central sewer system (§115-Attachment 2 – Table II)(§115-22).

- **Open Space Provisions:** The proposed plan includes (7.96) acres +/- (out of a total of (12.32) acres) of open space which equates to approximately (65%) of the project site.

- **Agricultural Areas:** The site is not within the vicinity of active agricultural lands.

- **Interconnectivity: N/A**

- **Transportation Improvement District (TID): N/A**

- **Forested Areas:** Staff note that majority of the area within the Parcels contains trees with very little appearing to be unforested outside of TM# 134-12.00-375.00. Staff appreciate efforts to conserve as many mature trees as possible on the project site. Staff note that any buffers which may be required as part of this plan are required to be exclusive of "stormwater management areas or facilities, wastewater treatment and/or disposal facilities" (§99-5 FORESTED AND/OR LANDSCAPED BUFFER) & (§115-193(C)(18)). Staff note that any Plan submitted will require a design ensuring the location of stormwater management basins are exclusive of the required wetland resource buffers (if applicable) or any screening or vegetative buffers which may be required as part of any conditions of approval if approved.

- **Wetlands Buffers/Waterways:** County data indicates the presence of jurisdictional Nonidal Wetlands areas on a portion of the rear of Parcel #134-12.00-375.00 which are required to meet the Resource Buffer Protection Section of the Zoning Code (§115-193). Staff note that the jurisdictional wetlands within the Tax Ditch ROWs on the other Parcels at the site are not required to meet the County Resource Protection Code as these resources are managed by DNREC. Staff have concerns regarding the wetland areas at the rear of TM#134-12.00-375.00 as the design may not meet the required (30) foot buffer required for Nontidal Wetlands (§ 115-193A(4) – Table 1).

  Staff note that the Applicant submitted a Drainage Assessment Report (DAR) as required under (§115-193F) and the submission was reviewed by SCED, with all of SCED's comments addressed.

- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The Parcels are located within Flood Zones "X" and Staff note there are no Wellhead Protection Areas on the site. The Parcel is classified as within areas of "Good", "Fair" in terms of Groundwater Recharge Potential on the site per data from the State of

Delaware. Staff note that any Tax Ditch crossing will require permitting through DNREC prior to Final Site Plan approval. Additionally, any revisions to the Tax Ditch ROWs will be required to show documentation of any Court Order Change (COC) which approves any revision to the Tax Ditch ROWs on the site.

Based on the analysis provided, the Conditional Use to allow for a multifamily dwelling use at the site, could be considered as being consistent with the surrounding land use, zoning, and uses, subject to considerations of scale and impact.

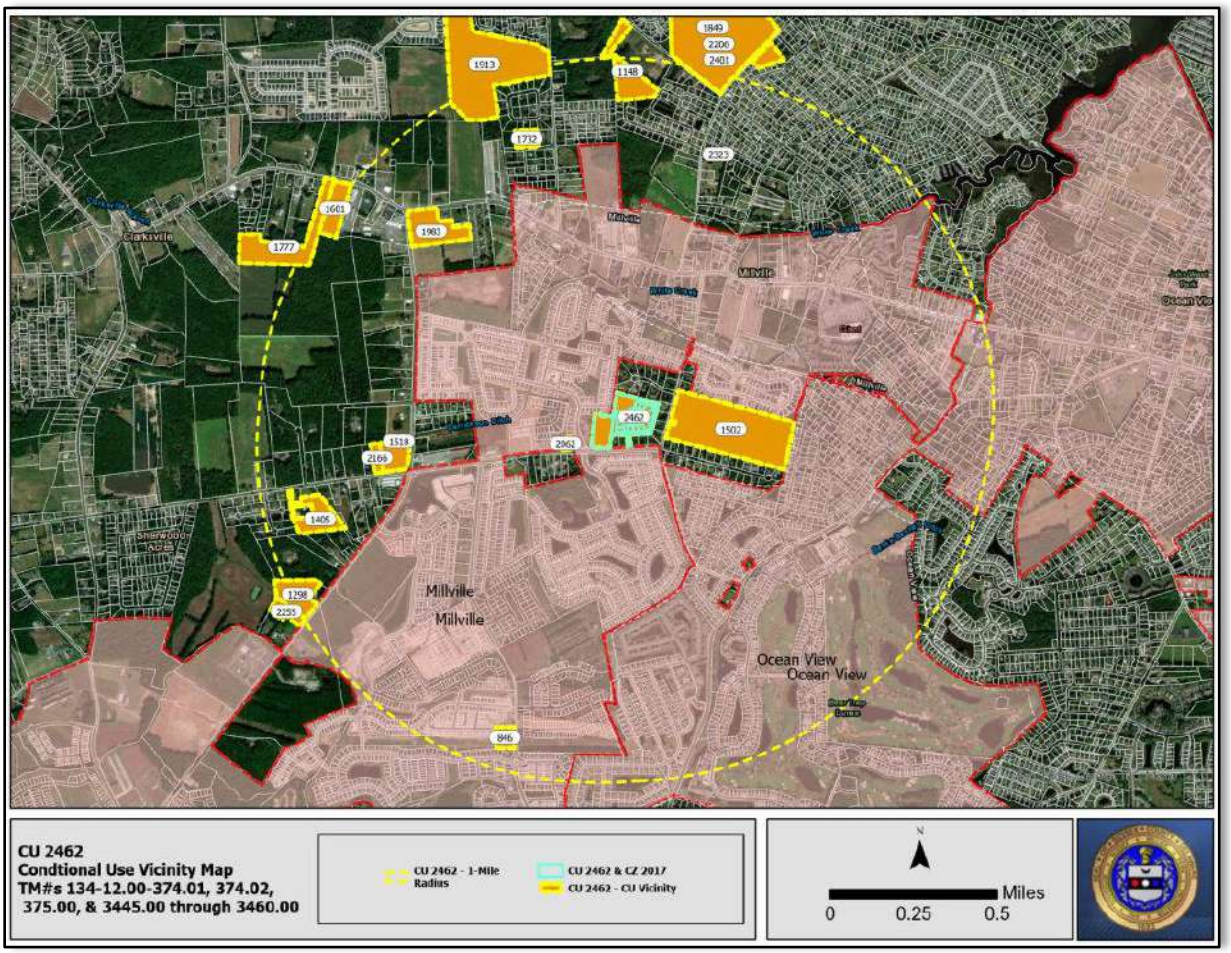
**Existing Conditional Uses within the Vicinity of the Subject Site:** Staff notes there have been (18) Conditional Use application within a one (1) mile radius of the application site. A Data Table and Supplemental Map have been supplied to provide additional background regarding the approval status of Applications in the area to include the location of all other Conditional Use Applications since 2011 that are less than 1 mile distance from the subject site.

**Conditional Use Applications**

**(Within a 1-mile radius of the subject site)**

| Application CU Number | Application Name | Zoning District | Proposed Use | CC Decision | CC Decision Date | Ord Number |
|---|---|---|---|---|---|---|
| 846 | Delaware Electric Cooperative | AR-1 | Public Utility Electric Substation | Approved | 1/14/1986 | 341 |
| 1148 | Great Scott Broadcasting | AR-1 | Radio Broadast Tower | Approved | 3/12/1996 | 1081 |
| 1298 | Lawrence & Susan Kelly | AR-1 | Nursery/Landscaping/Garden Center | Approved | 8/10/1999 | 1335 |
| 1405 | Michael G. McCarthy | AR-1 | Offices & Woodshop | Approved | 6/19/2001 | 1473 |
| 1502 | Windmill Venture LLC | MR | Multi-Family | Approved | 12/16/2003 | 1647 |
| 1518 | Atlantic Auction Co., Inc. | AR-1 | Self-Storage & Professional Office | Approved | 1/27/2004 | 1660 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1601 | Pierce Hardt Limited Partnership | AR-1 | **Wholesale Bldg/Materials/Sales** | **Approved** | 8/16/2005 | **1786** |
| 1732 | Mabethson, LLC | AR-1 | **Storage Of Equipment for HVAC Business** | **Withdrawn** | **N/A** | **N/A** |
| 1777 | Beebe Medical Center Inc. | AR-1 | **Medical Center** | **Approved** | 8/12/2008 | **1990** |
| 1849 | Linder & Company | GR | **Multi-Family** | **Approved** | 2/1/2011 | **2176** |
| 1913 | Jeremy W. Smith | AR-1 | **Yard & Waste Composting Facility** | **Approved** | 2/7/2012 | **2236** |
| 1983 | Gerald W. & Emily W. Hocker | C-1 | **Food Vendor** | **Approved** | 5/20/2014 | **2349** |
| 2062 | RDK & A Investments, LLC | AR-1 | **Medical Offices** | **Approved** | 2/14/2017 | **2481** |
| 2166 | Deborah Townsend | AR-1 | **Professional Office & Business Services with Residence** | **Approved** | 4/30/2019 | **2651** |
| 2206 | Linder & Company, Inc. (Evans Farm) | GR | **Multi-Family (200)** | **Approved** | 6/15/2021 | **2776** |
| 2255 | John Sommers | AR-1 | **Bicycle Sales, Repair, Storage** | **Approved** | 9/14/2021 | **2798** |
| 2323 | Lesle Brossus | GR | **Short-Term Rental for Yurt & Treehouse** | **Deferred** | 6/13/2023 | **2928** |
| 2401 | OA Sundance Club, LLC | GR | **Multi-Family (180 Units)** | **Approved** | 1/30/2024 | **2977** |


CU 2462
Condtional Use Vicinity Map
TM#s 134-12.00-374.01, 374.02,
375.00, & 3445.00 through 3460.00
CU 2462 - 1-Mile Radius
CU 2462 & CZ 2017
CU 2462 - CU Vicinity
N
Miles
0
0.25
0.5
Millville
Millville
Ocean View
Ocean View
Clarkville
1913
1148
1849
2206
2401
1712
2323
1601
1983
1777
1518
2166
2462
2962
1502
1405
1298
2255
846

File #: CU 2462
202309498

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

RECEIVED
JUL 30 2024
SUSSEX COUNTY
PLANNING & ZONING

Revised Application

**Type of Application: (please check applicable)**
Conditional Use ✓
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**
SINGLE-FAMILY CONDOMINIUMS (50 Units)

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302) 732-9364
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7/17/24

***Signature of Owner***

_____ Date: 7-17-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
P.O. Box 601
Georgetown, DE 19947

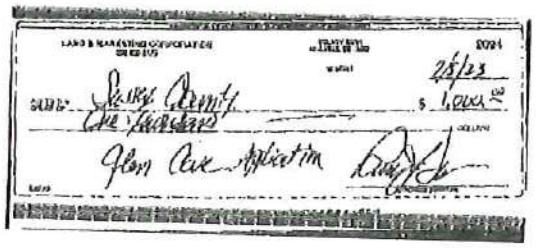
33025078-0042 Catherine 07/05/2023 10:44AM

PERMITS / INSPECTIONS
CONDITIONAL USE - FEE
2023 Item: 202309498|Z010 1,000.00

1,000.00

| | |
|---|---|
| Subtotal | 1,000.00 |
| Total | 1,000.00 |
| CHECK | 1,000.00 |
| Check Number002094 | |
| Change due | 0.00 |

Paid by: LAND AND MARKET CORPORATION



Thank you for your payment.

Sussex County Government COPY
DUPLICATE RECEIPT

File #: CU 2462
202309498

# Planning & Zoning Commission Application
# Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ✔
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**
MULTI-FAMILY CONDOMINIUMS

**Tax Map #:** 1-34-12.00-374.01 **Size of Parcel(s):** 8.84 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:**

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Same as above
Owner Address:
City: State: Zip Code:
Phone #: E-mail:

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✔ **Completed Application**

✔ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✔ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✔ **DelDOT Service Level Evaluation Request Response**

✔ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 6-28-23

***Signature of Owner***

_____ Date: 6/30/23

*For office use only:*

Date Submitted: 7/5/23 Fee: Check #: 2094

Staff accepting application: AL Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

June 16, 2023

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the Civil Engineering Associates (Burbage Road, Ocean View, DE) proposed land use application, which we received on May 18, 2023. This application is for an approximate 3.88-acre parcel (Tax Parcel: 134-12.00-374.01). The parcel is located on the north side of Burbage Road (Sussex Road 353) and 500 feet west from the intersection of Windmill Drive (Sussex Road 352) and Burbage Road. The parcel is currently zoned AR-1 (Agricultural Residential District) with a proposed zoning to MR-1 (Medium Density Residential District). The Applicant seeks to construct 31 single family attached units on the parcel.

Per the 2022 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road from Windmill Drive to Substation Road (Sussex Road 366) is 3,216 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Mr. Philip Lindsey, at philip.lindsey@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:plm
cc: Civil Engineering Associates, Applicant
Ann Lepore, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer
Tara Summers-Strong, South District Public Works Admin.
Todd Sammons, Assistant Director, Development Coordination, Planning
Kevin Hickman, Acting Sussex County Review Coordinator, Development Coordination
Derek Sapp, Sussex County Subdivision Reviewer, Development Coordination
Brian Yates, Sussex County Subdivision Reviewer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Reviewer, Development Coordination
Jose Quixtan, Sussex County Subdivision Reviewer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination
Philip Lindsey, TIS Group Project Engineer, Development Coordination

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

August 19, 2024

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray** (Burbage Road, Millville, DE 19967) proposed land use application, which we received on August 6, 2024. This application is for an approximate 12.32-acre assemblage of parcels (Tax Parcel: 134-12.00-374.01, 134-12.00-3445.00 Thru 3460.00, and 375. 00). All Parcels are located on the north side of Burbage Road (Sussex County Road 353) and approximately 460 feet west of the intersection of Windmill Drive (Sussex County Road 352) and Burbage Road. The parcels are currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a Conditional Use approval to place 50-Condos units, on the parcels.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road where the subject land is located, which is from Windmill Drive to Substation Road (Sussex County Road 366), is 3,224 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 50), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at annamaria.furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:bfm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Engineer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Engineer, Development Coordination
José Quixtan, Sussex County Subdivision Engineer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination

## Michael Lowrey

**From:** Michael Lowrey
**Sent:** Tuesday, February 25, 2025 1:00 PM
**To:** jack.owens@irsd.k12.de.us
**Cc:** Lauren DeVore
**Subject:** Notification of Upcoming Applications - CU 2462 & CZ 2017 - Gulfstream Glen Cove
**Attachments:** CU 2462 Gulfstream Glen Cove - Application (Revised 7.25.24) (OB).pdf; CU 2462 Gulfstream Glen Cove - PRELIMINARY PLANS_1.21.2025 (2)(OB).pdf; CZ 2017 Gulfstream Glen Cove - Applications (Revised 7.30.24) (OB).pdf

Dr. Jay F. Owens,

Good afternoon.

The purpose of this email is to serve as official notice of an upcoming Application for consideration by the Planning and Zoning Commission at a future Commission Meeting which is proposed to be located within the Cape Henlopen School District.

**Title 9, Chapter 68, Section § 6820 directs County Governments to notify the local school district "*at least 7 days prior to any such approval process*" with respect to "*the initial approval of a residential subdivision or any change in a residential subdivision plan increasing residential density.*"**

The project is called "Gulfstream Glen Cove" and consists of Conditional Use & Change of Zone Applications for (49) single-family lots, private roads, open space, amenities area (poolhouse, pool) and other related site improvements.

Once the Application has been scheduled for Public Hearing on March 5, 2025, information on this and other Applications may be found on the **County's Land Use Application Docket**

**C/Z 2017 Gulfstream Glen Cove**
**AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR CERTAIN PARCELS OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.32 ACRES, MORE OR LESS. lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352).** 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885,30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View. Tax Map Parcels: 134-12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00.

**C/U 2462 Gulfstream Glen Cove**
**AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM RESIDENTIAL DISTRICT FOR MULTI-FAMILY (50 UNITS) TO BE LOCATED ON CERTAIN PARCELS OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.32 ACRES, MORE OR LESS.** The properties are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352). 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885,30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View. Tax Map Parcels: 134- 12.00-374.01, 374.02, 375.00, & 3445.00 through 3460.00

Written comments may be submitted in-person, mailed to the address in my signature below or emailed to pandz@sussexcountyde.gov.

Electronic copies of the Conditional Use Site Plan and Applications have been included as attachments to this email.

We thank you for your time, expertise, and consideration in this matter.

Best Regards,
Michael

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878
michael.lowrey@sussexcountyde.gov

SUSSEX COUNTY
D E L A W A R E

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf
Much of the County's Planning and Zoning Information can be found online at:
https://sussexcountyde.gov/sussex-county-mapping-applications
Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

**STATE OF DELAWARE**
**EXECUTIVE DEPARTMENT**
**OFFICE OF STATE PLANNING COORDINATION**

March 23, 2021

Ron Sutton
Civil Engineering Associates
55 W. Main St.
Middletown, DE 19709

RE: PLUS review 2021-02-06; Glen Cove

Dear Mr. Sutton:

Thank you for meeting with State agency planners on February 24, 2021 to discuss the proposed plans for the Glen Cove project. According to the information received you are seeking review of a proposed rezoning of 8.84 acres from AR-1 to MR in anticipation of future site plan for 33 residential units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that as the County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

## Strategies for State Policies and Spending

This project is located in Investment Level 2 according to the 2015 *Strategies for State Policies and Spending*. It is also located within the Town of Millville. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. State investments will support growth in these areas. Our office has no objections to the proposed rezoning and development of this project in accordance with Sussex County Comprehensive plan and all applicable codes and ordinances.

122 Martin Luther King Jr. Blvd. South – Haslet Armory · Third Floor · Dover, DE 19901
Phone (302)739-3090 · Fax (302) 739-5661 · www. stateplanning.delaware.gov

## Code Requirements/Agency Permitting Requirements

**Department of Transportation – Contact Bill Brockenbrough 760-2109**

- The site access on Burbage Road (Sussex Road 353) must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017. The December 15, 2020, meeting was sufficient in this regard.

- In accordance with Sections 1.6.1 of the Manual, and Figure 1.5.1 within that section, address entrance spacing. The proposed site driveway is bordered by two vacant lots, Lots 2 and 3 of Windmill Subdivision Phase 1. Lot 2, to the west, has been acquired by the owner of Lot 1 and has an entrance on it that serves Lot 1. Lot 3, to the east, has no constructed entrance but it appears that the entrance to Lot 4 was designed for a future shared access. According to Figure 1.5.1, the proposed site entrance would be too close to the existing entrances on Lot 2 and 4. To optimize conformity to Figure 1.5.1, DelDOT anticipates requiring that driveway easements be granted along the proposed private drive to allow Lots 2 and 4 to take access there when they are developed. DelDOT has no present intention to close the existing access on Lot 2 but may do so if it is proposed for development.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- Per Section 2.2.2.1 of the Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the PLUS application, the total daily trips are estimated at 354 vehicle trip ends per day. Using the 10th edition of the Institute of Transportation Engineers' Trip Generation Manual, DelDOT calculates this number as 375 and estimates the weekday morning and evening peak hour trip ends at 28 and 35, respectively. Therefore a TIS is not required.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Manual, DelDOT will require dedication of right-of-way along the site's frontage on Burbage Road. By this regulation, this dedication is to provide a minimum of 40 feet from the physical centerline of Burbage Road. The following right-of-way dedication note is required, **"An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."**

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Burbage Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **"A 15-foot wide permanent easement is hereby established for the State of Delaware, as per this plat."**

- Referring to Section 3.4.2.1 of the Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.

    - Depiction of all existing entrances within 450 feet of the entrance on Burbage Road.

    - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- Section 3.5.4.2 of the Manual addresses requirements for Shared Use Path (SUP) and sidewalks. For projects in Level 1 and 2 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is mandatory. DelDOT anticipates requiring a Shared Use Path along the site frontage, recognizing that the SUP may be little more than curb ramps due to the limited site frontage.

- In accordance with Section 3.8 of the Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Burbage Road.

- In accordance with Section 5.2.9 of the Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance on Burbage Road and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/Business/subdivisions/index.shtml. DelDOT anticipates that a right turn lane with a five-foot bicycle lane will be warranted and that a left turn lane may be warranted as well.

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- Section 5.8 of the Manual addresses Stormwater Management. DelDOT anticipates requiring additional detail on how the developer will manage any proposed increase in drainage into the State system.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

**Department of Natural Resources and Environmental Control – Beth Krumrine 735-3480**
Concerns Identified Within the Development Footprint

**Stormwater Management**

This project/site has met the minimum threshold of 5000 square feet of land disturbing activity under the DNREC Sediment and Stormwater Program.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically (https://apps.dnrec.state.de.us/eNOI/default.aspx) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

- Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

- General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov
  Website: https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/

**Hydrologic Soils Group**
Hydrologic Soils Group A soils (well drained) exist on the majority of the site; however, Hydrologic Soil Group A/D soils (poorly drained) have been identified on the northwest portion of the site. These soil types are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins, which must meet minimum infiltration requirements.

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation.
- Contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
  E-mail: DNREC.Stormwater@delaware.gov.
  Website: https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/

**Tax Ditches**
The proposed project lies within the Derrickson Tax Ditch Watershed. Tax Ditch channels onsite have associated Tax Ditch Rights-of-Way (ROW) that are utilized for ditch access as well as sediment and debris disposal during maintenance. The Tax Ditch ROWs located on this parcel were previously reduced by a Court Order Change. It is highly unlikely that they can be reduced further, based on the minimal ROW width requirements.

- The previous Court Order Change stipulates that a 15' by 285' Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.
- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROW.
- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channels should be cleared or excavated prior to the construction of the project if needed.
- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site stormwater.
- Contact: DNREC Drainage Program at (302) 855-1930.
  Website: https://dnrec.alpha.delaware.gov/drainage-stormwater/
  Tax Ditch Mapper: de.gov/taxditchmap

**Water Quality (Pollution Control Strategies)**
Pollution Control Strategies have been developed for the following watersheds in Delaware: Christina, Appoquinimink, Broadkill, Mispillion and Cedar Creek, Murderkill, Saint Jones, Inland Bays (Rehoboth Bay, Indian River Bay, and Little Assawoman Bay), Nanticoke, and

Upper Chesapeake. Such strategies were created because surface water failed to meet water quality standards for nutrients and sediment.

- This site lies within the Indian River Bay Watershed. Consult with the appropriate plan review agency to determine if stricter stormwater management standards may apply for development projects in this area.

- Contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
  Website: https://www.sussexconservation.org/

**Wastewater permits – Large Systems**
Sussex County holds existing permits with the DNREC Groundwater Discharges Section's Large Systems Branch.

- It is the responsibility of the permitee (Sussex County) to notify the Large Systems Branch if the capacity of the rate of wastewater disposal is to be updated.

- Contact: DNREC Large Systems Branch at (302) 739-9948.
  Website: https://dnrec.alpha.delaware.gov/water/groundwater/

**Wetlands**
According to the application, approximately 0.8 acres of non-tidal wetlands exist on the northwestern corner of the site, and a wetland delineation has been completed. The U.S. Army Corps of Engineers has signed off on the delineation.

- If the project proposes to disturb (dredge or fill) jurisdictional wetlands under the U.S. Army Corps of Engineers, a delineation of waterways and wetlands is required. In certain circumstances, additional certifications from DNREC Wetlands & Subaqueous Lands Section will be required as part of the U.S. Army Corps of Engineers permit process.

- For a list of consultants and engineers who can conduct wetland delineations, please visit the DNREC Wetlands and Subaqueous Lands Section link:
  http://www.dnrec.delaware.gov/wr/Documents/WSLS/Consultant%20List.pdf

- Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.

**Vegetated Buffer Zones**
Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. They also provide valuable habitat and can help prevent encroachment of human activities into ecologically sensitive areas. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- The applicant must comply with minimum vegetated buffer widths as identified within county and municipal codes.

**State Historic Preservation Office – Contact Carlton Hall 736-7400**

- There are no known archaeological sites or known National Register listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance.

- Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

**Delaware State Fire Marshall's Office – Contact Duane Fox 259-7037**

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

Fire Protection Water Requirements:

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- Where a water distribution system is proposed for townhouse type dwellings it shall be capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

Accessibility:

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be accessible to fire apparatus. This means that the access road to the subdivision shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not

more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

Gas Piping and System Information:

- Provide type of fuel proposed and show locations of bulk containers on plan.

Required Notes:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Townhouse 2-hr separation wall details shall be shown on site plans
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how the suggestions can benefit the project.

**Department of Transportation – Contact Bill Brockenbrough 760-2109**

- There is an open space area in the adjoining Bishops Landing development that abuts the west property line of the subject development for about 200 feet beginning about 300 feet from the south end of the west property line (about 500 feet north of Burbage Road). DelDOT recommends that an easement and a trail be provided to promote walking between the two developments. DelDOT recognizes that there is no such trail on the Bishops Landing property but by providing their own easement and trail, the applicant can initiate a connection and influence where it should be.

- The applicant should expect a requirement that any substation and/or wastewater facilities will be required to have access from an internal driveway with no direct access to Burbage Road.

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 25, 2019. The notes can be found at https://www.deldot.gov/Business/subdivisions/

**Department of Natural Resources and Environmental Control – Beth Krumrine 735-3480**
Concerns Identified Within the Development Footprint

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

**General Drainage Recommendations**

- All existing ditches on the property should be evaluated for function and cleaned, if needed, prior to the construction of the project.

- Environmental permits or exemption coverage may be necessary from the County Conservation District (Standard Plan), DNREC Sediment and Stormwater (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Subaqueous Lands Section prior to clearing and/or excavating ditch channels.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

- Any area designated as a drainage/utility easement should be open space and not owned by the individual landowners.

Any drainage/utility easement owned by an individual landowner should not possess structures such as decks, buildings, sheds, kennels, or fences within the drainage easement to allow for future drainage maintenance. Trees and shrubs planted within a drainage/utility easement should be spaced to allow for drainage maintenance at maturity.

- Contact: DNREC Drainage Program at (302) 855-1930.
  Website: https://dnrec.alpha.delaware.gov/drainage-stormwater/

**Wetlands**

- Recommendations for buffers are prescribed below under the heading, Vegetated Buffer Zones.

**Vegetated Buffer Zones**

- A 20-foot buffer has been proposed from wetlands. DNREC reviewers recommend incorporating a 100-foot vegetated buffer zone from the edge of wetlands. If possible, relocate stormwater management outside of the vegetated buffer zone so that habitat remains intact.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance (LOD) on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Vegetated buffer zones should be deeded as community open space. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Maintain vegetated buffer zones as either grasslands/meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.
- Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600.
  Website: https://dnrec.alpha.delaware.gov/fish-wildlife/contact-information/

**Mosquitoes**

The project lies within a zone that will be impacted by mosquitoes due to its location near wetlands and waterways.

- Mosquito control issues are increasing as developments infringe on wetland areas, often leading to increased demands by the public for mosquito control services. These control services can be provided at no charge to homeowners and other entities by the state's

Mosquito Control Section, or by a private company licensed in this area of specialty.

- Contact: DNREC Division of Fish and Wildlife at (302) 739-9917. Website: https://dnrec.alpha.delaware.gov/fish-wildlife/mosquito-control/

**Additional Sustainable Practices**

- Incorporate nonmotorized connectivity (walkways) where feasible to help facilitate non-vehicular travel modes to nearby open spaces.

- Use efficient Energy Star rated products and materials in construction and redevelopment to lessen the power source emissions of the project and costs. Every percentage of energy efficiency translates into a percent reduction in pollution.

- Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers. Use of structural paint coatings that are low in Volatile Organic Compounds will help protect air quality.

- The applicant should consider the use of recycled materials, such as reclaimed asphalt pavement, to reduce landfill waste, heat island effects on paved surfaces, and pavement costs.

- Include an option to install electric vehicle charging stations in garages of homes for your customers and tenants to assist Delaware in achieving its clean transportation goals.

- Consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities. Grants may be available for qualifying renewable energy systems installed in Delaware by applicants whose electricity provider collects funds for the program and offers a grant program for renewable energy projects. Additional information can be found at: https://dnrec.alpha.delaware.gov/climate-coastal-energy/renewable/assistance/.

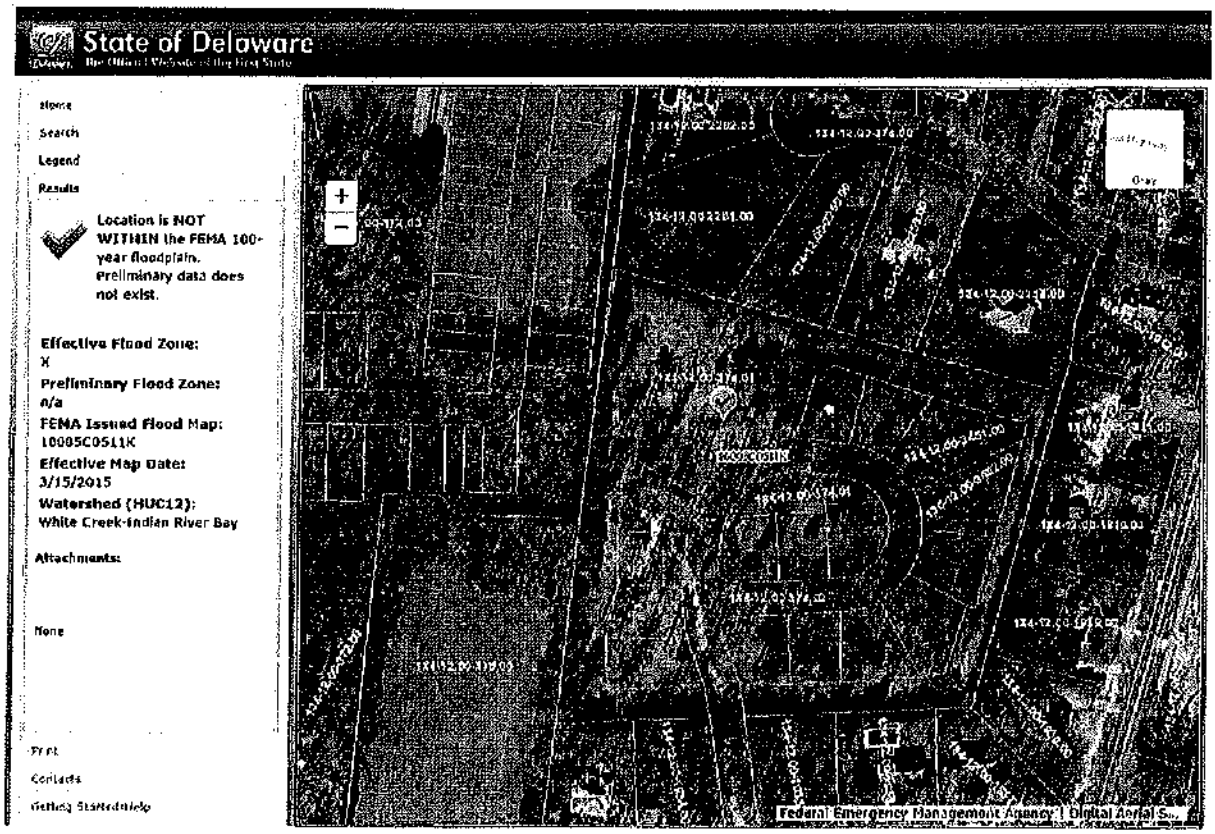
**Delaware State Fire Marshall's Office – Contact Duane Fox 259-7037**

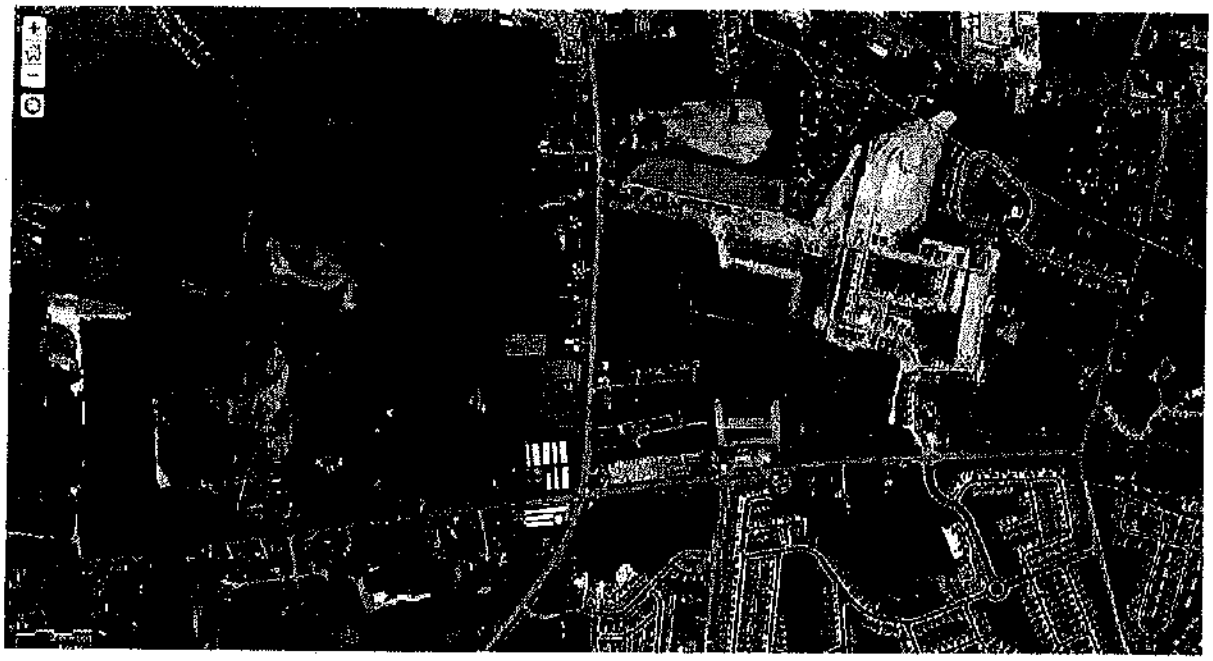
- Although not a requirement of the State Fire Prevention Regulations, the Office of the State Fire Marshal encourages home builders to consider the benefits of home sprinkler protection in dwellings. The Office of the State Fire Marshal also reminds home builders that they are obligated to comply with requirements of Subchapter III of Chapter 36 of Title 6 of the Delaware Code which can be found at the following website: http://delcode.delaware.gov/title6/c036/sc03/index.shtml

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

**Delaware Emergency Management Agency – Contact Philip Cane 659-2325**

- The location is not within any flood plain nor in a coastal inundation zone. 2018 QAP described the region this project is located in as being an "Area of Opportunity". The region has a homeownership rate of approximately 86.2%, a poverty ratio of 14 to 1 with approximately 28.3% of that census block's population at the age of 65 or older.





**Sussex County Engineering Department – Contact Chris Calio 855-1299**

- The proposed project is located within a Tier 1 area within the Sussex County Unified Sanitary Sewer District and connection to the sewer system is mandatory.

- A "Use of Existing Infrastructure Agreement" is required for new projects. Sussex County Code, Chapter 110, requires that the Engineer and/or Developer request a Sewer System Concept Evaluation (SSCE) from the Utility Planning & Design Review Department for the project by providing the parcel(s) estimated equivalent dwelling units (EDU) for the project, along with payment of a $1,000.00 fee for the evaluation and must be approved prior to approval of construction plans. The fee is to be payable to Sussex County Council. The Department will review the parcel(s) and EDU, confirm capacity, provide the connection point and define any additional parcels that must be served as part of the project. Should it be determined that a pump station is required for the project, additional information may be requested. This information will be conveyed to the engineer and/or developer. The Department will use this information when reviewing construction drawings to verify that the correct connection point is used, and all required parcels are served.

- The proposed development will require a developer installed collection system in accordance with Sussex County standards and procedures.

- One-time system connection charges will apply. Please contact the Utility Permits Division at 302 854-7719 for additional information on charges.

**Sussex County Housing – Contact: Brandy Nauman 855-7779**

- Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations.

- For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: www.sussexcountyde.gov/affordable-and-fair-housing-resource-center. The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County.

- The Community Development & Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state and county sources, as well as private funding sources that also promote affordable housing in Sussex County.

- Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland

Constance C. Holland, AICP
Director, Office of State Planning Coordination

CC: Sussex County Planning Department

## Ashley Paugh

**From:** Dickerson, Troy <TDickerson@delaware.coop>
**Sent:** Friday, August 9, 2024 8:17 AM
**To:** Ashley Paugh
**Subject:** RE: TAC Review - C/U 2462 & C/Z 2017 Glen Cove

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Ashley,

This development is located within DEC's service territory, and we have facilities in the area to serve the proposed units.

Thanks!

DELAWARE ELECTRIC CO-OP
"We Keep the Lights On"

Troy W. Dickerson, P.E.
Vice President of Engineering
Delaware Electric Cooperative, Inc.
o: 302.349.3125 m: 302.535.9048
a: 14198 Sussex Highway, Greenwood, DE 19950
w: www.delaware.coop e: tdickerson@delaware.coop

---

**From:** Ashley Paugh <ashley.paugh@sussexcountyde.gov>
**Sent:** Wednesday, August 7, 2024 1:44 PM
**To:** C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; Jennifer Cinelli <jennifer.cinelli@delaware.gov>; Jessica Watson <jessica.watson@state.de.us>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Lisa Savage - Delmarva Power <lisa.savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Robin Weinkam - DNREC Watershed <Robin.Weinkam@delaware.gov>; Stephanie Mack - Delmarva Power <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Dickerson, Troy <TDickerson@delaware.coop>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
**Subject:** TAC Review - C/U 2462 & C/Z 2017 Glen Cove

Good Afternoon All,

Sussex County Planning & Zoning Department has received one (1) application that requires TAC review. Attached is a memo regarding the application and a pdf of the plans submitted.

Please provide comments on or before Monday, September 23, 2024.

Please send all comments to pandz@sussexcountyde.gov

Kind Regards,

*Ashley Paugh*

Planning Technician

Sussex County

Planning & Zoning Dept.

2 The Circle (PO Box 417)

Georgetown, DE 19947

(302)-855-7878

## Ashley Paugh

**From:** Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>
**Sent:** Wednesday, August 7, 2024 2:29 PM
**To:** Ashley Paugh
**Subject:** RE: [EXTERNAL]TAC Review - C/U 2462 & C/Z 2017 Glen Cove

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**No comments.**

**Thank you.**

Lisa A. Savage
Sr. Real Estate Representative

delmarva power℠
AN EXELON COMPANY

Delmarva Power & Light Company
2530 N. Salisbury Boulevard
Salisbury, MD 21801
T 667-313-2682
lisa.savage@delmarva.com | delmarva.com

---

**From:** Ashley Paugh <ashley.paugh@sussexcountyde.gov>
**Sent:** Wednesday, August 7, 2024 1:44 PM
**To:** C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; Jennifer Cinelli <jennifer.cinelli@delaware.gov>; Jessica Watson <jessica.watson@state.de.us>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Robin Weinkam - DNREC Watershed <Robin.Weinkam@delaware.gov>; Mack, Stephanie T:(DPL) <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Troy Dickerson - DE Electric Coop <TDickerson@decoop.com>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
**Subject:** [EXTERNAL]TAC Review - C/U 2462 & C/Z 2017 Glen Cove

***EXTERNAL MAIL. Do not click links or open attachments from unknown senders or unexpected Email.***

Good Afternoon All,

Sussex County Planning & Zoning Department has received one (1) application that requires TAC review. Attached is a memo regarding the application and a pdf of the plans submitted.
Please provide comments on or before Monday, September 23, 2024.

Please send all comments to pandz@sussexcountyde.gov

Kind Regards,

*Ashley Paugh*
Planning Technician
Sussex County
Planning & Zoning Dept.
2 The Circle (PO Box 417)
Georgetown, DE 19947
(302)-855-7878

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STATE OF DELAWARE
DEPARTM ENT OF NATURAL RESOURCES AND
ENVIRONM ENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

DRAINAGE PROGRAM

PHONE: (302) 855-1930
FAX: (302) 670-7059

August 14, 2024

Michael Lowrey
michael.lowrey@sussexcountyde.gov
Sussex County
Department of Planning and Zoning
2 The Circle
P.O. Box 417
Georgetown, DE 19947

RE: Parcel # 134-12.00-375.00, 134-12.00-374.01, 134-12.00-374.02, 134-12.00-3445.00, 13412.00-3446.00, 134-12.00-3447.00. 134-12.00-3448.00, 134-12.00-3449.00, 134-12.003450.00, 134-12.00-3451.00, 134-12.00-3452.00, 134-12.00-3453.00, 134-12.00-3454.00, 13412.00-3455.00, 134-12.00-3456.00, 134-12.00-3457.00. 134-12.00-3458.00, 134-12.003459.00, 134-12.00-3460.00, Glen Cove

The Delaware Department of Natural Resources and Environmental Control (DNREC), Drainage Program has reviewed the pre-application package submitted by Civil Engineering Associates, LLC for the above noted property within the Derrickson Canal Tax Ditch Watershed along Sub 2 Prong 2 and Prong 2.

- Please clearly delineate and label existing and proposed Tax Ditch [Prongs] and associated Right-of-Way (ROW) on all sheets where it appears, including on adjacent properties. The Delaware Tax Ditch FeatureServer is available on DE FirstMap and here: https://enterprise.firstmap.delaware.gov/arcgis/rest/services/Hydrology/DE_TaxDitch/FeatureServer

- Tax ditch channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during tax ditch maintenance activities. Tax Ditch ROWs vary by channel size and location.

- Permanent obstructions, including but not limited to; stormwater management facilities, buildings, sheds, streets, wells, landscape plantings, driveways and septic's are not allowed within the tax ditch ROW.

- Existing Tax Ditches on the property should be surveyed and compared to Tax Ditch design specifications for effective function. The channels should be cleared or excavated prior to the construction of the project if needed. Please contact the DNREC Drainage Program for tax ditch asbuilt information (DNREC Drainage@delaware.gov.)

- Stormwater Management Facilities and associated infrastructure are the responsibility of the private landowner or HOA even if located within the tax ditch channel.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

- Projects only have DNREC Tax Ditch Program approval if they have received a Letter of No Objection (LONO) from our office. Approvals from other entities do not guarantee that your project has no tax ditch impacts or has satisfied tax ditch comments. Projects and activities are subject to Del Code Title 7 Chapter 41.

**No Drainage Concerns have been reported to DNREC's Drainage Concern Database of Parcels within project scope.**

If you are a consultant working on behalf of a landowner, it is your responsibility to pass on this information to the landowner.

Please submit the Drainage Program's land development review request form for the above noted project when submitting revised plans to SCD. In addition, feel free to CC me in any email submissions to SCD. The form along with a tax ditches and land development guidance document can also be found at de.gov/taxditch.

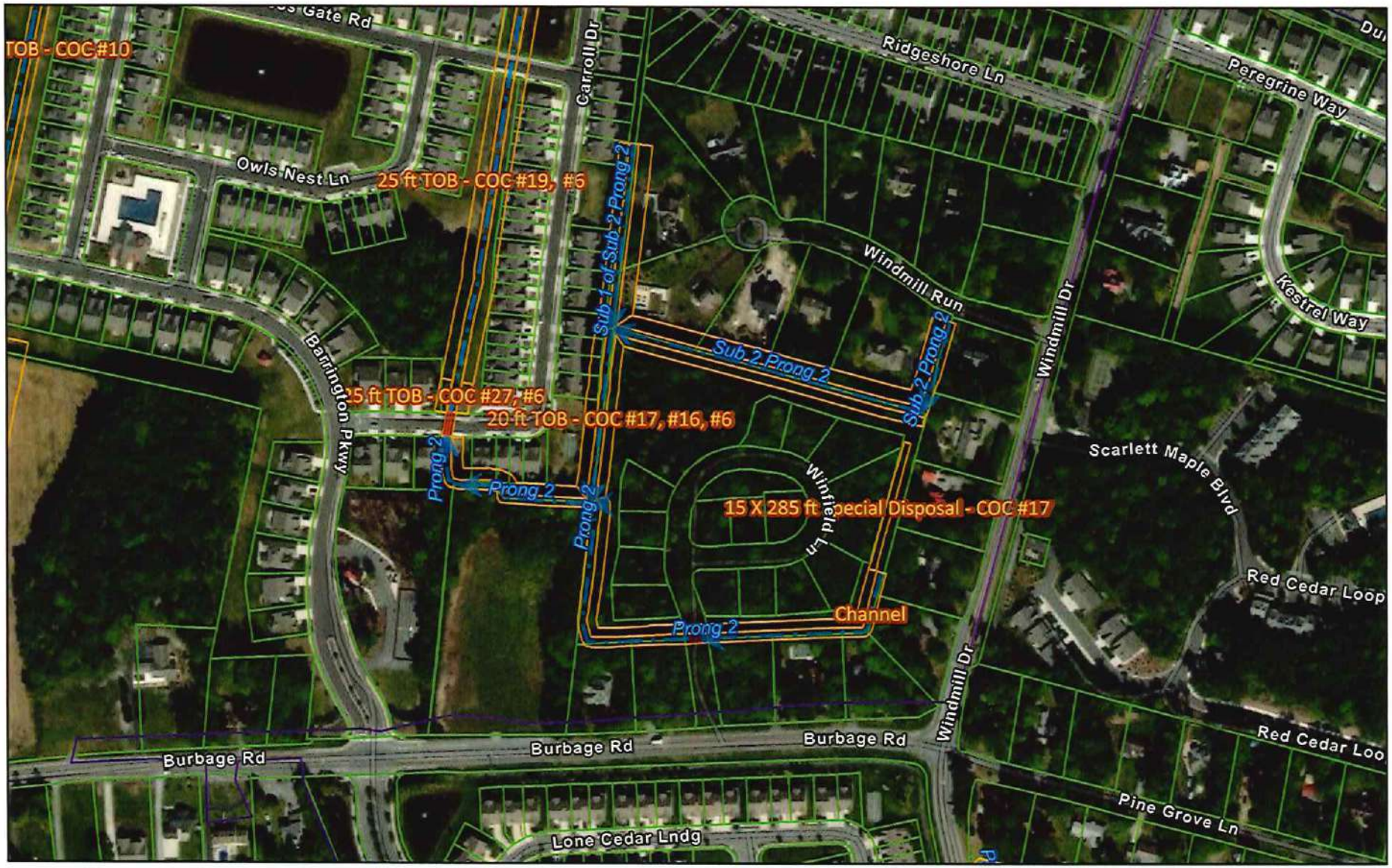
Once we have received both the request form from you and the stormwater management plans from the Sussex Conservation District, we can proceed with a more in-depth review along with processing of any necessary COC's followed by the issuance of our Letter of No Objection to the Sussex Conservation District.

Sincerely,

Karyssa Gortz
Planner II- Permit & Data Specialist

cc: Jordan Watson, Planner IV

# Aerial Map




8/13/2024, 3:34:39 PM

Tax Ditch Channels

Tax Ditch Channel

DITCHPIPEPRIV

Extent of Right-of-Way

Approx. Watershed Boundary

Parcels - Sussex

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

## Ashley Paugh

**From:** Gortz, Karyssa (DNREC) <karyssa.gortz@delaware.gov>
**Sent:** Wednesday, August 14, 2024 12:05 PM
**To:** Planning and Zoning
**Subject:** Glen Cove- TAC Review
**Attachments:** TAC Review Comments.docx; Aerial Map.pdf

**Categories:** Ashley

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Hi,

DNREC Drainage Program preliminary review comment letter for Glen Cove.

Thank you!

Karyssa Gortz
Planner II- Permit & Data Specialist
Drainage Program
DNREC Division of Watershed Stewardship
21309 Berlin Rd, Unit #6, Georgetown, DE 19947
Direct (302) 855-1943

# Sussex County, Delaware
## Technical Advisory Committee

### Comment Sheet

DATE OF REVIEW: August 8, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
**Desiree B. McCall, CFI, Sr. Fire Protection Specialist**
**John A. Colpo, Sr. Fire Protection Specialist**
**Daniel E. Louder, Fire Protection Specialist**
**Walter L. Johnson, Fire Protection Specialist**

AGENCY PHONE NUMBERS: **302-856-5298, Fax: 302-856-5800**

RE: C/U 2462 □ C/Z 2017 Glen Cove

*The reasons and conditions applied to this project and their sources are itemized below:*

**********

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Industrial, Storage and Mercantile)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One □ Two- Family Dwelling)
  - One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Walker Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. Streets designed without parking need to develop a plan for enforcement once HOA takes charge. Fire apparatus still need to negotiate the streets.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The use of open bridge or covered bridge shall be designed to DEDOT standards and accessible by all fire department apparatus.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes**:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications, or brochures.

***THIS DOCUMENT IS INFORMATIONAL ONLY, AND DOES NOT CONSTITUTE ANY TYPE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE***

JAMIE WHITEHOUSE, AICP, MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

# Memorandum

To: Sussex County Technical Advisory Committee
From: Ashley Paugh, Planning Technician
Date: August 7, 2024
RE: Multi-Family Conditional Use & Change of Zone for TAC Review

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**PLEASE NOTE: All e-mailed responses shall be directed to PANDZ@SUSSEXCOUNTYDE.GOV. Each application can be directed to the planner assigned.**

The Sussex County Planning and Zoning Office has received one (1) application for a Change of Zone from AR-1 (Agricultural Residential) to a MR (Medium-Density Residential) Zoning District and one (1) application for a Conditional Use for Multi-Family (50 Units) that requires review by the Sussex County Technical Advisory Committee. Please review the application and provide comments back to the Planning and Zoning Office on or before **September 23, 2024.**

**C/Z 2017 Gulfstream Glen Cove**
**AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR CERTAIN PARCELS OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.32 ACRES, MORE OR LESS. lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352).** 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885,30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View. Tax Map Parcels: 134-12.00-374.01, 374.02, 375.00, □ 3445.00 through 3460.00.

**C/U 2462 Gulfstream Glen Cove**
**AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM RESIDENTIAL DISTRICT FOR MULTI-FAMILY (50 UNITS) TO BE LOCATED ON CERTAIN PARCELS OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.32 ACRES, MORE OR LESS.** The properties are lying on the north side of Burbage Road (S.C.R. 353) approximately 475 ft. west of Windmill Drive (S.C.R. 352). 911 Addresses: 30835, 30839, 30845, 30853, 3083, 30879, 30885,30889, 30895, 30899, 30903, 30911, 30910, 30896 Winfield Lane, Ocean View. Tax Map Parcels: 134-12.00-374.01, 374.02, 375.00, □ 3445.00 through 3460.00.

**Planner Assigned:** Michael Lowrey – Planner III
michael.lowrey@sussexcountyde.gov

Please feel free to contact the office with any questions at (302) 855-7878.

**ENGINEERING DEPARTMENT**

JOHN J. ASHMAN
SR. MANAGER OF UTILITY PLANNING
& DESIGN REVIEW

(302) 855-7370 T
(302) 854-5391 F
jashman@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

Date: **August 30, 2024**

REF: **T. A. C. COMMENTS**
**GLEN COVE II**
**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**SUSSEX COUNTY TAX MAP NUMBER**
**134-12.00 PARCEL 374.01, 34.02, 375.00, and 3445 through 3460.00**
**AGREEMENT NO. 999-1**

The following comments are the result of the Sussex County Engineering Department's review of the preliminary site plan for the above referenced project:

## DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.

2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.

3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.

4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.

5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.

6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

The plans shall show and address the following items at minimum:

7. The project requires professional land surveying services to accurately delineate, and show the following items but is not limited to the following: all property and right-of-

way lines, established at a minimum, survey monuments, easements, existing and proposed topographic contours at 1-foot vertical intervals and spot elevations as necessary to establish grades, the locations of all existing structures, highway and roadway pavements, shoulders, curbs, driveways, sidewalks, lighting structures, traffic control signs, and all public and private utilities, including, but not limited to, electric power and telephone lines, poles and boxes, underground electric, telephone, and communication lines, potable water lines, fire hydrants and valve boxes, gas lines, wells, sanitary sewers including septic systems, rim and invert elevations of manholes and cleanouts, and the rims and invert elevations and type of storm water structures, drainage ditches, ponds, streams and waterways, flood zones and flood zone boundaries and elevations, and State and Federal wetlands, trees, cemeteries and historic features, and the finished floor elevations of buildings.

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.

9. The plan requires a Certification Signature and/or a Certification Block for the following:

    a. Delaware Professional Engineer or Delaware Land Surveyor.
    b. Owner or Representative of the Owner.
    c. Professional Wetlands Delineator.

10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.

11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.

12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, geo-referenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.

13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.

14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.

15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Road, Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.

17. False berms shall not be utilized to create roadside drainage swale back slopes.

18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.

19. Provide and show the locations and details of all ADA pedestrian connections.

20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.

21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.

22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.

23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.

24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.

25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.

26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

## SEWER SPECIFIC COMMENTS

LOCATION: Approx 500' west of intersection of Windmill Dr. (Rd. 352) and Burbage Rd. (Rd. 353).

NO. OF UNITS: 50 Single family lots.

GROSS ACREAGE: 12.32 Acres

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

(2). Which County Tier Area is project in? Tier 1

(3). Is wastewater capacity available for the project? Yes If not, what capacity is available? N/A.

(4). Is a Construction Agreement required? Yes If yes, contact Utility Engineering at (302) 855-7370 / option 2.

(5). Are there any System Connection Charge (SCC) credits for the project? No

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Parcels located in Tier 1.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

If the above items, as applicable, are incorporated into the development plans, then preliminary approval is recommended. However, final plan approval should be withheld pending the approval of the construction plans by the Sussex County Engineering Department.

**MEMORANDUM**

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

RE: C/Z 2017 Gulfstream Glen Cove and C/U 2462 Gulfstream Glen Cove

I am in receipt of your e-mails dated August 7 and 8, 2024, which included the Applications for a change of zone from AR-1 to MR and for a conditional use for multi-family for Gulfstream Glen Cove (hereinafter the "Applications") and the Preliminary Plan (hereinafter "Plan") for the project identified above. I have reviewed all the information for compliance with the requirements of the Sussex County Subdivision Code, including §§ 99-06 (General Requirements and Restrictions), 99-22 (General Requirements), 99-23 (Information to be Shown), 99-24 (Supporting Statements) and 99-27 (Supporting Statements).

My review specifically addressed the following areas:

(1) Private streets and road maintenance (9 *Del. C.* § 9623; 17 *Del. C.* § 131; Sussex County Code § 99-27).

(2) Storm water management, erosion, and sedimentation control facilities maintenance (Sussex County Code § 99-27).

(3) Water supply, sanitary sewer or other facilities maintenance (Sussex County Code § 99-27).

(4) Forested buffer strips maintenance (Sussex County Code §§ 99-16(D), 99-24(F)).

(5) Agricultural use protection notice (Sussex County Code § 99-6(G)).

(6) State or Federal wetlands disclosures and notice (Sussex County Code § 99-6(H)).

(7) Special restriction on mobile homes as a single family dwelling in AR-1 zones on lots of more than 3/4 acre (Sussex County Code § 115-20(A)).

As a result of the review described above, I offer the following comments:

- This is an application to amend the comprehensive zoning map of Sussex County from an AR-1 (Agricultural Residential) District to a to MR (Medium Density Residential) District and for a Conditional Use for Multi-Family.
- Proposed restrictive covenants were submitted with the Application.
- The proposed project is within a AR-1 (Agricultural Residential) District and is comprised of fifty condominiums. The Plan indicates that the lots will be served by Tidewater Utilities for water service and the Sussex County Unified Sanitary Sewer District for sanitary sewer service.
- The proposed project does not appear to be adjacent to agricultural farmland but does appear to provide a forested buffer strip in *all* areas of the perimeter. The proposed restrictions include a statement specifically providing for the perpetual maintenance of the buffer (Sussex County Code § 99-24(F)).
- The project also does not appear to be within fifty (50) feet of lands used for agricultural purposes; thus, additional setbacks established by Sussex County Code § 99-6(G)(2) may not apply.
- There is no agricultural use protection notice provided for in Sussex County Code § 99-6(G)(1) contained in the proposed restrictive covenants.
- The proposed restrictions provide for the maintenance of the streets and roadways.
- The proposed restrictions must address the maintenance of all common areas, including the maintenance of the storm water management areas, surface drainage facilities, erosion and sedimentation control facilities and buffer areas.
- It appears from the Plan that there are wetlands on this site. The proposed restrictive covenants do not contain a notice that the property contains regulated wetlands. Activities within these wetlands may require a permit from the U.S. Army Corps of Engineers and/or the State of Delaware.

Cc: Foxlane Homes Delaware

## Michael Lowrey

**From:** Valerie Thompson
**Sent:** Monday, February 17, 2025 10:03 AM
**To:** Michael Lowrey
**Subject:** RE: Glen Cove DAR

Good morning Micharl,

I have reviewed the resubmitted DAR for Glen Cove. Based on the provided Site Plan, all SCE comments have been addressed.

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
2 The Circle, Georgetown DE 19947
Office: 302-855-7790
Cell: 443-783-8063
Email: valerie.thompson@sussexcountyde.gov

---

**From:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Sent:** Friday, February 14, 2025 3:18 PM
**To:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>
**Subject:** RE: Glen Cove DAR

Good afternoon.

I've attached the Applicant's response to your prompts & the full email thread of the Applicant's response. Additionally, I've hosted all the submitted materials referenced in the email or the attached response here:
GLEN COVE - SHARE W SCED

Let me know if you have any questions & tanks for your time.
Have a nice weekend.
Michael

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947

302-855-7878
michael.lowrey@sussexcountyde.gov

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
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**From:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>
**Sent:** Friday, January 24, 2025 1:32 PM
**To:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Subject:** Glen Cove DAR

Good afternoon Michael,

Attached are the review comments and checklist for Glen Cove.

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
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Email: valerie.thompson@sussexcountyde.gov

**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**UTILITY PLANNING & DESIGN REVIEW DIVISION**
**C/U & C/Z COMMENTS**

| | |
|---|---|
| TO: | **Jamie Whitehouse** |
| REVIEWER: | **Chris Calio** |
| DATE: | **2/18/2025** |
| APPLICATION: | **CU 2462 Gulfstream Glen Cove** |
| APPLICANT: | **Gulfstream Glen Cove, LLC** |
| FILE NO: | **NM-1.03** |
| TAX MAP & PARCEL(S): | **134-12.00-374.01, 374.02, 375.00 & 3445.00 – 3460.00** |
| LOCATION: | **Lying on the north side of Burbage Road (SCR 353), approximately 475'+/- west of Windmill Drive (SCR 352).** |
| NO. OF UNITS: | **50** |
| GROSS ACREAGE: | **12.32** |

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **4**

**SEWER:**

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 1**

(3). Is wastewater capacity available for the project? **Yes** If not, what capacity is available? **N/A**.

(4). Is a Construction Agreement required? **Yes** If yes, contact Utility Engineering at (302) 855-7717.

(5). Are there any System Connection Charge (SCC) credits for the project? **No** If yes, how many? **N/A**. Is it likely that additional SCCs will be required? **Yes** If yes, the current System Connection Charge Rate is **Unified $7,700.00** per EDU. Please contact **Ashley Evans** at **302-855-7719** for additional information on charges.

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

☐ Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **A new SSCE will be required due to the increase in the number of EDUs for the project.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Ashley Evans

## Michael Lowrey

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**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**UTILITY PLANNING & DESIGN REVIEW DIVISION**
**C/U & C/Z COMMENTS**

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **2/18/2025**

APPLICATION: **CU 2462 Gulfstream Glen Cove**

APPLICANT: **Gulfstream Glen Cove, LLC**

FILE NO: **NM-1.03**

TAX MAP & PARCEL(S): **134-12.00-374.01, 374.02, 375.00 & 3445.00 – 3460.00**

LOCATION: **Lying on the north side of Burbage Road (SCR 353), approximately 475'+/- west of Windmill Drive (SCR 352).**

NO. OF UNITS: **50**

GROSS ACREAGE: **12.32**

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **4**

**SEWER:**

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 1**

(3). Is wastewater capacity available for the project? **Yes** If not, what capacity is available? **N/A**.

(4). Is a Construction Agreement required? **Yes** If yes, contact Utility Engineering at (302) 855-7717.

(5). Are there any System Connection Charge (SCC) credits for the project? **No** If yes, how many? **N/A**. Is it likely that additional SCCs will be required? **Yes** If yes, the current System Connection Charge Rate is **Unified $7,700.00** per EDU. Please contact **Ashley Evans** at **302-855-7719** for additional information on charges.

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

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(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **A new SSCE will be required due to the increase in the number of EDUs for the project.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Ashley Evans

## Ashley Paugh

**From:** Dickerson, Troy <TDickerson@delaware.coop>
**Sent:** Friday, August 9, 2024 8:17 AM
**To:** Ashley Paugh
**Subject:** RE: TAC Review - C/U 2462 & C/Z 2017 Glen Cove

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Ashley,

This development is located within DEC's service territory, and we have facilities in the area to serve the proposed units.

Thanks!

Troy W. Dickerson, P.E.
Vice President of Engineering
Delaware Electric Cooperative, Inc.
o: 302.349.3125 m: 302.535.9048
a: 14198 Sussex Highway, Greenwood, DE 19950
w: www.delaware.coop e: tdickerson@delaware.coop

---

**From:** Ashley Paugh <ashley.paugh@sussexcountyde.gov>
**Sent:** Wednesday, August 7, 2024 1:44 PM
**To:** C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; Jennifer Cinelli <jennifer.cinelli@delaware.gov>; Jessica Watson <jessica.watson@state.de.us>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Lisa Savage - Delmarva Power <lisa.savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Robin Weinkam - DNREC Watershed <Robin.Weinkam@delaware.gov>; Stephanie Mack - Delmarva Power <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Dickerson, Troy <TDickerson@delaware.coop>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
**Subject:** TAC Review - C/U 2462 & C/Z 2017 Glen Cove

Good Afternoon All,

Sussex County Planning & Zoning Department has received one (1) application that requires TAC review. Attached is a memo regarding the application and a pdf of the plans submitted.

Please provide comments on or before Monday, September 23, 2024.

Please send all comments to pandz@sussexcountyde.gov

Kind Regards,

*Ashley Paugh*

Planning Technician

Sussex County

Planning & Zoning Dept.

2 The Circle (PO Box 417)

Georgetown, DE 19947

(302)-855-7878

**MEMORANDUM**

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

RE: C/Z 2017 Gulfstream Glen Cove and C/U 2462 Gulfstream Glen Cove

I am in receipt of your e-mails dated August 7 and 8, 2024, which included the Applications for a change of zone from AR-1 to MR and for a conditional use for multi-family for Gulfstream Glen Cove (hereinafter the "Applications") and the Preliminary Plan (hereinafter "Plan") for the project identified above. I have reviewed all the information for compliance with the requirements of the Sussex County Subdivision Code, including §§ 99-06 (General Requirements and Restrictions), 99-22 (General Requirements), 99-23 (Information to be Shown), 99-24 (Supporting Statements) and 99-27 (Supporting Statements).

My review specifically addressed the following areas:

(1) Private streets and road maintenance (9 *Del. C.* § 9623; 17 *Del. C.* § 131; Sussex County Code § 99-27).

(2) Storm water management, erosion, and sedimentation control facilities maintenance (Sussex County Code § 99-27).

(3) Water supply, sanitary sewer or other facilities maintenance (Sussex County Code § 99-27).

(4) Forested buffer strips maintenance (Sussex County Code §§ 99-16(D), 99-24(F)).

(5) Agricultural use protection notice (Sussex County Code § 99-6(G)).

(6) State or Federal wetlands disclosures and notice (Sussex County Code § 99-6(H)).

(7) Special restriction on mobile homes as a single family dwelling in AR-1 zones on lots of more than 3/4 acre (Sussex County Code § 115-20(A)).

As a result of the review described above, I offer the following comments:

- This is an application to amend the comprehensive zoning map of Sussex County from an AR-1 (Agricultural Residential) District to a to MR (Medium Density Residential) District and for a Conditional Use for Multi-Family.
- Proposed restrictive covenants were submitted with the Application.
- The proposed project is within a AR-1 (Agricultural Residential) District and is comprised of fifty condominiums. The Plan indicates that the lots will be served by Tidewater Utilities for water service and the Sussex County Unified Sanitary Sewer District for sanitary sewer service.
- The proposed project does not appear to be adjacent to agricultural farmland but does appear to provide a forested buffer strip in *all* areas of the perimeter. The proposed restrictions include a statement specifically providing for the perpetual maintenance of the buffer (Sussex County Code § 99-24(F)).
- The project also does not appear to be within fifty (50) feet of lands used for agricultural purposes; thus, additional setbacks established by Sussex County Code § 99-6(G)(2) may not apply.
- There is no agricultural use protection notice provided for in Sussex County Code § 99-6(G)(1) contained in the proposed restrictive covenants.
- The proposed restrictions provide for the maintenance of the streets and roadways.
- The proposed restrictions must address the maintenance of all common areas, including the maintenance of the storm water management areas, surface drainage facilities, erosion and sedimentation control facilities and buffer areas.
- It appears from the Plan that there are wetlands on this site. The proposed restrictive covenants do not contain a notice that the property contains regulated wetlands. Activities within these wetlands may require a permit from the U.S. Army Corps of Engineers and/or the State of Delaware.

Cc: Foxlane Homes Delaware

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FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

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Cc: Foxlane Homes Delaware

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

DRAINAGE PROGRAM

PHONE: (302) 855-1930
FAX: (302) 670-7059

August 14, 2024

Michael Lowrey
michael.lowrey@sussexcountyde.gov
Sussex County
Department of Planning and Zoning
2 The Circle
P.O. Box 417
Georgetown, DE 19947

RE: Parcel # 134-12.00-375.00, 134-12.00-374.01, 134-12.00-374.02, 134-12.00-3445.00, 13412.00-3446.00, 134-12.00-3447.00. 134-12.00-3448.00, 134-12.00-3449.00, 134-12.003450.00, 134-12.00-3451.00, 134-12.00-3452.00, 134-12.00-3453.00, 134-12.00-3454.00, 13412.00-3455.00, 134-12.00-3456.00, 134-12.00-3457.00. 134-12.00-3458.00, 134-12.003459.00, 134-12.00-3460.00, Glen Cove

The Delaware Department of Natural Resources and Environmental Control (DNREC), Drainage Program has reviewed the pre-application package submitted by Civil Engineering Associates, LLC for the above noted property within the Derrickson Canal Tax Ditch Watershed along Sub 2 Prong 2 and Prong 2.

- Please clearly delineate and label existing and proposed Tax Ditch [Prongs] and associated Right-of-Way (ROW) on all sheets where it appears, including on adjacent properties. The Delaware Tax Ditch FeatureServer is available on DE FirstMap and here: https://enterprise.firstmap.delaware.gov/arcgis/rest/services/Hydrology/DE_TaxDitch/FeatureServer

- Tax ditch channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during tax ditch maintenance activities. Tax Ditch ROWs vary by channel size and location.

- Permanent obstructions, including but not limited to; stormwater management facilities, buildings, sheds, streets, wells, landscape plantings, driveways and septic's are not allowed within the tax ditch ROW.

- Existing Tax Ditches on the property should be surveyed and compared to Tax Ditch design specifications for effective function. The channels should be cleared or excavated prior to the construction of the project if needed. Please contact the DNREC Drainage Program for tax ditch asbuilt information (DNREC Drainage@delaware.gov.)

- Stormwater Management Facilities and associated infrastructure are the responsibility of the private landowner or HOA even if located within the tax ditch channel.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

- Projects only have DNREC Tax Ditch Program approval if they have received a Letter of No Objection (LONO) from our office. Approvals from other entities do not guarantee that your project has no tax ditch impacts or has satisfied tax ditch comments. Projects and activities are subject to Del Code Title 7 Chapter 41.

**No Drainage Concerns have been reported to DNREC's Drainage Concern Database of Parcels within project scope.**

If you are a consultant working on behalf of a landowner, it is your responsibility to pass on this information to the landowner.

Please submit the Drainage Program's land development review request form for the above noted project when submitting revised plans to SCD. In addition, feel free to CC me in any email submissions to SCD. The form along with a tax ditches and land development guidance document can also be found at de.gov/taxditch.

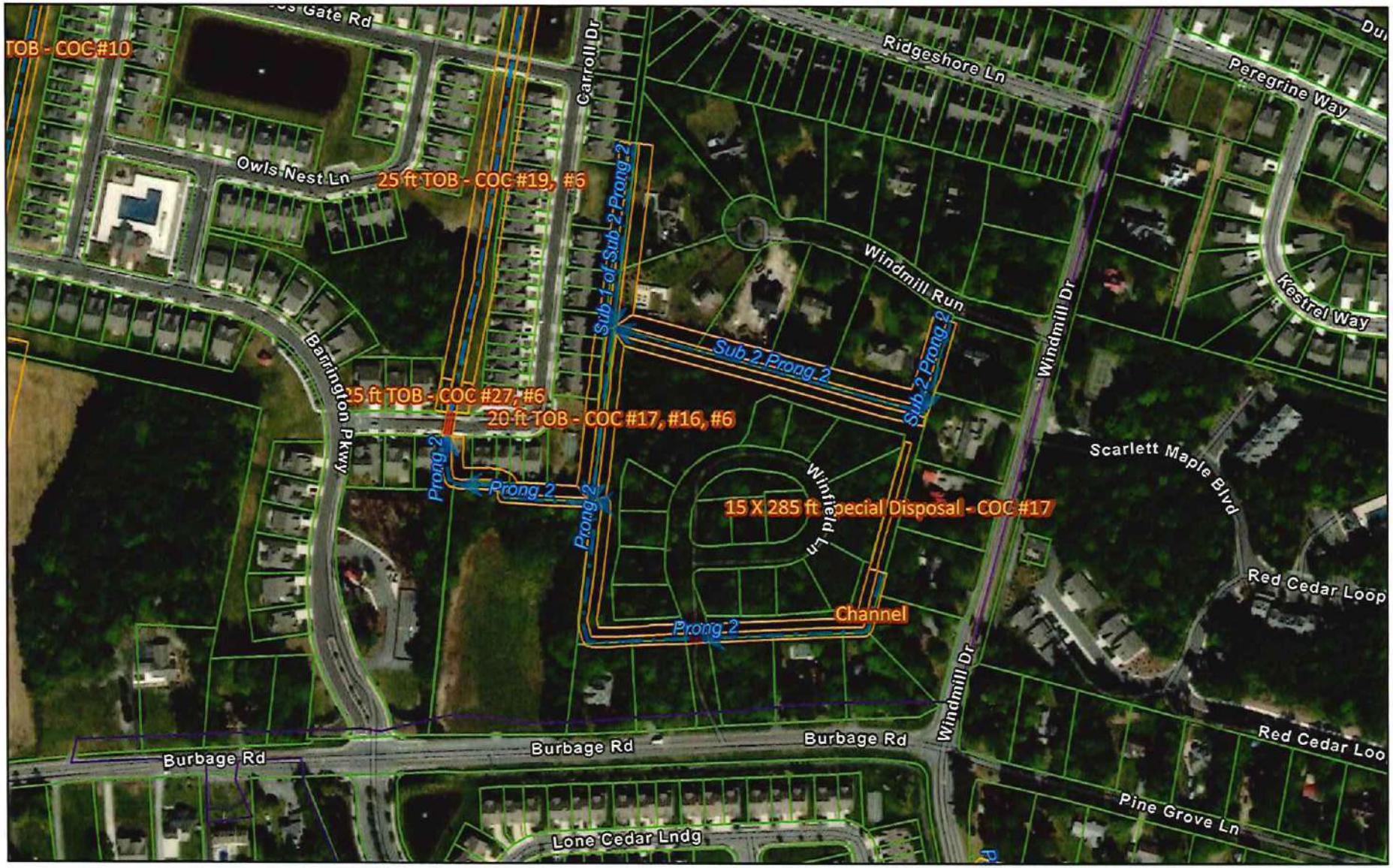
Once we have received both the request form from you and the stormwater management plans from the Sussex Conservation District, we can proceed with a more in-depth review along with processing of any necessary COC's followed by the issuance of our Letter of No Objection to the Sussex Conservation District.

Sincerely,

Karyssa Gortz
Planner II- Permit & Data Specialist

cc: Jordan Watson, Planner IV

# Aerial Map




8/13/2024, 3:34:39 PM

Tax Ditch Channels

Tax Ditch Channel

DITCHPIPEPRIV

Extent of Right-of-Way

Approx. Watershed Boundary

Parcels - Sussex

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

## Ashley Paugh

**From:** Gortz, Karyssa (DNREC) <karyssa.gortz@delaware.gov>
**Sent:** Wednesday, August 14, 2024 12:05 PM
**To:** Planning and Zoning
**Subject:** Glen Cove- TAC Review
**Attachments:** TAC Review Comments.docx; Aerial Map.pdf

**Categories:** Ashley

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Hi,

DNREC Drainage Program preliminary review comment letter for Glen Cove.

Thank you!

Karyssa Gortz
Planner II- Permit & Data Specialist
Drainage Program
DNREC Division of Watershed Stewardship
21309 Berlin Rd, Unit #6, Georgetown, DE 19947
Direct (302) 855-1943

# Sussex County, Delaware
## Technical Advisory Committee

### Comment Sheet

DATE OF REVIEW: August 8, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
**Desiree B. McCall, CFI, Sr. Fire Protection Specialist**
**John A. Colpo, Sr. Fire Protection Specialist**
**Daniel E. Louder, Fire Protection Specialist**
**Walter L. Johnson, Fire Protection Specialist**

AGENCY PHONE NUMBERS: **302-856-5298, Fax: 302-856-5800**

RE: C/U 2462 □ C/Z 2017 Glen Cove

*The reasons and conditions applied to this project and their sources are itemized below:*
**********

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Industrial, Storage and Mercantile)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One □ Two- Family Dwelling)
  - One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Walker Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. Streets designed without parking need to develop a plan for enforcement once HOA takes charge. Fire apparatus still need to negotiate the streets.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The use of open bridge or covered bridge shall be designed to DEDOT standards and accessible by all fire department apparatus.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes**:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications, or brochures.

***THIS DOCUMENT IS INFORMATIONAL ONLY, AND DOES NOT CONSTITUTE ANY TYPE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE***

**ENGINEERING DEPARTMENT**

JOHN J. ASHMAN
SR. MANAGER OF UTILITY PLANNING
& DESIGN REVIEW

(302) 855-7370 T
(302) 854-5391 F
jashman@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

Date: **August 30, 2024**

REF: **T. A. C. COMMENTS**
**GLEN COVE II**
**SUSSEX COUNTY ENGINEERING DEPARTMENT**
**SUSSEX COUNTY TAX MAP NUMBER**
**134-12.00 PARCEL 374.01, 34.02, 375.00, and 3445 through 3460.00**
**AGREEMENT NO. 999-1**

The following comments are the result of the Sussex County Engineering Department's review of the preliminary site plan for the above referenced project:

## DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.

2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.

3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.

4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.

5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.

6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

The plans shall show and address the following items at minimum:

7. The project requires professional land surveying services to accurately delineate, and show the following items but is not limited to the following: all property and right-of-

way lines, established at a minimum, survey monuments, easements, existing and proposed topographic contours at 1-foot vertical intervals and spot elevations as necessary to establish grades, the locations of all existing structures, highway and roadway pavements, shoulders, curbs, driveways, sidewalks, lighting structures, traffic control signs, and all public and private utilities, including, but not limited to, electric power and telephone lines, poles and boxes, underground electric, telephone, and communication lines, potable water lines, fire hydrants and valve boxes, gas lines, wells, sanitary sewers including septic systems, rim and invert elevations of manholes and cleanouts, and the rims and invert elevations and type of storm water structures, drainage ditches, ponds, streams and waterways, flood zones and flood zone boundaries and elevations, and State and Federal wetlands, trees, cemeteries and historic features, and the finished floor elevations of buildings.

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.

9. The plan requires a Certification Signature and/or a Certification Block for the following:

    a. Delaware Professional Engineer or Delaware Land Surveyor.
    b. Owner or Representative of the Owner.
    c. Professional Wetlands Delineator.

10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.

11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.

12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, geo-referenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.

13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.

14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.

15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Road, Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.

17. False berms shall not be utilized to create roadside drainage swale back slopes.

18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.

19. Provide and show the locations and details of all ADA pedestrian connections.

20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.

21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.

22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.

23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.

24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.

25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.

26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

## SEWER SPECIFIC COMMENTS

LOCATION: Approx 500' west of intersection of Windmill Dr. (Rd. 352) and Burbage Rd. (Rd. 353).

NO. OF UNITS: 50 Single family lots.

GROSS ACREAGE: 12.32 Acres

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes ☒ No ☐

(2). Which County Tier Area is project in? Tier 1

(3). Is wastewater capacity available for the project? Yes If not, what capacity is available? N/A.

(4). Is a Construction Agreement required? Yes If yes, contact Utility Engineering at (302) 855-7370 / option 2.

(5). Are there any System Connection Charge (SCC) credits for the project? No

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Parcels located in Tier 1.**

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

If the above items, as applicable, are incorporated into the development plans, then preliminary approval is recommended. However, final plan approval should be withheld pending the approval of the construction plans by the Sussex County Engineering Department.

**STATE OF DELAWARE**
**OFFICE OF MANAGEMENT AND BUDGET**
**OFFICE OF STATE PLANNING COORDINATION**

September 17, 2024

Ron Sutton, Jr.
Civil Engineering Associates, Inc.
55 W Main St,
Middletown, DE 19709

RE: PLUS review – Glen Clove 2; 2024-08-02

Dear Mr. Sutton:

Thank you for meeting with State agency planners on August 28th, 2024 to discuss The Glen Cove 2 project. According to the information received, you are seeking review of this proposed rezoning of 12.32 from AR-1 to MR to build 50 single family condo units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

## Strategies for State Policies and Spending

This project is located in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. This site is also located in the Coastal Area of Sussex County.

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this **rezoning and site plan** provided it meets the relevant codes and ordinances of the Sussex county

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With that said, this parcel is adjacent to the Town of Millville and within their planned growth area. The developer should consider annexing or at least working with the town to ensure the planned development meets the desires of their comp plan.

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis and based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF). This project is located in an area anticipated to be in the future Roxana Transportation Improvement District (TID). This TID will not be operational for at least a year. If your development timeline allows participation in the TID may be an option in place of the AWSF.

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across any property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation.**"

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to

assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Tax Ditches**
Prong 2 of the Derrickson Tax Ditch lies along several of the property boundaries and bisects the western and eastern parcels. Derrickson Canal Sub 2 Prong 2 runs along the property boundary in the northeast. Tax ditches are man-made channels created to move normal water flow off agricultural lands. These channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during maintenance. Tax ditch ROWs vary by channel size and location. Prong 2 and Sub 2 Prong 2 of the Derrickson Tax Ditch have a 20-foot to Top of Bank (TOB) ROW extending into the project boundary.

- The previous Court Order Change stipulates that a l5-foot by 285-foot Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.

- If the site and/or stormwater management features are designed to discharge into Prong 2 of the Derrickson Tax Ditch, design must consider existing conditions versus design specifications. Please consult with the DNREC Drainage Program for As-Built design information if necessary.

- Proposed structures or construction lies within the existing tax ditch ROW. Contact the DNREC Drainage Program to discuss the on-site tax ditch ROWs prior to the project application meeting with the appropriate plan review agency for construction stormwater management.

- The site plan appears to show a road crossing the tax ditch between Lots 16 and 17. The applicant must consult with the DNREC Tax Ditch Program on the elevation of the crossing. To reduce or change existing tax ditch ROWs, a Court Order Change must be

submitted by the DNREC Drainage Program. The associated Land Development Project Review Request form is attached, as well as the aerial drainage map.

- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROWs.

- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channel should be cleared or excavated prior to the construction of the project if needed.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

**Stormwater Management**

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Wetlands and Waterways**

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the western portion of the site, as well as riverine wetlands associated with the canal that runs around the periphery of the site. The application indicates that wetlands have been delineated. According to the application, the U.S. Army Corps of Engineers sign-off is completed. The application states that the project does not propose direct impacts to the wetlands.

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.

- If road crossings are proposed in drainage features functioning as intermittent or perennial features, **s**tate permits from the DNREC Wetlands and Waterways Section may be required for disturbance proposed in state jurisdictional wetlands and waterways. To apply for a permit online, please visit their website at https://dnrec.delaware.gov/water/wetlands-subaqueous/permits/.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/

**Wastewater Disposal Systems – Large Systems**

- For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

**Electric Vehicle Charging**

Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or
2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.

Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

<u>Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325</u>

**Proposed Project Parcel Flood Concern**

- This parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within two Sussex County Evacuation Zones B (red) and D (yellow).

**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There are no known archaeological sites or known National Register-listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance. Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

- If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Clubhouse)

- Where a water distribution system is proposed for single-family dwellings, it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)

- One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.

- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq. ft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Burbage Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Forest**
The preliminary plan proposes the elimination of approximately 9 of 12 acres forest on the site. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

- Removing forested areas for development should be avoided to the greatest extent possible.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st. Likewise, avoid mowing open space areas and grass filter strips during the same timeframe, as various species of birds utilize these areas for nesting sites.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

**Forested Wetlands and Vegetated Buffer Zones**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of freshwater forested wetlands on the western portion of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb wetlands. Wetlands are a critical part of our natural environment. They reduce the impacts of flooding, improve water quality, and sequester carbon dioxide from the atmosphere. Wetlands also provide habitat for plants and animals that are uniquely adapted to saturated conditions.

- Maintain an upland buffer of at least 100 feet along all wetlands, except tax ditches, including those containing existing forest or natural vegetative cover.

- Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Maintain vegetated buffer zones as either meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.
- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Grass cutting for vegetated buffer zones if maintained as meadow should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

**Tax Ditches**

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Water Quality**
This site lies within the Indian River Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable.
- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.
- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. https://dnrec.alpha.delaware.gov/watershed-stewardship/

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.

- Offer the option to install solar or geothermal systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities such as the proposed pool house, consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves

consumers and businesses money, while also helping to reduce pollution from power generation.

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 23, though, with development, this will undoubtedly change. The 5 adjacent blocks aggregated bring the area to a total population of 404.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected

Expected Annual Loss
× Social Vulnerability
÷ Community Resilience
= Risk Index

Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.

- According to FEMA's National Risk Index, the parcel is considered relatively low for overall natural hazards risks.
- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.
- Its community resilience is rated at relatively moderate whereas its social vulnerability is rated as very low.

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes electricity as the predominant fuel type for heating purposes.
- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.
- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

Preliminary meetings with Fire Protection Specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason, therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

David L. Edgell, AICP
Director, Office of State Planning Coordination

Attachments:

- Sussex County Planning & Zoning Comments
- Sussex Engineering Comments
- DNREC Tax Ditch Map
- DNREC Tax Ditch Land Development Project Review Request Form

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
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Sussex County
DELAWARE
sussexcountyde.gov

# Preliminary Land Use Service (PLUS) Meeting
# August 28th, 2024
# June PLUS Comments
# Sussex County Department of Planning & Zoning

DRAFT

**I. Review and Discussion: Glen Cove 2 (2024-08-02)**

**Location:** Winfield Lane and on the north side of Burbage Lane (S.C.R. 353) approximately 300 feet west of the intersection of Burbage Road (S.C.R. 353) and Windmill Drive (S.C.R. 352).

**Project:** Review of proposed multifamily improvements comprised of (50) single family detached multifamily condominiums on (19) parcels comprised of a total of (12.32) acres +/-.

**Sussex County Department of Planning & Zoning Comments**

**The applicant is required to participate in a pre-application meeting with the County. Please contact the Planning and Zoning Department to schedule a pre-application meeting with staff to discuss the proposed project by calling (302)855-7878 or you may reach out to the Planning & Zoning Office at p&z@sussexcountyde.gov.**

**Following submission to the County, staff will review the Preliminary Site Plan, where more detailed comments will be provided to the applicant. At the PLUS stage of review, staff wish to limit comments to high-level comments only.**

**Please note that the following are informal staff comments, and do not prejudice any decision that the Sussex County Planning & Zoning Commission may wish to make as part of any application submitted to the Department.**

**Tax Parcel ID:** 134-12.00-375.00, 134-12.00-374.01, 134-12.00-374.02, 134-12.00-3445.00, 134-12.00-3446.00, 134-12.00-3447.00. 134-12.00-3448.00, 134-12.00-3449.00, 134-12.00 3450.00, 134-12.00-3451.00, 134-12.00-3452.00, 134-12.00-3453.00, 134-12.00-3454.00, 134-12.00-3455.00, 134-12.00-3456.00, 134-12.00-3457.00. 134-12.00-3458.00, 134-12.00-3459.00, 134-12.00-3460.00

**Proposed:** The Applicant proposes multifamily improvements comprised of single-family detached condominiums (50 units), amenities including a pool and poolhouse, internal roads, forested buffers, and ancillary improvements on a total of (19) parcels comprised of a total of (12.32) acres +/-.

**Zoning:** The parcels are zoned Agricultural Residential (AR-1) Zoning District with the boundary with the Town of Millville immediately adjacent to the north and west of the Parcels

and just beyond the adjacent properties to the east and south as well. The multifamily use at the site is the subject of pending Conditional Use & Change of Zone Applications submitted to the County in July of 2023. The Change of Zone is from Agricultural Residential (AR-1) District to Medium-Density Residential (MR) District and the Conditional Use approval for multifamily use will soon be scheduled for Public Hearings. (CU 2462 & CZ 2017– Gulf Stream Glen Cove, LLC)

**Density:** If a Conditional Use were to be approved, the proposed density of ≈ (4.1) dwelling units per acre would comply with the County Code requirements for multifamily improvement in an (MR) District which allows up to (12) multifamily dwelling units per acre when serviced by a central sewer system (§115-Attachment 2 – Table II)(§115-22).

**Applicability to Comprehensive Plan:** The project lies within the Growth Area and is categorized as "Coastal Area" (per the 2018 Comprehensive Plan). Coastal Areas are growth areas that the County encourages only the appropriate forms of concentrated new development, especially when environmental features are in play. The Coastal Area designation is intended to recognize the characteristics of both anticipated growth and ecologically important and sensitive characteristics. The Plan notes, "A range of housing types should be permitted in Coastal Areas, including single-family homes, townhouses, and multi-family units" (2018 Sussex County Comprehensive Plan, 4-15). In terms of density the Plan notes:

*Medium and higher density could be supported in areas:*

- *Where there is central water and sewer*
- *Near sufficient commercial uses and employment centers*
- *Where it is in keeping with the character of the area*
- *Where it is along a main road or at/or near a major intersection*
- *Where there is adequate Level of Service*
- *Or where other considerations exist that are relevant to the requested project and density*

(2018 Sussex County Comprehensive Plan, 4-16).

**Open Space Provisions:** The proposed plan includes (8.3) acres +/- (out of a total of (12.32) acres) of open space which equates to approximately (67%) of the project site.

**Interconnectivity:** While it is understood that there are existing site constraints which may inhibit the ability for proposals to connect to adjacent lands, please note that Staff desire to see interconnectivity between proposed developments. Staff recommend any future Plan include stubs or easements for connection to all parcels adjacent to the site prior to any future site plan review by the Planning & Zoning Commission.

**Transportation Improvement District (TID):** The proposed project is **<u>not</u>** located within the Henlopen TID.

DRAFT

**Agricultural Areas:** The site is located within the vicinity of parcels which appear to be actively farmed. Please include on any plans submitted the Agricultural Use Protection notice located in (§99-6(G)(1)) of the County Code. This language shall also be included within any subsequent deed restrictions, leases, or agreements of sale for the property.

**Forested Areas:** The Application indicates no forested area. Staff note that majority of the area within the Parcels contains trees will very little appearing to be unforested outside of TM# 134-12.00-375.00. Staff appreciate efforts to conserve as many mature trees as possible on the project site. Staff note that any buffers which may be required as part of this plan are required to be exclusive of "stormwater management areas or facilities, wastewater treatment and/or disposal facilities" (§99-5 FORESTED AND/OR LANDSCAPED BUFFER) & (§115-193(C)(18)). Staff note that any Plan submitted will require a design ensuring the location of stormwater management basins are exclusive of the required wetland resource buffers (if applicable) or any screening or vegetative buffers which may be required as part of any conditions of approval if approved.

**Wetlands:** N/A - The Application notes that there are (0.2) acres of non-tidal wetlands present on the site. Please note that Sussex County Code requires that Preliminary and Final Site Plans include the location and regulatory delineation of all state and federal wetlands (§115-220(B)(13)) & (§115-221(B)(14)). Please note, under (§115-193) Resource Protection in County Code, non-tidal wetlands and streams are required to provide prescriptive resource buffering. Additionally, as wetland resources are on the site, a Drainage Assessment Report (DAR) per (§115-193F(2)) and a Resource & Resource Buffer Management Plan (RRBMP) are required to be submitted <u>at the time of Application submission</u> for applications with wetland resources on site.

**Site Considerations (Flood Zones, Tax Ditches, Groundwater Recharge Potential etc.):** The property is located within Flood Zone "X" (Unshaded - Areas determined to be outside of the 100 year floodplain) as indicated in the applicant's Conceptual Land Use Plan. This is accurate according to current data available to Sussex County Planning & Zoning. The site is located within an areas of "fair" & "good" Groundwater Recharge according to State and County GIS data. Please note this on any plan in order to comply with the provisions of Chapter 89 "Source Water Protection" of the Sussex County Code (§89-7). Staff note that the proposal is not within a wellhead protection area. Tax Ditches and Tax Ditch ROWs are adjacent to the perimeter of the site on three sides and will run through the proposed community. Please note, any Tax Ditch crossing will require permitting through DNREC prior to Final Site Plan approval. Additionally, any revisions to the Tax Ditch ROWs will be required to show documentation of any Court Order Change (COC) which approves any revision to the ROW.

DRAFT

PLUS

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**Preliminary Land Use Service (PLUS) Meeting**
**Meeting will be conducted on-line and in person**
**Room 219, Haslet Armory**
**122 Martin Luther King Jr. Blvd., South**
**Please see https://publicmeetings.delaware.gov/ for link to on-line access**
**August 28, 2024**

**Applicants should arrive at least 15 minutes before their appointed time. Times are approximate and are subject to change.**

**Public comment will be heard at the end of each PLUS application after the State Agencies have shared their comments with the applicants. Each person wishing to comment on the application under review will have up to 3 minutes.**

I. 8:30 AM **Pre-Meeting Discussion – PLUS Reviewers**

II. 9:00 AM **Review and Discussion: The Commons at Odessa (2024-08-01)**
**County:** New Castle **Municipality:** Odessa
**Location:** 631 Main Street, Odessa, DE 19730
**Project**: Review of this proposed Mixed Use Residential Subdivision with 238 total residential units of Single Family, Multi-Family 5 units per building, Duplex or Townhouse with a 188,300 sq ft of commercial section on 45.12 acres zoned PND (Planned Neighborhood Development).

III. 9:30 AM **Review and Discussion: Poole East (2024-08-03)**
**County:** New Castle **Municipality:** Middletown
**Location:** 827 Middletown Warwick Road, Middletown, DE 19709.
**Project:** Review of a proposed Site Plan with commercial uses, restaurants, retail, and self-storage facility on 32.6 acres zoned C-3 (Employment/Regional Retail).

IV. 10:00 AM **Review and Discussion: NCC Creation of Zoning District for Publicly Owned Conserved Land & Public Parks (2024-08-05)**
**County:** New Castle **Municipality:** Unincorporated
**Location:** All Unincorporated parts of New Castle County.
**Project:** Review of this proposed Ordinance to amend County Code Chapter 40 to establish a zoning district for publicly owned conserved land and public parks.

V. 10:15 AM **Review and Discussion: NCC Rezoning – Individual Parcels (2024-08-06)**
**County:** New Castle **Municipality:** Unincorporated.
**Location:** All unincorporated parts of New Castle County.
**Project:** Review of this proposed Ordinance to amend County Code Chapter 40, Article 31 and Article 33 to change zoning procedures.

VI. 10:30 AM **Review and Discussion: NCC Community Development Plans and Guidelines/ DRAC (2024-08-07)**
**County:** New Castle **Municipality:** Unincorporated
**Location:** All unincorporated parts of New Castle County.
**Project:** Review of this proposed Ordinance to amend County Code Chapter 40, section 40.26.430 relating to Community Development Plans and Design Guidelines.

VII. 10:45 AM **Review and Discussion: Glen Cove 2 (2024-08-02)**
**County:** Sussex **Municipality:** Unincorporated
**Location:** Burbage Road – Ocean View, DE.
**Project:** Review of a proposed Rezoning of 12.32 acres consisting of 19 parcels from AR-1 (Agricultural Residential) to MR (Medium Density Residential) to build 50 single-family Condo units.

**The proposed project is located within a Tier 1 area within the Sussex County Unified Sanitary Sewer District and connection to the sewer system is mandatory.**

**A "Use of Existing Infrastructure Agreement" is required for new projects. Sussex County Code, Chapter 110, requires that the Engineer and/or Developer request a Sewer System Concept Evaluation (SSCE) from the Utility Planning & Design Review Department for the project by providing the parcel(s) estimated equivalent dwelling units (EDU) for the project, along with payment of a $1,000.00 fee for the evaluation and must be approved prior to approval of construction plans. The fee is to be payable to Sussex County Council. The Department will review the parcel(s) and EDU, confirm capacity, provide the connection point and define any additional parcels that must be served as part of the project. Should it be determined that a pump station is required for the project, additional information may be requested. This information will be conveyed to the engineer and/or developer. The Department will use this information when reviewing construction drawings to verify that the correct connection point is used, and all required parcels are served.**

**The proposed development will require a developer installed collection system in accordance with Sussex County standards and procedures.**

**One-time system connection charges will apply. Please contact the Utility Permits Division at 302 855-7719 for additional information on charges.**

For questions regarding these comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7370.

VIII. 11:00 AM **Review and Discussion: Greens Landing (2024-08-04)**
**County:** Sussex **Municipality:** Unincorporated
**Location:** Sussex Road – Dagsboro, DE
**Project:** Review of proposed Site Plan with a 104 single-family second homes project on 61.67 acres zoned AR-1 (Agricultural Residential) district with coastal overlay zoning.

**The proposed project is located in a Tier 2 area and is contiguous to the Sussex County Unified Sanitary Sewer District. The Sussex County Engineering Department would support the Greens Landing project connecting to the County sewer district, as the project would enhance the economic feasibility of an existing adjacent community project's ability to proceed with a septic elimination project. The existing modest sized canal front community has requested central sewer**

**service that would benefit the inland bays area. Combining the two projects would eliminate the existing on-site septic systems for the existing community.**

**A "Use of Existing Infrastructure Agreement" is required for new projects. Sussex County Code, Chapter 110, requires that the Engineer and/or Developer request a Sewer System Concept Evaluation (SSCE) from the Utility Planning & Design Review Department for the project by providing the parcel(s) estimated equivalent dwelling units (EDU) for the project, along with payment of a $1,000.00 fee for the evaluation and must be approved prior to approval of construction plans. The fee is to be payable to Sussex County Council. The Department will review the parcel(s) and EDU, confirm capacity, provide the connection point and define any additional parcels that must be served as part of the project. Should it be determined that a pump station is required for the project, additional information may be requested. This information will be conveyed to the engineer and/or developer. The Department will use this information when reviewing construction drawings to verify that the correct connection point is used, and all required parcels are served.**

**The proposed development will require a developer installed collection system in accordance with Sussex County standards and procedures.**

**One-time system connection charges will apply. Please contact the Utility Permits Division at 302 855-7719 for additional information on charges.**

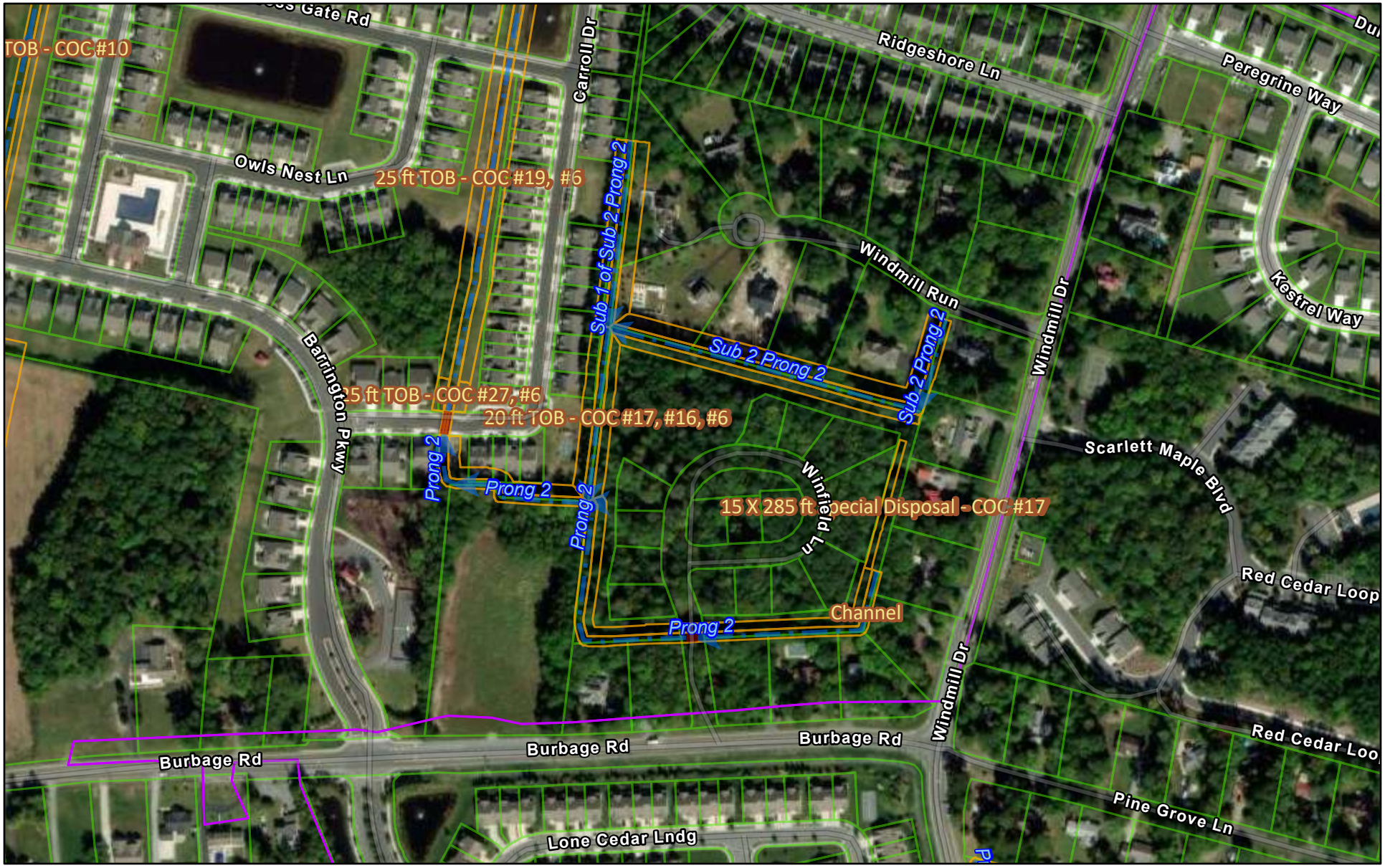
For questions regarding these comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7370.

IX. 11:30 PM **Review and Discussion: 350 Lafferty Lane Flex and Warehousing (2024-08-08)**
**County:** Kent **Municipality:** Dover
**Location:** 350 Lafferty Lane, Dover, Delaware
**Project:** Review of a proposed Site Plan with the construction of two flex space buildings and one warehouse building with all parking, drive aisles, and loading space required for each building on 19.74 acres zoned M (Manufacturing).

X. 12:00 PM **Review and Discussion: Sunshine Estates (2024-08-09)**
**County:** Kent **Municipality:** Harrington
**Location:** Approx. 412 Jackson Ditch Road, Harrington, DE
**Project:** Review of a proposed Subdivision of 277 entry level residential lots, 172 being single-family and 105 Townhouse lots on 55 acres of Traditional Neighborhood Development.

**The agenda items times are approximate and subject to change. This agenda is subject to change to include additional items or the deletion of items, which arise at the time of the meeting.**

# Aerial Map




8/13/2024, 3:34:39 PM

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Tax Ditch Channels

Tax Ditch Channel

DITCHPIPEPRIV

Extent of Right-of-Way

Approx. Watershed Boundary

Parcels - Sussex

Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

Division of Watershed Stewardship
Drainage Program
21309 Berlin Rd., Unit 6
Georgetown, DE 19947

# Tax Ditch Land Development Project Review Request Form

**Project Name:** _____

**Attach Site Plan of proposed request(s) and include all structures, easements, setbacks, etc. that make your proposal as requested necessary. Include and label existing tax ditch channel and rights-of-way for comparison.**

*Check out de.gov/taxditchmap to view tax ditch channels and rights-of-way from any web browser. To download the tax ditch GIS Feature Service layer to your own application, visit Delaware FirstMap. Don't forget to label all tax ditch features in all your plans!*

**Project Representative/Consultant Information:**

Name(s): _____
Company: _____
Title(s): _____
Phone Number(s): _____
Email(s): _____

**Owner(s) Contact Information:**

Name: _____
Phone Number: _____
Email: _____

**Authorized Signer(s) Contact Information (when applicable):**

Name: _____
Title: _____
Phone Number: _____
Email: _____

**For Internal Use Only**
Date Received: _____
Tracking #: _____

Division of Watershed Stewardship
Drainage Program
21309 Berlin Rd., Unit 6
Georgetown, DE 19947

**Property Information:**

Tax Parcel(s) Affected: _____

Tax Ditch Organization(s) Affected: _____

**Request(s) of / Proposed Impact(s) to Tax Ditch System (Check all that apply):**

| | |
|---|---|
| ☐ | Outfall/Discharge into Tax Ditch Channel(s) |
| ☐ | Pipe Crossing/Entrances in Tax Ditch Channel(s) |
| ☐ | Relocate/Eliminate Tax Ditch Channel(s) |
| ☐ | Reduce/Increase Tax Ditch Rights-of-Way |
| ☐ | Change Tax Ditch Watershed Boundary |
| ☐ | Alteration of Existing Tax Ditch Channel(s) |
| ☐ | Utility Crossing in Tax Ditch Channel |
| ☐ | Other Explain: |

*Based on the options selected above, additional information may be requested.*

***Please specify Tax Ditch Channel(s) affected, existing and requested tax ditch rights-of-way extents whenever applicable, using the space below. (REQUIRED)***

Submit all forms to the DNREC Drainage Program
Via email: DNREC_drainage@delaware.gov
Subject Line: Tax Ditch- Land Development Request

For questions about this form please call the Tax Ditch Program at 302-855-1930.

**For Internal Use Only**

Date Received: _____

Tracking #: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

# MEMORANDUM

**TO:** John Pietrobono, Acting Sussex County Review Coordinator

**FROM:** Sireen Muhtaseb, TIS Group Manager

**DATE:** November 4, 2024
**Revised December 13, 2024**

**SUBJECT:** **Glen Cove**
**(Protocol Tax Parcel # 134-12.00-374.01)**
**Area Wide Study Fee (AWSF) and Off-site Improvements**

---

**Note Concerning Revision**: This document has been updated to revise the proposed trip generation of the development due to a reduction in the number of dwelling units of the proposed site. Specifically, the revision updates the number of single-family detached houses from 50 dwelling units to 49 dwelling units. As such, the trip generation and the Area Wide Study Fee has been updated to reflect this change. This document replaces our previous AWSF memorandum dated November 4, 2024, a copy of which is enclosed herein.

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 49 dwelling units of single-family detached houses. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 523 average vehicle daily trips (ADT) and 51 vehicle trips during the

p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be □5,230.

2. The developer shall improve the State-maintained Roads on which they front (Burbage Road, Sussex Road 353), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

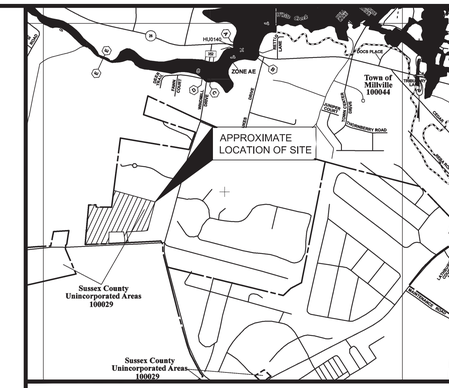
3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

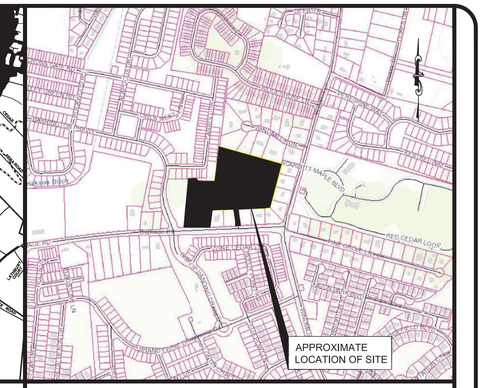
SAM: km
Enclosure
cc: John Murray, Foxlane Homes Delaware
Scott Roberts, Civil Engineering Associates, LLC
Jamie Whitehouse, Sussex County Planning □ Zoning
Lauren DeVore, Sussex County Planning □ Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming □ Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tijah Jones, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

# PRELIMINARY PLAN
## FOR
# GLEN COVE

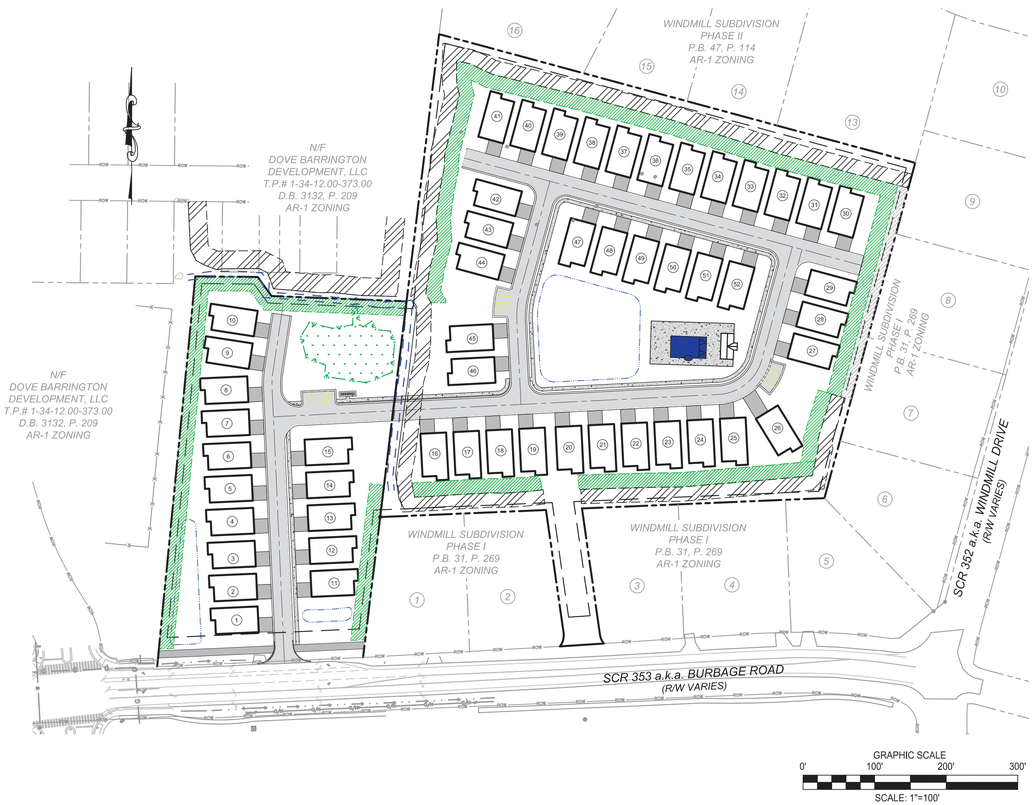
### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'




VICINITY MAP
SCALE: 1" = 1000'




## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW ROW |
| ADJACENT RIGHT-OF-WAY | ROW ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE PE |
| EXISTING SEWER | SS SS |
| PROPOSED SEWER | 8SS 8SS |
| EXISTING WATER | W W |
| PROPOSED WATER | W W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 EDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 52 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 52 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 117,443.04 S.F. ± = 2.70 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 64,879.36 S.F. ± = 1.50 AC. ± |
| OPEN SPACE | = 354,494.57 S.F. ± = 8.13 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (52 UNITS)*(2 SPACES) = 104 PARKING SPACES
    PROVIDED: (52 UNITS)*(2 SPACES) + 13 OFF-STREET= 117 PARKING SPACES

15. UTILITIES: WATER: TIDEWATER UTILITIES
    SANITARY SEWER: SUSSEX COUNTY

16. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

17. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

18. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

19. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27
    VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE_____ DATE_____

## CERTIFICATION OF PLAN ACCURACY:

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

_____ RONALD H. SUTTON JR., P.E.

_____ DATE

## INDEX OF DRAWINGS


| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |


REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |


CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM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COVER SHEET FOR GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

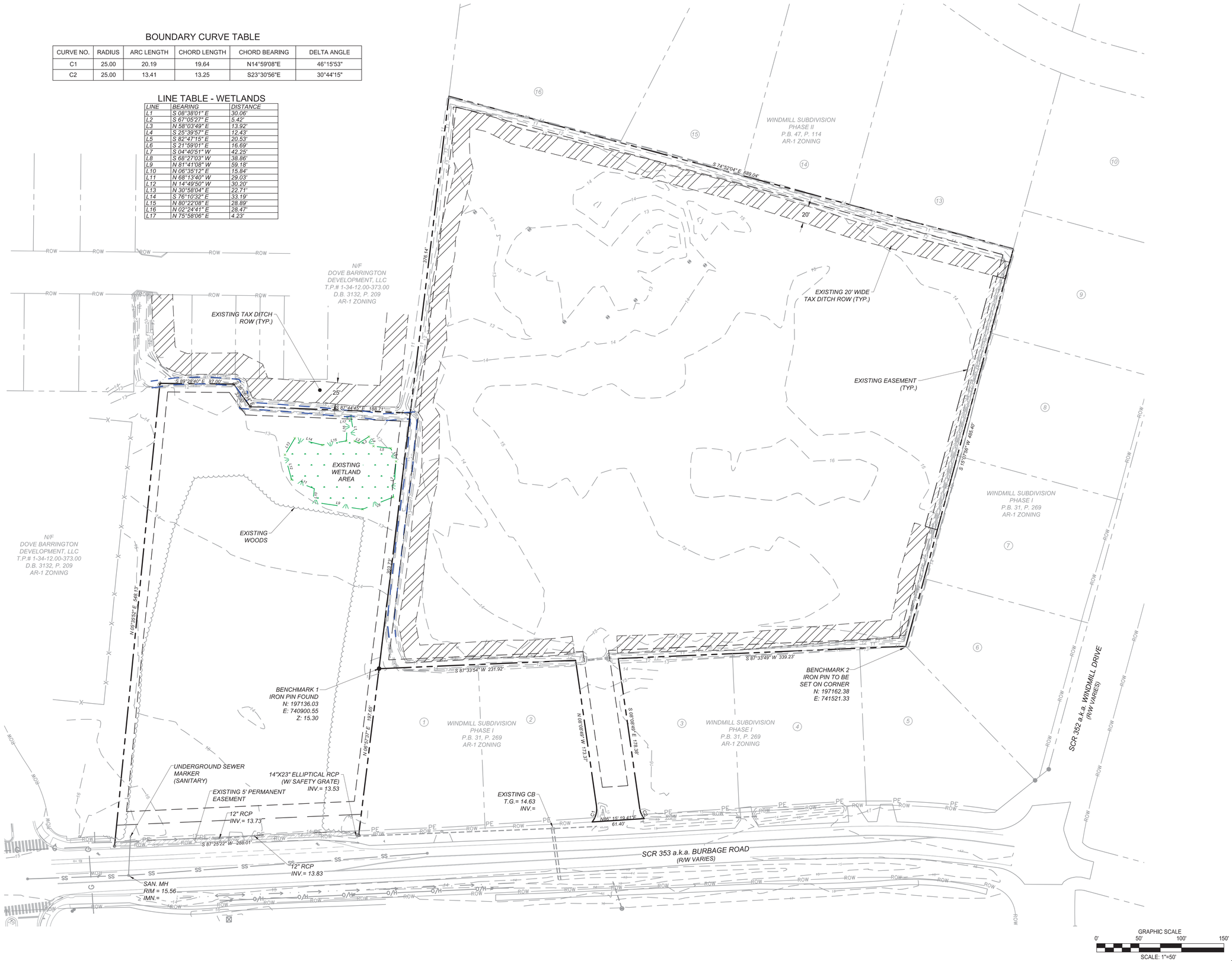
DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: T-1

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |




REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE

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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

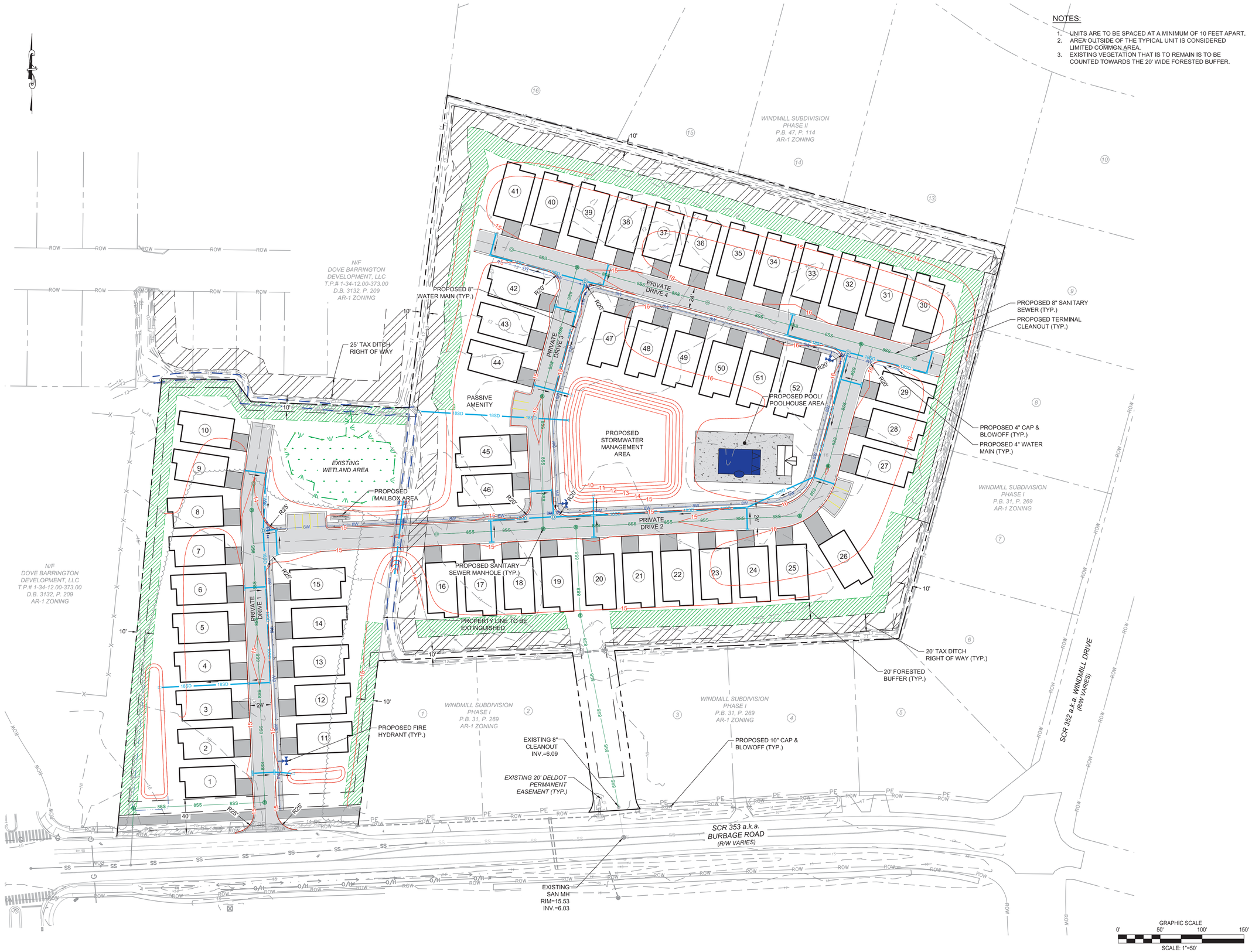
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.




REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
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FAX (302) 376-8834
WWW.CEA-DE.COM

# PRELIMINARY SITE PLAN

FOR

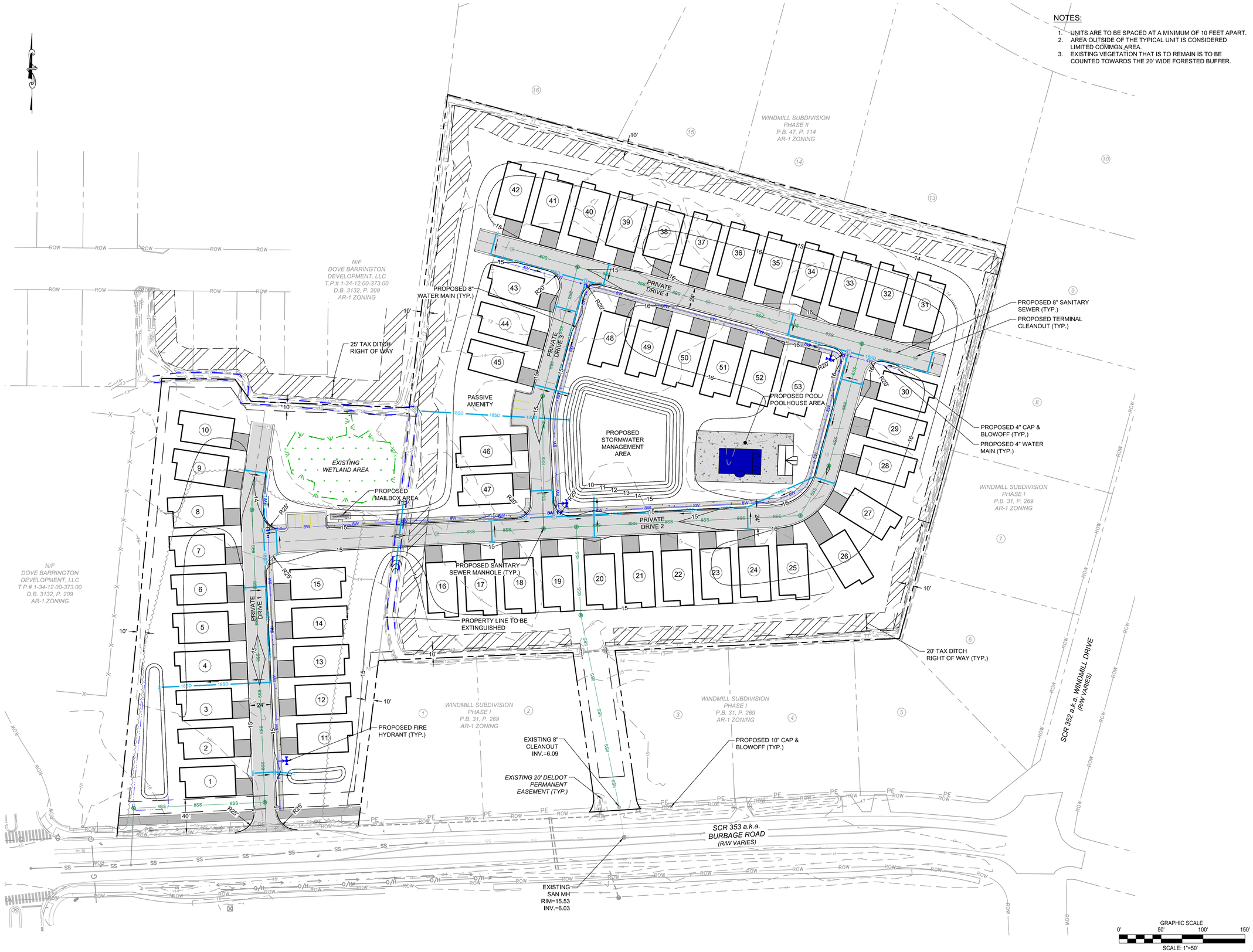
# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

| | |
|---|---|
| DATE: APRIL 30, 2024 | |
| DESIGNED BY: SPR | APPROVED BY: RHS |
| FILE: P23101-PRELIM PLAN/SITE | |
| SHEET NO.: C-1 | |

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.




REVISIONS

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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 18, 2024

DESIGNED BY: RT

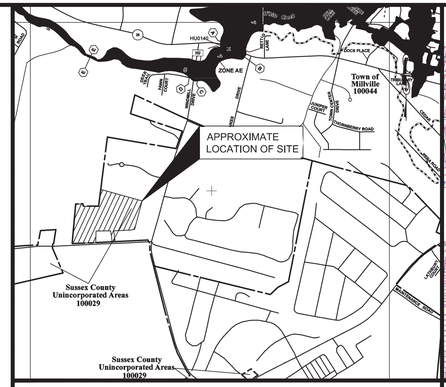
APPROVED BY: RHS

FILE: P20058-SITE_PLAN.DWG

SHEET NO.: C-1

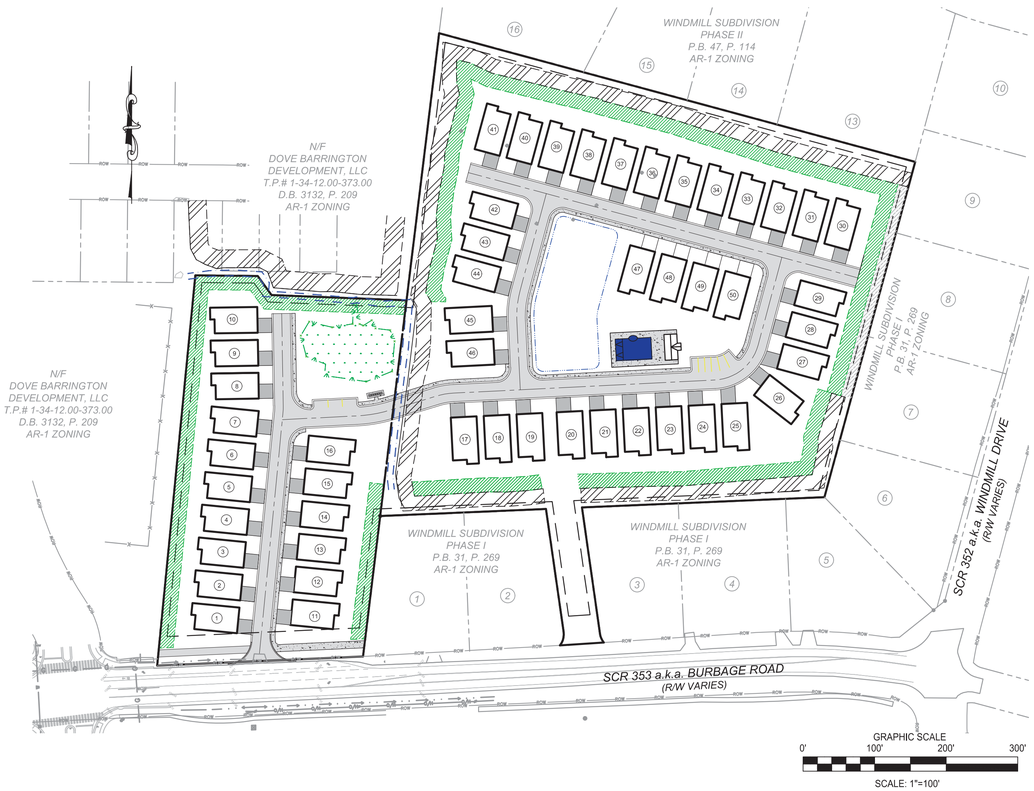
# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'

VICINITY MAP
SCALE: 1" = 1000'




## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW ROW |
| ADJACENT RIGHT-OF-WAY | ROW ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE PE |
| EXISTING SEWER | SS SS |
| PROPOSED SEWER | 8SS 8SS |
| EXISTING WATER | W W |
| PROPOSED WATER | W W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | S |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | S |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 50 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 50 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 112,926.00 S.F. ± = 2.59 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 61,969.91 S.F. ± = 1.42 AC. ± |
| OPEN SPACE | = 361,921.06 S.F. ± = 8.30 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (50 UNITS)*(2 SPACES) = 100 PARKING SPACES
    PROVIDED: (50 UNITS)*(2 SPACES) + 9 OFF-STREET= 109 PARKING SPACES

15. UTILITIES: WATER: TIDEWATER UTILITIES
    SANITARY SEWER: SUSSEX COUNTY

16. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

17. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

18. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

19. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27
    VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Harris DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Dean N. Collins DATE 7-17-2024
OT COLLINS FAMILY LIMITED PARTNERSHIP

## CERTIFICATION OF PLAN ACCURACY

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS

| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|

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COVER SHEET FOR GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

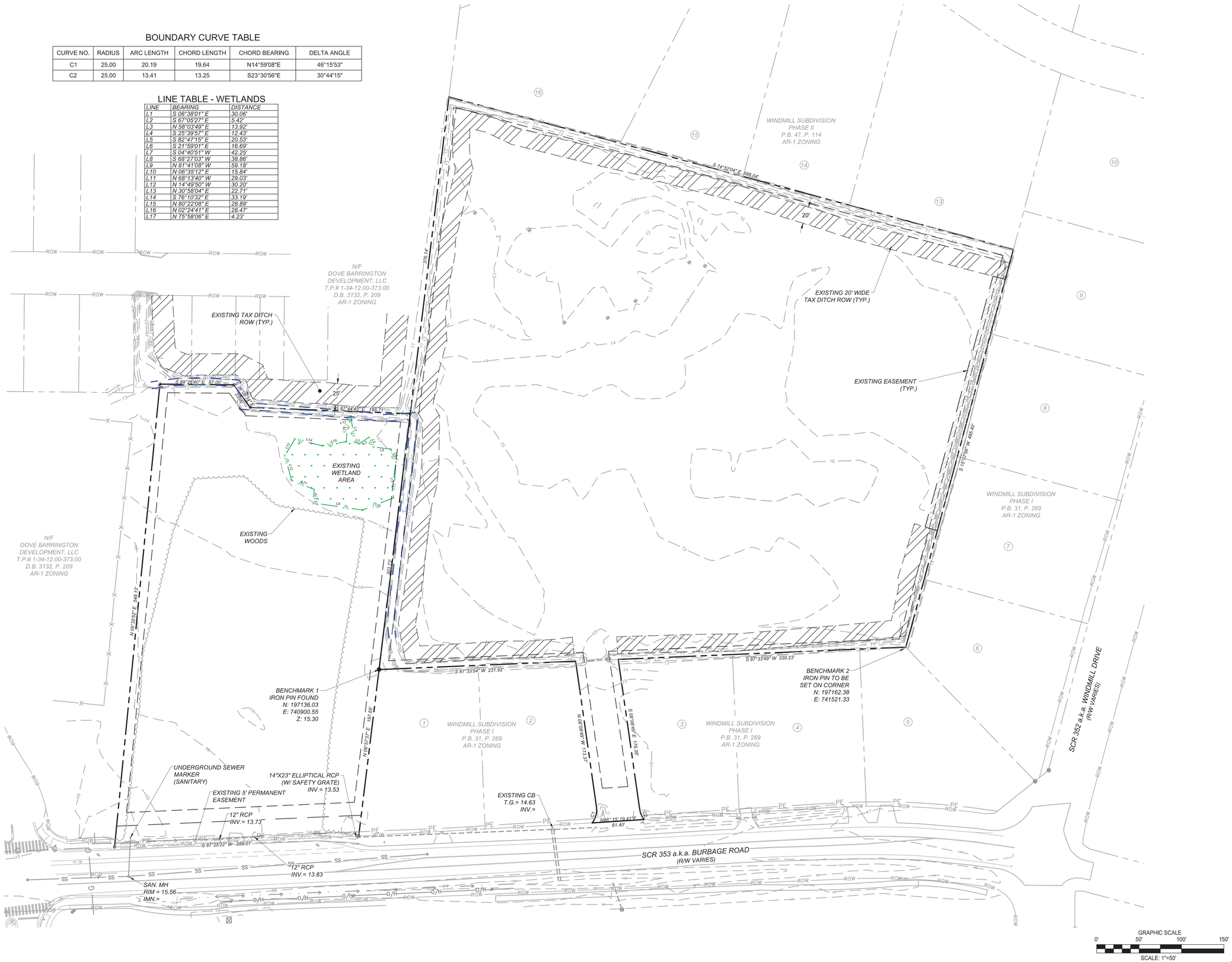
DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: T-1

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |




DATE

REVISIONS

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# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

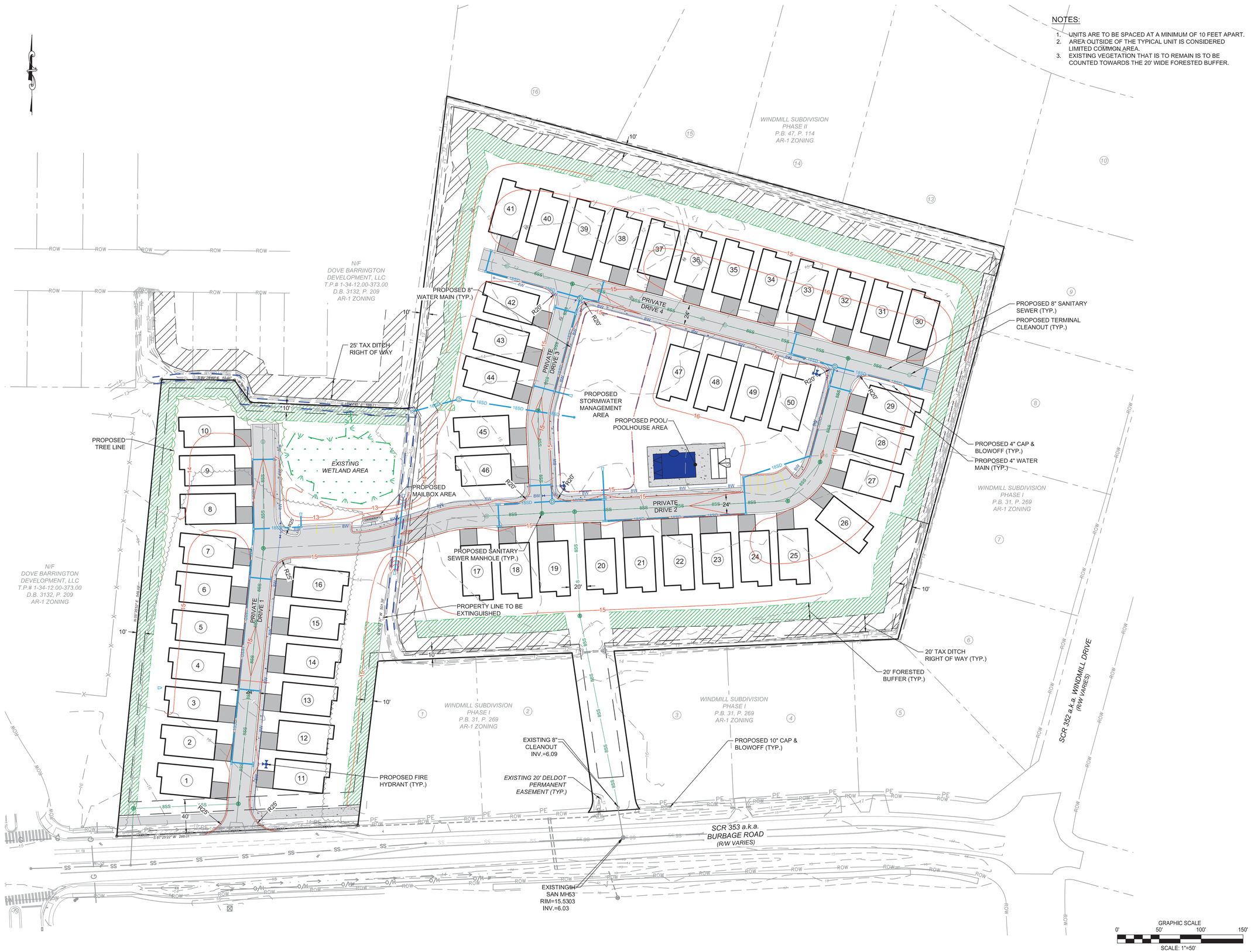
DESIGNED BY: SPR | APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.

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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

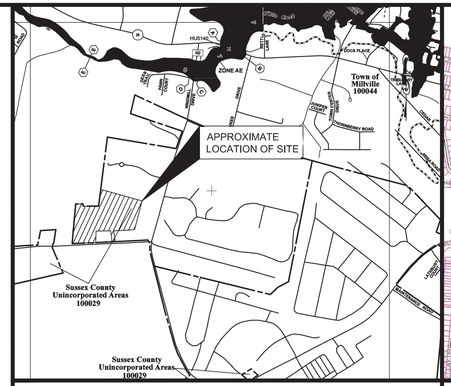
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

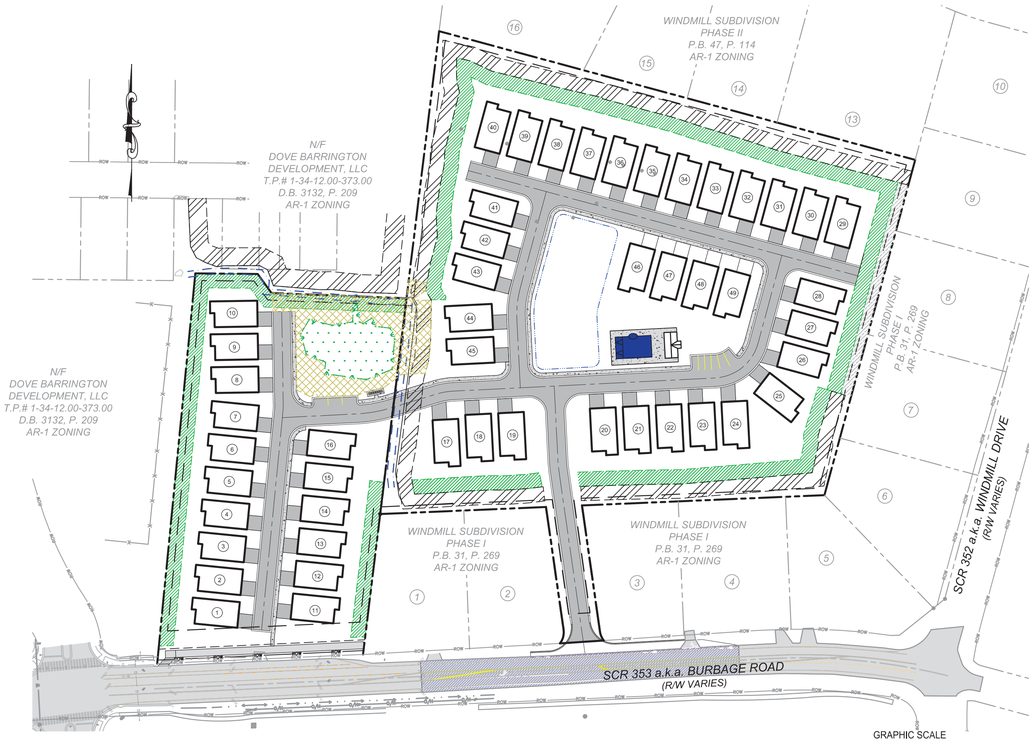
# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'

VICINITY MAP
SCALE: 1" = 1000'




## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW ROW |
| ADJACENT RIGHT-OF-WAY | ROW ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE PE |
| EXISTING SEWER | SS SS |
| PROPOSED SEWER | 8SS 8SS |
| EXISTING WATER | W W |
| PROPOSED WATER | W W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| RESOURCE BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | S |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | S |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 49 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 49 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 110,667.48 S.F. ± = 2.54 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 79,262.37 S.F. ± = 1.82 AC. ± |
| OPEN SPACE | = 346.887.12 S.F. ± = 7.96 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (49 UNITS)*(2 SPACES) = 98 PARKING SPACES
    PROVIDED: (49 UNITS)*(2 SPACES) + 9 OFF-STREET= 107 PARKING SPACES

15. RESOURCE BUFFER AREA:
    REQUIRED - 16,195 SF (0.37 AC)
    PROVIDED - 16,677 SF (0.38 AC) (ACCESS TO BUFFER WILL EXTEND FROM END OF PRIVATE DRIVE 1)

16. UTILITIES: WATER: TIDEWATER UTILITIES
    SANITARY SEWER: SUSSEX COUNTY

17. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

18. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

19. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

20. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27
    VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Hanna DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

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SIGNATURE Dan K. Collins DATE 7-17-2024
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RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS

| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
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**COVER SHEET**
FOR
**GLEN COVE**
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: **T-1**

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
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| L2 | S 67°05'27" E | 5.42' |
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| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
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| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
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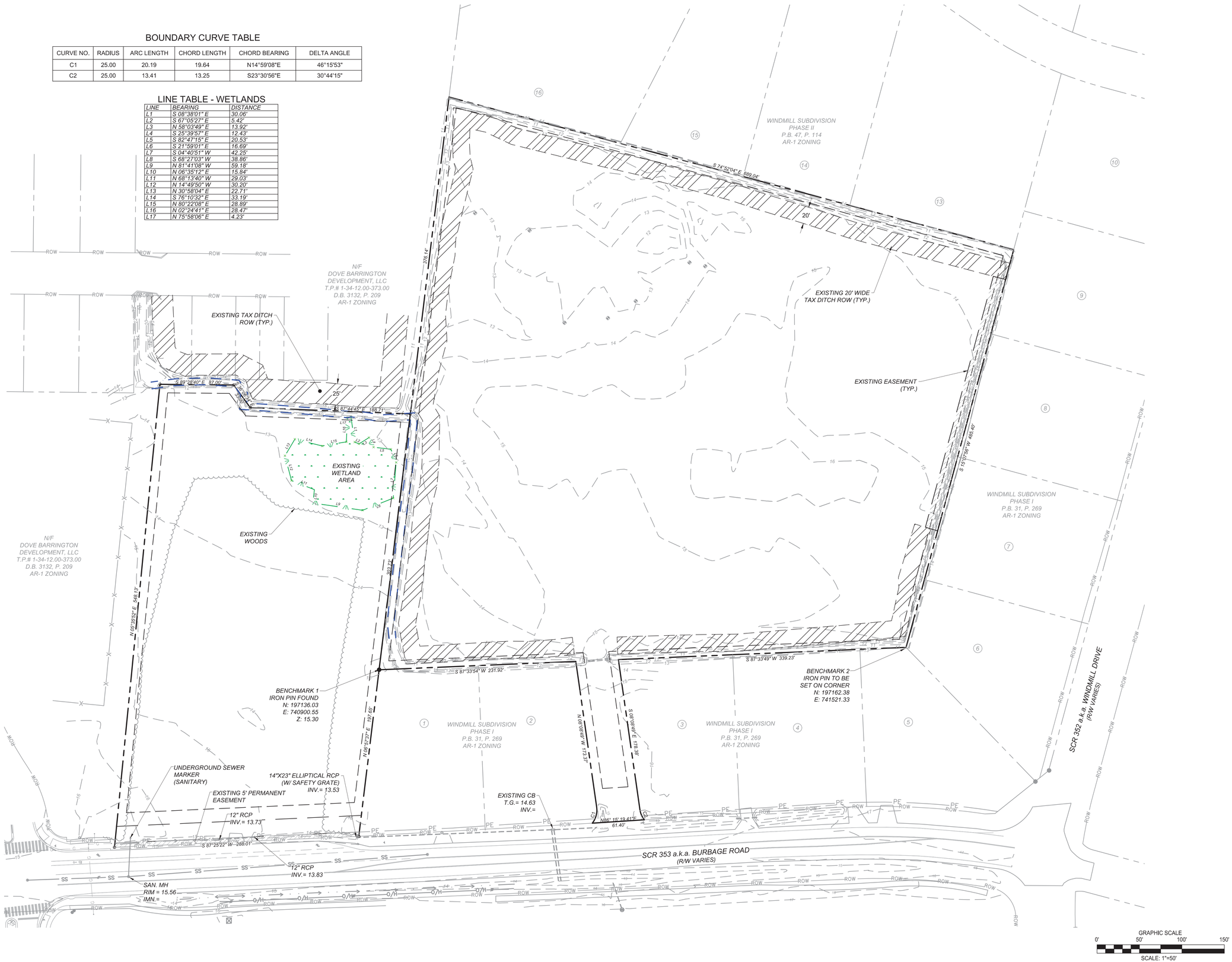


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55 W. MAIN STREET
MIDDLETOWN, DE 19709
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# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

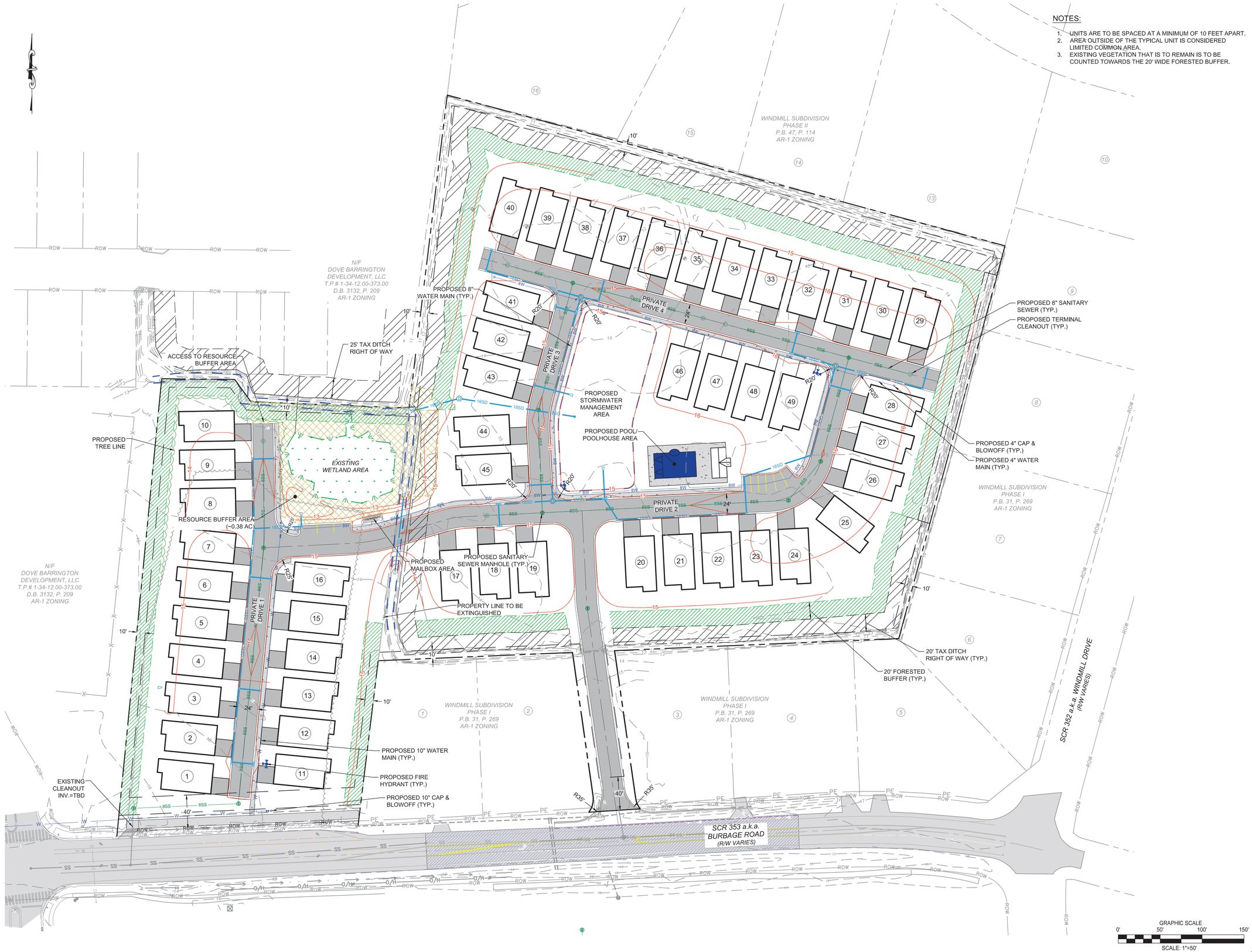
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.




REVISIONS

| REVISION | DATE | DESCRIPTION |
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| | | |

DATE

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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

Tax Map Parcel Number: 1-34-12.00-374.01, 3445.00 through 3460.00
Tax Map Parcel Number: 134-12.00-375.00

Prepared by and Return to:
Baird Mandalas Brockstedt LLC
1413 Savannah Road, Suite 1
Lewes, DE 19958

DECLARATION OF
GLEN COVE CONDOMINIUM
BALTIMORE HUNDRED, SUSSEX COUNTY, DELAWARE

FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company ("Declarant"), does hereby declare:

1. Intent of Submission and Description of Property. Declarant, as owner of legal title to the land herein described, hereby submits certain real property located in Sussex County, Delaware, more particularly described in **Schedule A** annexed hereto, together with the buildings and improvements thereon erected and owned by Declarant in fee simple absolute (hereinafter referred to as the "Property"), to the Delaware Uniform Common Interest Ownership Act ("DUCIOA"), 25 Del. C. § 81-106 (Applicability of local ordinances, regulations, and building codes) and 81-107 of this title (Eminent domain), as this community is specifically exempt from DUCIOA as per section 81 Del.C. §81-117, in order to create a plan of condominium ownership in the Property. The Property currently consists of the Land, Buildings, Units and Common Elements (all as hereinafter defined) shown on the Declaration Plan (as hereinafter defined) but expressly excepts and excludes the Expansion Area (as hereinafter defined), including, but not limited to, the Expansion Building(s) and Unit(s) (as hereinafter defined), until such time, if ever, as such Expansion Area, including, but not limited to, such Expansion Building(s) and Unit(s), are constructed and submitted to the Act and the Condominium Regime (as hereinafter defined) in accordance with the terms of this Declaration.

2. Definitions. The terms used in this Declaration and in the Code of Regulations/Bylaws recorded immediately hereafter and all amendments to said documents shall have the following meanings:

(a) "Act" means the statutory provisions set forth in 25 Del. C. Chapter 22 and 25 Del. C. § 81-106 (Applicability of local ordinances, regulations, and building codes) and 81-107 of this title (Eminent domain).

(b) "Assessments" shall mean any and all sums attributable to each Unit and due to the Association pursuant to the Condominium Documents, including but not limited to, the Common Expenses allocated to each Unit in the manner described in § 81-315 of the Act, as well as those set forth under §81-315(a)(2) of the Act regarding repair and replacement reserves as well as the maintenance, repair, or replacement of General Common Elements and/or Limited Common Elements appurtenant to each Unit, the cost and expense of which are the responsibility of each Unit Owner and which, if not maintained as provided under the Condominium Documents, shall be assessed to the applicable Unit Owner under § 81-315(c)(1) of the Act and as provided in

the Condominium Documents and any individualized fees for services provided to some but not all of the Unit Owners as provided under § 81-315(c)(2) of the Act.

(c) "Association" means all of the Unit Owners acting as a group in accordance with this Declaration and the Act and Bylaws, which shall be organized as a Delaware nonprofit nonstock corporation called "Glen Cove Condominium Association, Inc.".

(i) "Building" means each individual Single Family Home that contain a Unit with direct entry from the outside, which is used for residential purposes (including leasing of such Units for residential purposes) or for any other lawful purpose, as such Units are more specifically depicted in the Declaration Plan, when and if constructed and submitted to the Act.

(d) "Bylaws" means the recorded document entitled Code of Regulations/Bylaws that contains the procedures for the conduct of the affairs of the Association in accordance with the Act, including any and all amendments thereto.

(e) "Common Elements" mean (i) all parts of the Property other than the Units and (ii) any other interest in real estate for the benefit of the Unit Owners which are subject to this Declaration but shall expressly except and exclude the Expansion Area until such time, if ever, as such Expansion Area is constructed and submitted to the Act and the Condominium Regime in accordance with the terms of this Declaration. By way of illustration and not of limitation, the Common Elements include (i) the General Common Elements, including the "Amenity Detail" as shown on the Declaration Plan which includes but is not limited to a paved seating/gathering area, Bar-b-que, Fire Pit and Pergola/Shade Structure, (ii) the Single Family Home Limited Common Elements, and (iii) all Land, and all air space above the surface of the Land (but excluding air space enclosed within the title lines of any Unit) together with all site improvements, subject to any public utility easements now of record or to be given or obtained in the future either by the Declarant or the Association for sanitary and storm sewer use, water lines, electric, telephone and cable T.V., transmission lines or other similar necessary or desirable utility functions or which are appurtenant to the Land but shall expressly except and exclude the Expansion Area until such time, if ever, as such Expansion Area is constructed and submitted to the Act and the Condominium Regime in accordance with the terms of this Declaration.

(f) "General Common Element Percentage Interest" means the proportionate undivided interest in the General Common Elements expressed as a percentage and assigned to each Unit as set forth in **Schedule C** attached hereto, the same being subject to specified reductions upon subsequent amendments thereto as provided for in this Declaration.

(g) "Common Element Expenses" mean the General Common Element Expenses.

(h) "Condominium" means the GLEN COVE Condominium project being submitted to the provisions of the Act pursuant to the terms and conditions of this Declaration.

(i) "Condominium Documents" means this Declaration and the Site Plan, Declaration Plan, Bylaws, Rules and Regulations, and Declaration of Easement, and any of

the accompanying documents referenced or provided for as schedules thereto, and any and all amendments thereto.

(j) "Condominium Regime" means the entirety of the Property as developed from time to time consistent with the terms of the Condominium Documents.

(k) "County" means Sussex County, Delaware.

(l) "Declaration" means this document by which Declarant, as owner in fee simple of the Property, submits the Property to the provisions of the Act, and any and all amendments hereto.

(m) "Declaration Plan" means the Condominium Declaration Plan dated _____, prepared by CEA, LLC and recorded among the Land Records in the Office of the Recorder of Deeds in and for Sussex County, Delaware in Plot Book ___, Page ____, which Condominium Declaration Plan (i) contains a survey of the entire Property and a depiction and location of the Buildings, Units and Common Elements, (ii) is recorded contemporaneously with this Declaration in the Recorder's Office, and (iii) complies with §§81-103(18) and 81-209 of the Act, and any and all amendments thereto.

(n) "Declaration of Easement" means the Declaration of Easement Together With An Irrevocable Power Of Attorney Coupled With An Interest (a copy of which is attached hereto as **Schedule E**), which is of record immediately prior to the Declaration Plan in the Recorder's Office, and any and all amendments thereto.

(o) "Declarant" means FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, and its successors or assigns.

(p) "Declarant Control Period" means the period beginning on the date of recordation of this Declaration and ending on the date which is the earliest of (i) sixty (60) days after the date on which seventy-five percent (75%) or more of the proposed Units, including any and all Units submitted to the Act and the Condominium Regime in accordance with this Declaration and any and all proposed Expansion Units, together with the Common Elements appurtenant thereto, have been conveyed to Unit Owners other than Declarant; (ii) two (2) years after Declarant has ceased to offer Units for residential purposes for sale in the ordinary course of business; (iii) two (2) years after any right to add new Units for residential purposes was last exercised; or (iv) the day Declarant, after giving written notice to the Unit Owners, records an instrument voluntarily surrendering all rights to control activities of the Association.

(q) "Mortgagee" or "mortgagee" shall mean any Person holding a mortgage on any Unit which is recorded in the Recorder's Office, together with any insurer or guarantor of such mortgage, and their respective assignees, as their interests may appear.

(r) "Executive Board" means a board of natural persons of the number stated in the Bylaws.

(s) "Expansion Area" shall have the meaning ascribed in Section 5 hereof, captioned "Expansion" and shall expressly except and exclude the Property.

(t) "Expansion Buildings" mean the Single Family Home Expansion Buildings, as defined on **Schedule F**, respectively.

(u) "Expansion Building(s) and Unit(s)" mean the Single Family Home Expansion Buildings and Units, as defined on **Schedule F**, respectively.

(v) "Expansion Units" mean the Expansion Single Family Home Units, as defined on **Schedule F**, respectively.

(w) "General Common Elements" mean the entire Property expressly excepting and excluding the Units, the General Common Elements, Single Family Home Limited Common Elements, as shown on the Declaration Plan and as otherwise set forth herein.

(x) "General Common Element Expenses" means and includes any of the following that are not otherwise included in the Common Element Expenses:

(i) All sums lawfully assessed against the Unit Owners by the Executive Board;

(ii) Expenses of administration, maintenance, repair and replacement of the General Common Elements, including General Common Element Repair and Replacement Reserves for the General Common Elements as may be established from time to time;

(iii) Expenses agreed upon as General Common Element Expenses by the Unit Owners in accordance with the terms of this Declaration and the Bylaws;

(iv) Expenses declared to be General Common Element Expenses by the provisions of the Act or by this Declaration or the Bylaws;

(v) Premiums for insurance policies attributable to any Common Elements required to be purchased by the Executive Board pursuant to the Bylaws;

(vi) Costs and expenses allocated and attributable to the Property and payable by the Executive Board on behalf of the Unit Owners which are assessed to the Property in connection with the maintenance, repair, replacement and other obligations, responsibilities and duties as more fully set forth in any Agreements recorded in the Recorder's Office that benefits or burdens the Property;

(vii) All valid charges assessed against or applicable to the Property and the Condominium as a whole (expressly excepting and excluding any such charges assessed against or applicable to the General Common Elements); and

(viii) All expenditures made by, or financial liabilities of, the Association, together with any allocations to reserves, related to General Common Elements, other Units or other real estate described in this Declaration.

(y) "Initial Building" shall have the meaning ascribed in Section 4

hereof, captioned "Buildings/Units".

(z) "Initial Building and Units" shall have the meaning ascribed in Section 4 hereof, captioned "Buildings/Units".

(aa) "Initial Units" shall have the meaning ascribed in Section 4 hereof, captioned "Buildings/Units".

(bb) "Land" means the real property more particularly described in **Schedule A** attached hereto, expressly excepting and excluding (i) the Buildings, Units or other improvements thereon, and (ii) the Expansion Area, including, but not limited to, the Expansion Building(s) and Unit(s).

(cc) "Legal Requirements" shall mean all laws, regulations, ordinances and similar enactments, by and from any local, county, state or federal agency or body, including, but not limited to environmental laws and regulations and applicable zoning, subdivision, health and building codes as well as all permits, authorizations, licenses or similar governmental authorization relating thereto (collectively the "Permits") which govern the use and operation of the Condominium, Condominium Property, together with the Expansion Area, as applicable.

(dd) "Limited Common Elements" mean the Single Family Home Limited Common Elements, as defined in **Schedule F**, respectively.

(ee) "Limited Common Element Yard Area" shall mean those limited lawn or landscape areas which are appurtenant to each Unit as shown and delineated as a "Limited Common Element Yard Area" on the Declaration Plans or described in the Condominium Documents, including any lamp post, and other betterments appurtenant to such Unit, located within the Limited Common Element Yard Area immediately adjacent to such Unit.

(ff) "Majority" or "Majority of the Unit Owners" means the Owners of more than fifty percent (50%) of the aggregate interest in the undivided ownership of the applicable Common Elements involving such Unit Owners as specified herein.

(gg) "Managing Agent" means a professional managing agent employed by Declarant or the Executive Board to perform such duties and services as Declarant or the Executive Board shall authorize in conformance with this Declaration and the Bylaws.

(hh) "Participating Builder" shall mean and refer to (1) Foxlane Homes or (2) any person or entity designated by Declarant.

(ii) "Person" means any individual, partnership, corporation, limited liability company, association, joint stock company, trust, joint venture, unincorporated organization, governmental entity, any department, agency or political subdivision thereof, or any other legal entity or combination thereof.

(jj) "Recorder's Office" means the Office of the Recorder of Deeds, in and for Sussex County.

(kk) "Repair and Replacement Reserves" mean the General Common Elements Repair and Replacement Reserve.

(ll) "Site Plan" means that certain Record Plan of GLEN COVE dated _____, prepared by CEA, LLC, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Plot Book ___, Page ___, and any and all amendments, changes or modifications thereto.

(mm) "Rules and Regulations" means such rules and regulations as may be adopted from time to time by Declarant or the Executive Board that are deemed necessary for the enjoyment of the Condominium, provided they are not in conflict with the Act or any of the Condominium Documents.

(nn) "General Common Elements" shall have the meaning ascribed in **Schedule F** hereof.

(oo) "General Common Element Expenses" means and includes any of the following that are not otherwise included as part of the General Common Element Expenses:

(i) All sums lawfully assessed against the Single Family Home Unit Owners by the Executive Board that are not otherwise included as part of the General Common Element Expenses;

(ii) Expenses of administration, maintenance, repair and replacement of the General Common Elements, including General Common Element Repair and Replacement Reserves for the General Common Elements as may be established from time to time;

(iii) Expenses agreed upon as General Common Element Expenses by the Single Family Home Unit Owners in accordance with the terms of this Declaration and the Bylaws;

(iv) Expenses declared or required to be General Common Element Expenses by the provisions of the Act or by this Declaration or the Bylaws;

(v) All valid charges assessed against or applicable to the General Common Elements; and

(vi) All expenditures made by, or financial liabilities of, the Association, together with any allocations to reserves, related to General Common Elements.

(pp) "General Common Element Percentage Interest For General Common Element Expenses" means the percentage assigned to each Single Family Home Unit as set forth in **Schedule C** attached hereto for its proportionate share of the General Common Element Expenses and other rights and obligations thereto, the same being subject to specified reductions upon subsequent amendments thereto as provided for in this Declaration.

(qq) "Unit" means a Unit as defined by the UPA and DUCOIA Acts, and

consists of any one of those parts of the Buildings which are separately described on the Declaration Plan and herein, including, but not limited to, the Unit garage, if any, deemed to be part of such Unit and depicted and described on the Declaration Plan, and shall expressly include the Initial Units and, when and if constructed and submitted to the Act and the Condominium Regime, any Expansion Units. The Units include each Single Family Home Unit.

(rr) "Unit Designation" means the number, letter, or combination thereof designating a Unit on the Declaration Plan.

(ss) "Unit Owner" or "Owner" means any Single Family Home Unit Owner.

(i) "Single Family Home Unit Owner" means any natural person, corporation, partnership, association, limited liability company, trust or other legal entity or any combination thereof which owns title to a Single Family Home Unit, but does not include any such natural person, corporation, partnership, association, limited liability company, trust or other legal entity or any combination thereof having an interest in a Single Family Home Unit solely as security for an obligation.

3. Name of Condominium. The Condominium shall be known as "GLEN COVE Condominium". The Condominium is an expandable condominium as hereinafter provided.

4. Buildings/Units. There shall be a maximum of up fifty (50) Units on the Property. As of the date of this Declaration, One (1) Building consisting of Units 1 (the "Initial Building(s)" and "Initial Unit(s)"), have been built (the Initial Building(s) and Initial Unit(s) are collectively referred to as the "Initial Building(s) and Unit(s)"). The Initial Building(s) and Unit(s) are located as shown on the Declaration Plan. **Schedule F** attached hereto and incorporated by reference contain certain provisions applicable to the Single Family Home Buildings and Single Family Home Units, respectively.

5. Expansion.

(a) Right to Expand. Subject to the limitations and requirements set forth herein, the Declarant shall have the absolute right (but not the obligation), without the consent of the Association, the Executive Board, any Unit Owner, any Mortgagee, the holder of any lien on any Unit, or any other Person, at any time and from time to time, to be exercised prior to the date that is **twenty (20)** years after the date of the recordation of this Declaration in the Recorder's Office, to annex into the Property, as the same are described and identified by legal description on **Schedule A** attached hereto; and thereby to submit to each and every of the provisions of the Condominium Documents and the Act, and to the Condominium Regime, the Declarant's interest in the lands described on said **Schedule A** which are currently excepted out and from submission to the Act and the Condominium Regime, and which lands underlie, *inter alia*, the Expansion Building(s) and Expansion Unit(s), as applicable, and which lands are delineated, in general terms, on the Declaration Plan (collectively, the "Expansion Area"), together with the improvements to be hereafter constructed upon any such lands, in substantial conformity with the Condominium Documents. Nothing herein shall be construed or interpreted (either expressly or impliedly) as

requiring or obligating the Declarant to expand the Condominium and annex any additional land (including, but not limited to, any or all of the Expansion Area) or construct any Expansion Building(s) and Expansion Unit(s). The foregoing expansion may be accomplished in one or more phases (individually an "Expansion Phase" and collectively the "Expansion Phases"), subject to such changes as the Declarant, in Declarant's sole subjective and absolute discretion, deems necessary due to site conditions, construction problems, revisions to applicable building codes or circumstances dictated by the needs of the market place or such other factors or circumstances that Declarant encounters from time to time that requires such changes in Declarant's sole subjective and absolute judgment. The construction of the Phases, in whole or in part, is to be at the sole subjective and absolute discretion of the Declarant. If, as and to the extent constructed and annexed and submitted as aforesaid, each Expansion Phase shall become part of the Condominium Regime and be subject to the terms and provisions of the Condominium Documents, the same as if both the currently "as-built" Condominium Regime and each such Expansion Phase, when and as constructed, had been built contemporaneously and all references herein shall be construed appropriately in context.

(b) Expansion Amendments. Any such expansion and annexation of any one or more of the Phases shall be accomplished by the recordation in the Recorder's Office of an amendment to this Declaration, including, **Schedules A**, **B**, and **C**, of this Declaration, as applicable, and an amended Declaration Plan showing thereon, inter alia, the Buildings and Units as constructed. It shall be sufficient to describe and identify the portion of land in any expansion or annexation under this paragraph by identifying, describing and designating said land by the Unit numbers of the Units proposed to be built over the land as the same are identified on **Schedule A** and delineated on the Declaration Plan. Upon each annexation of all or any portion of the Expansion Area, including, without limitation, any one or more Expansion Building(s) and Unit(s), into the property of the Condominium, **Schedule A** shall be amended to delete the exception of such portion of the Expansion Area as part of the land previously excepted out of, and excluded from, the property of the Condominium, the Property, and the Condominium Regime.

(c) General Common Element Percentage Interests.

(i) Each Unit Owner, by operation of law, shall have an undivided ownership interest in the General Common Elements and the number of votes equal to the General Common Element Percentage Interest assigned to the Unit owned by such Unit Owner as set forth on **Schedule C** attached hereto. Each Unit's General Common Element Percentage Interest in the General Common Elements and voting rights shall be determined and calculated based on the percentage equivalent of a fraction, the numerator of which is one (1) and the denominator of which is the total number of Units submitted to the Act and Condominium Regime in accordance with this Declaration and any subsequent amendments. Also, the General Common Element Percentage Interest shall be used to allocate the obligation to pay General Common Element Common Expenses among all Unit Owners.

(d) Adjustments to General Common Element Percentage Interests.

(i) Upon the recordation of an amendment to this Declaration for the purpose of annexing to the Property all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) and Unit(s), each Unit Owner, by

operation of law, shall have an undivided ownership interest in the General Common Elements and the voting rights equal to the General Common Element Percentage Interests assigned to the Unit Owned by such Unit Owner as set forth on **Schedule C**, as amended. Each such expansion and annexation will be accomplished by recording in the Recorder's Office an amendment to this Declaration which will, among other things and as appropriate, adjust each Unit's General Common Element Percentage Interest. The sum of the General Common Element Percentage Interests when expressed in terms of a percentage as provided in **Schedule C** for all Units shall equal one hundred percent (100%), except for minor variations due to rounding. In the event of any discrepancy between an allocated interest and the result derived from application of the pertinent formula, then the allocated interest prevails as provided under §81-207(e) of the Act.

(e) Irrevocable Power of Attorney. Upon the recordation of any such amendment, (i) the General Common Element Percentage Interest used to allocate voting rights and General Common Element Expenses among the Units shall be reallocated as set forth above and amended on **Schedule C**. Any deed, instrument of assignment conveyance or other transfer document for any Unit shall be delivered, subject to the conditional limitation that the General Common Element Percentage Interests, and voting rights appurtenant to such Unit shall be automatically reallocated pro tanto upon the recordation of such amendments in accordance with the terms of this Declaration. Attached hereto as **Schedule E** is an Irrevocable Power Of Attorney Coupled With An Interest, which shall be executed by each Unit Owner coincident with and in partial consideration of Declarant's conveyance of each Unit to the Owner thereof. Such Power of Attorney shall be recorded with the Recorder's Office to confirm the right of Declarant to create and expand the Condominium Regime to include any one or more of the Phases as herein provided. In addition, each such Unit Owner and any mortgagee shall be deemed to have agreed and covenanted to execute such further instruments, if any, as may be required by the Declarant, its successors or assigns, to properly accomplish such amendments, at no additional cost or expense to Declarant. Notwithstanding the foregoing, in the absence of the execution of any such Power of Attorney by a Unit Owner, any such Unit Owner (for such Unit Owner and such Unit Owner's successors and assigns), by acceptance of any deed for such Unit shall be deemed to have acknowledged and agreed to grant the rights and authorities referenced and contained in the foregoing Power of Attorney.

(f) Execution and Recordation of Amendments. There is reserved unto the Declarant an irrevocable power of attorney, coupled with an interest, for the purpose of reallocating the General Common Element Percentage Interests, General Common Element Percentage Interests and voting rights appurtenant to each of the Units in accordance with this Declaration and executing, acknowledging and delivering such further instruments as may from time to time be required in order to accomplish the purposes of this Declaration. Each Unit Owner and each mortgagee of a Unit shall be deemed to have acquiesced in and expressly authorized the amendment of the Condominium Documents for the purpose of adding additional Buildings, Units, and Common Elements to the Condominium in the manner set forth in this Declaration and shall be deemed to have granted unto the Declarant an irrevocable power of attorney, coupled with an interest, to effectuate, execute, acknowledge and deliver any such amendments, and each such Unit Owner and mortgagee shall be deemed to have agreed and covenanted to execute such further instruments, if any, as may be required by the Declarant to properly accomplish such amendments at no additional cost or expense to Declarant.

(g) Status of Expansion Area, including, without limitation, Land Underlying Expansion Building(s) and Unit(s) Prior to Expansion. Notwithstanding anything contained in any Condominium Document to the contrary, Declarant hereby reserves the right and has the right to use all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) or Expansion Unit(s), for any purpose whatsoever, and shall not be deemed to be obligated to and is not obligated to (i) construct any Buildings, Units or other appurtenant improvements on all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) or Expansion Unit(s), or (ii) hold all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) or Expansion Unit(s), in inventory for annexation into the Condominium Regime.

(h) Expense, Taxes and Other Burdens of Ownership of Expansion Area Prior To Expansion. Until any portion of the Expansion Area is submitted to the provisions of this Declaration and the Act and Condominium Regime in accordance with the terms of this Declaration, the expense, taxes and any other burdens of ownership of any such Expansion Area shall be at the sole expense and responsibility of, and any income or proceeds from the Expansion area shall inure to the benefit of, the Declarant. Any necessary amendments to the Condominium Documents under this Section shall also be at the sole cost and expense of the Declarant.

(i) Additional FNMA Expansion Provisions. In the event that additional property (expressly excluding any and all Expansion Area, including, without limitation, any one or more Expansion Building(s) or Unit(s)) is added to the Condominium, the prior written consent of each holder, insurer or guarantor of a mortgage on a Unit shall be obtained at the time such additional property is added to the Condominium. If the Federal National Mortgage Association ("FNMA") holds any mortgage on a Unit at the time such additional property (expressly excluding any and all Expansion Area, including, without limitation, any one or more Expansion Building(s) or Unit(s)) is to be added to the Condominium, FNMA shall be furnished with title evidence, in form satisfactory to FNMA, which discloses any lien, easement or other encumbrances affecting such additional property to be added or which will affect the Condominium after the addition of such additional property.

6. Adjustments to General Common Element Percentage Interests.

(a) Change in Percentage of Ownership in General Common Elements, Voting Rights and General Common Element Expenses by Expansion and Annexation, and Method of Implementing Any Such Change. Notwithstanding anything contained in any Condominium Document to the contrary, upon annexation of land into the Property of the Condominium as provided for in Section 5 hereof, captioned "Expansion", the General Common Element Percentage Interest of each Unit Owner and such Unit Owner's voting rights and obligations with respect to General Common Element Expenses shall be reallocated as provided for, and authorized in, said Section 5, and in accordance with the formula provided for in said Section 5 and as listed on **Schedule C** .

7. Units. **Schedule F**, attached hereto and incorporated by reference, contain certain provisions applicable to the Single Family Home Units.

8. Limited Common Elements. **Schedule F**, attached hereto and incorporated by reference, contain certain provisions applicable to the General Common Elements and Single Family Home Limited Common Elements, respectively.

9. Use of Units and Common Elements. Each Unit and the Common Elements shall be occupied and used as follows:

(a) General Use Restrictions. No part of the Property shall be used other than for housing and the related common purposes for which the Property was designated and each Unit shall be used only for residential purposes and shall be occupied only by the Unit Owner, the Unit Owner's immediate family, guests, subtenants and invitees in such numbers as do not overburden such Unit or the Common Elements. Notwithstanding the foregoing, and subject to applicable statutes and ordinances, a Unit Owner may maintain a home business office within a Unit for such Unit Owner's personal use; provided, however business invitees, customers, and clients shall not be permitted to meet with Unit Owners in Units unless the Executive Board provides otherwise in the Rules and Regulations. No Owner may actively engage in any solicitation for commercial purposes within the Property. No solicitors of a commercial nature shall be allowed within the Property without the prior written consent of the Executive Board. No garage or similar types of sales are permitted, except as permitted by the Executive Board. No day care center or facility may be operated out of a Unit. Notwithstanding anything contained in any of the Condominium Documents to the contrary (1) Declarant and Participating Builder shall have the right to maintain, at no charge, one or more of the following: one (1) sales office, one (1) construction management office, and two (2) models in any Units owned by Declarant or the Participating Builder or on the Common Elements in any size, and at any location as Declarant or the Participating Builder shall deem necessary in its sole subjective and absolute discretion for a period beginning on the date hereof and ending on the date which is thirty (30) days after the last proposed Unit (including any and all Units submitted to the Act and the Condominium in accordance with this Declaration and any and all proposed Expansion Units) has been conveyed by Declarant or the Participating Builder, and (2) Declarant or the Participating Builder maintaining them shall have the right to relocate any one or more such offices or models, at any time and from time to time, in Declarant's or the applicable Participating Builder's sole subjective and absolute discretion. In addition, Declarant and Participating Builder shall have the right to maintain, at no charge, one or more construction trailers, equipment, vehicles, and other temporary structures, equipment, vehicles and improvements associated with the development and construction of the Property upon the Common Elements or any Unit owned by Declarant or Participating Builder.

(b) Insurance Considerations. Nothing shall be done or kept in any Unit or in the Common Elements which will increase the rate of insurance for the Property, or the contents thereof, applicable for residential use, without the prior written consent of the Executive Board. No Owner shall permit anything to be done or kept in such Owner's Unit or in the Common Elements which will result in the cancellation of insurance on the Property, or the contents thereof, or which would be in violation of any law.

(c) General Compliance with Legal Requirements. No immoral, improper, offensive or unlawful use shall be made of the Property or any part thereof. All Legal Requirements shall be observed and complied with, by and at the sole expense of, the Unit Owner

or the Executive Board, as applicable.

(d) No Impairment of Structures. Nothing shall be done in any Unit or in, on, under, above or to the Common Elements which will impair the structural integrity of the Property or which would structurally change any structures or improvements thereon except as is otherwise provided in the Bylaws or this Declaration.

(e) No Non-Residential Uses. Except for residential use permitted by Section 9(a) and subject to the rights granted to Declarant and Participating Builder by Section 9(a), no industry, business, trade, or occupation, designed for profit, not-for-profit, altruism, exploration, or otherwise, shall be conducted, maintained, or permitted on any part of the Property.

(f) For Sale Signs. Any Unit Owner shall have the right to display a "For Sale" sign measuring up to twelve inches (12") by eighteen inches (18") on the exterior wall of such Unit Owner's Unit or the Limited Common Elements appurtenant to such Unit. Such "For Sale" sign shall be entitled "For Sale", and contain such information as accurately describes the Unit and any applicable names, addresses and phone numbers of the person or persons who are offering the Unit for sale. Notwithstanding the foregoing limitations, the right is expressly reserved and retained by Declarant and any Participating Builder or their respective agents to place "For Sale" signs on any unsold or unoccupied or proposed Units (including any and all Units submitted to the Act and the Condominium in accordance with this Declaration and any and all proposed Expansion Units) or at suitable places in the Common Elements, at any time and from time to time, including, but not limited to, the sales offices and the right is hereby given to any mortgagee, who may become the owner of any Unit, to place such signs on any Unit owned by such mortgagee.

(g) For Rent Signs. Any Unit Owner shall have the right to display a "For Rent" sign measuring up to twelve inches (12") by eighteen inches (18") on the exterior wall of such Unit Owner's Unit or the Limited Common Elements appurtenant to such Unit for a period of up to sixty (60) days prior to expiration of any then permitted lease of the Unit as well as during any time the Unit is vacant and is being offered for lease for a term in compliance with this Declaration. Notwithstanding the foregoing limitations, the right is expressly reserved and retained by Declarant and any Participating Builder or their respective agents to place "For Rent" signs or other window displays or advertising on any unsold or unoccupied Units or at suitable places in the Common Elements, including, but not limited to, the sales offices, and the right is hereby given to any mortgagee, who may become the Owner of any Unit, to place such signs on any Unit owned by such mortgagee while such Unit is vacant.

(h) American Flag. In accordance with §81-320(c) of the Act, any Unit Owner shall have the right to display the flag of the United States of America, measuring up to three (3) feet by five (5) feet, on a pole attached to the exterior wall of such Unit Owner's Unit or to the Limited Common Elements appurtenant to such Unit.

(i) Display Items. Subject to the express exceptions set forth under the Act and this Declaration, no sign, banner, flag, or advertisement of any kind, including, but not limited to, informational signs, signs of contractors and subcontractors, or signs of a political nature or in support of any particular political cause or person running for public or quasi-public

office or any other signs or banners of any kind whatsoever (each a "Display Item"), shall be erected or maintained on or visible from a Unit or Common Element except as provided in the Rules and Regulations or in the absence of any applicable provisions in the Rules and Regulations then with the prior written consent of the Executive Board, or as expressly permitted under all applicable Legal Requirements. If permission is granted to any Owner to erect a Display Item by the Executive Board, the Executive Board reserves the right to restrict the size, shape, color, lettering, height, material and location of the Display Item, or in the alternative, provide the Owner with the Display Item to be used for such purposes. No Display Item shall be nailed or otherwise attached to trees or other landscaping on the Property.

(j) Changes to Exterior Appearances. A Unit Owner shall not change the exterior appearance of the Limited Common Elements appurtenant to the Owner's Unit or any part of the Unit visible from outside of the Unit (i.e. doors and windows) and other Limited Common Elements by painting, staining or otherwise altering, in any manner or fashion the existing color thereof, adding fixtures, plantings or landscaping thereto, or otherwise, without obtaining the prior written approval of the Executive Board and Declarant so long as Declarant holds title to any portion of the Expansion Area.

(k) Alteration of Common Elements. Nothing shall be altered or constructed, stored in or on or removed from the Common Elements, except upon the written consent of the Executive Board and otherwise in compliance with the Act and the Condominium Documents. Notwithstanding anything to the contrary in this Declaration, no obstruction to visibility at street intersections shall be permitted and such visibility clearances shall be maintained as required by the Association and applicable governmental agencies. No vehicles, objects, fences, walls, hedges, shrubs or other plantings shall be placed or permitted on any Common Element where such obstruction would create a traffic concern or problem.

(l) General Use of Common Elements. The Common Elements shall be used only for the furnishing of the services and facilities for which they were reasonably suited and which are incident to the use and occupancy of the Units for the use permitted in Section 9(a).

(1) No cooking shall be permitted nor shall any goods or beverages be consumed on the General Common Elements except in areas designated for those purposes by the Executive Board.

(2) Each Unit Owner (including Declarant and Participating Builder) shall have the unrestricted perpetual right to use the Common Elements (except the Limited Common Elements) in common with all other Unit Owners as may be required for the purposes of access and ingress and regress to and use and occupancy and enjoyment of the respective Unit owned by such Unit Owner. Such right to use the Common Elements shall extend to each Unit Owner, and the agents, servants, and invitees of each Unit Owner. No wire or other lawn edging, underground invisible fencing or other treatment shall be placed or maintained on any portion of the Common Elements (including any Limited Common Elements) which would impede or hinder the Association's ability to perform its obligations as set forth in this Declaration or the other Condominium Documents, or which would be inharmonious with the aesthetics of the Condominium.

(3) For purposes of maintenance of Common Elements, no salt shall be used to treat snow/ice on any concrete surface.

(m) General Use of Units and Limited Common Elements. Each Unit Owner shall have the right to the exclusive use and possession of the Limited Common Elements contiguous to or assigned to or serving exclusively the respective Unit owned by such Unit Owner. Such rights to use and possess the Limited Common Elements shall be subject to and governed by the provisions of the Act and the Condominium Documents, including this Declaration.

(1) In the event a Unit will be unoccupied for an extended period exceeding thirty (30) days, the Unit Owner of any such Unit shall, prior to departure: (i) notify the Association of the anticipated duration such extended absence; (ii) remove all removable items such as furniture, plants and other objects from the outside the Unit; and (iii) designate a responsible firm or individual to monitor and if necessary care for the Unit, should the Unit suffer damage or require attention, and provide a key to the Unit to the firm or individual and provide the name of such the designee to the Association. Notwithstanding the foregoing, the Association shall have no responsibility or obligation to undertake or perform any services of any nature relating to any unoccupied Unit that would otherwise be the responsibility of the Unit Owner and not the Association.

(2) Except as originally installed by Developer, no flammable fuel storage for equipment shall be permitted within any Unit or Limited Common Element, except as may be necessary or reasonably used for permitted spas, fireplaces or similar devices compatible with the residential use of the Unit and otherwise in compliance with all applicable Legal Requirements. In addition, no flammable, combustible or explosive fuel, fluid, chemical, hazardous waste, or substance shall be kept on any Common Element, Limited Common Element or within any Unit, except those which are originally installed by Developer or required for and/or are in such quantities or volume customarily used in normal residential household use.

(3) No garage shall be converted into or used as a general living area. Garage doors shall remain closed at all times except when vehicular or pedestrian access is required. Notwithstanding the foregoing limitations, the right is expressly reserved and retained by Declarant and any Participating Builder to utilize the garage area of a Unit as a sales office or facility.

(4) No mops or laundry of any kind, or any other similar type article, shall be hung or exposed so as to be visible outside the Unit.

(5) Window treatments for each Unit shall consist of drapery, blinds, decorative panels, or other tasteful window covering approved by the Executive Board. No temporary window treatments shall be permitted. No security bars shall be placed on the windows of any Unit. No awnings, canopies or shutters shall be affixed to the exterior Limited Common Elements of a Unit without the prior written approval of the Executive Board. No reflective tinting or mirror finishes on windows shall be permitted; non-reflective tinting may be permitted if specifically approved by the Executive Board.

(6) All personal property of each Unit Owner or other occupants of the Unit shall be stored within such Unit unless outdoor storage within such Unit Owner's Limited Common Element Yard Area has been approved by the Executive Board.

(n) Vehicles. No trailers, campers, recreational vehicles, boats and other large vehicles (other than for temporary loading and unloading or to the extent parked in the garage of any Unit) shall be parked on the Property at any time, provided, that Declarant and Participating Builder shall have the right to maintain, at no charge, one (1) construction trailer, equipment and vehicles associated with the development and construction of the Property upon the Common Elements or any Unit owned by Declarant or a Participating Builder for a period beginning on the date hereof and ending on the date which is thirty (30) days after the last proposed Unit (including any and all Units submitted to the Act and the Condominium in accordance with this Declaration and any and all proposed Expansion Units) has been conveyed by Declarant. No junk or derelict vehicle or other vehicle on which current registration or plates are not maintained or displayed shall be kept upon any of the Common Elements.

(o) Animals. The maintenance, keeping, boarding and/or raising of animals, livestock, poultry or reptiles of any kind, regardless of number, shall be and are prohibited within any Unit or upon the Common Elements, except that the keeping of small, orderly domestic pets (i.e., insurance approved dogs, cats or caged birds) not to exceed two (2) pets per Unit without the approval of the Executive Board, is permitted, subject to the Rules and Regulations adopted and amended by the Executive Board from time to time and as otherwise permitted by all Legal Requirements and otherwise in accordance with the Rules and Regulations established by the Executive Board from time to time; provided, however, that such pets are not kept or maintained for commercial purposes or for breeding; and provided, further, that any such pet causing or creating a nuisance or unreasonable disturbance or noise shall be permanently removed from the Property by the owner of such pet upon three (3) days written notice from the Executive Board. Any breed of dog determined to increase insurance rates, such as Pitbulls, Akitas, etc., shall not be permitted. A determination by the Executive Board that any animal or pet kept or harbored in a Unit is a nuisance shall be conclusive and binding on all parties, subject to any appeal process provided in the Rules and Regulations. Such pets shall not be permitted upon the Common Elements unless accompanied by an adult and unless carried or leashed. No dog, cat or other animal shall be permitted to relieve itself on any shrub, patio, structure, dwelling, improvement, car or other areas or components of the Common Elements or items of personal property belonging to neighboring Unit Owners. Any solid waste left on any Common Elements or the Limited Common Element Yard Area of any Unit shall be promptly placed in a bag or other suitable receptacle and properly disposed of by the responsible Unit Owner of such pet. Every pet owner shall take all reasonable steps to prevent the noise, waste or odors of such owner's pet from annoying other Unit Owners. Unit Owners shall be strictly liable for the actions of their pets and those of their invitees, licensees, tenants and guests. The Executive Board shall have the right to require that any habitually diseased, infested, unclean or noisy animal, bird, reptile, fish or insect be removed from the Property. Any Unit Owner who keeps or maintains any pet upon any portion of the Property or allows any pet to be so kept or maintained upon any portion of the Property shall be deemed to have indemnified and agreed to hold the Association, each Unit Owner, Declarant and Legal Owner free and harmless from any loss, claim or liability of any kind or character whatever arising by reason of keeping or maintaining such pet upon any portion of the Property.

All pets shall be registered with the Executive Board and shall otherwise be registered and inoculated as required by all applicable Legal Requirements. The Executive Board may establish reasonable fees for registration of pets not to exceed the additional cost incurred by the Association resulting from the presence of such pets. Pets shall not be left unattended on any patio, porch or deck. No pet or animals shall be "tied out" on the exterior of the Unit or in the Common Elements, or left unattended in a yard or on a balcony, porch, patio or courtyard. No dog runs or enclosures shall be permitted except for the area of the General Common Elements designated as a "Pet Park" by the Declarant. The Executive Board shall have authority to modify these provisions on a case by case basis as may be reasonably necessary to accommodate pets providing specialized services to a Unit Owner or immediate family members, guests, tenants and invitees.

(p) Satellite Dishes. Satellite dishes shall be permitted by the Executive Board in such locations as the Executive Board may reasonably approve, provided such dishes do not exceed one (1) meter in diameter and otherwise are in compliance with all Legal Requirements. The use and maintenance of any such satellite dishes shall be the responsibility of Unit Owner served by the same. Antennas of any kind or nature shall not be permitted nor maintained or used at any time.

(q) Parking. The Executive Board may establish Rules and Regulations with respect to the use and enjoyment of the parking spaces which are delineated as General Common Elements to ensure proper use of such parking spaces by the Unit Owners entitled to the use thereof as provided under the Condominium Documents and to protect against the unauthorized use by third parties. There shall be no parking on the front Yard area serving a Unit as the propane tank servicing the Unit is located underground in the front yard area. In addition, there shall be no parking permitted along the roads and streets that are part of the Common Elements except as provided by the Executive Board in the Rules and Regulations, or the other Condominium Documents. All automobiles of the Unit Owners and their family members and their respective tenants, guests and invitees shall be parked in the garage or driveway appurtenant to such Unit and shall not block the sidewalks or driveways of other Unit Owners. All third-party service vehicles belonging to contractors or other service providers hired by an Owner ("Service Vehicles") shall be present only when necessary for the purpose of any such services or maintenance and shall park on the roadway in front of the Unit. No vehicle which cannot operate on its own power shall remain on any Common Element for more than twelve (12) hours. No repair, except emergency repair, of vehicles shall be made within the Common Elements. No commercial vehicle, limousine, recreational vehicle, boat, trailer, including, but not limited to boat trailers, house trailers, and trailers of every other type, kind or description, or camper, may be kept within the Common Elements. Notwithstanding the foregoing, a recreational vehicle, a boat and/or boat trailer may be kept within the Limited Common Element Yard Area of a Unit for up to twenty-four (24) hours for cleaning one every thirty (30) day period, and for loading and/or unloading purposes. The term commercial vehicle shall not be deemed to include law enforcement vehicles, recreational or utility vehicles (e.g., 4-Runners, Suburbans, Explorers, etc.) up to 21 feet 5 inches in length or clean "non-working" vehicles such as pick-up trucks, vans, or cars if they are used by the Unit Owner on a daily basis for normal transportation. No vehicles used in business for the purpose of transporting goods, equipment and the like, or any trucks or vans which are larger than one (1) ton shall be parked in any Common Element. Personal street vans, personal trucks of one (1) ton capacity or smaller, and personal vehicles that can be appropriately parked within standard size parking stalls may be parked in driveways appurtenant to Units. Except for Service Vehicles,

no vehicles displaying commercial advertising shall be parked within the public view. No vehicles of any nature shall be parked on any portion of the Common Elements except on the surfaced parking area thereof. No vehicles bearing a "for sale" sign shall be parked within the public view anywhere in the Common Elements. No vehicles shall be stored on blocks, nor may inoperable vehicles or vehicles with parts removed be stored or parked in the Common Elements. No tarpaulin covers on vehicles shall be permitted anywhere within the public view. For any Owner who drives an automobile used by any governmental agency, department or body (i.e., police cars), such automobile shall not be deemed to be a commercial vehicle and may be parked in the garage or driveway of the Unit. Notwithstanding any other provision in this Declaration to the contrary, the foregoing provisions shall not apply to construction, maintenance or service vehicles and equipment in connection with the development, construction, improvement, installation, maintenance, repair or replacement activities with respect to any Units or Common Elements by the Declarant or any Participating Builder, in the exercise of the Association's maintenance, repair, replacement obligations and responsibilities and services provided to the Unit Owners under the Condominium Documents, in connection with the development and construction activities of Declarant or any Participating Builder.

(r) Garbage Storage. Garbage, rubbish or any other material of any nature to be abandoned or disposed of shall not be placed or allowed to remain on any Unit or Common Element nor shall it be placed, left or allowed to fall upon any portion of the Property, but if placed outside a Unit shall be placed in closed garbage receptacles of permanent (mobile) construction intended for such purpose and may be placed at street side on the day of collection if required by the collecting agency or as other directed by the Executive Board. All garbage, trash and other refuse shall be kept in tight, enclosed containers with lids, adequately camouflaged and kept from public view and removed from the Units at reasonably frequent intervals. Such trash receptacles shall be kept in clean, sanitary and enclosed areas, hidden from view inside the garage of a Unit, excepting that they may be placed temporarily at street/curb side on the regular day of collection or after 5:00 p.m. on the day immediately prior to the day of collection if required by the collection agency. Each Unit Owner shall take all reasonable steps to prevent such Owner's garbage and refuse from omitting odors which would reasonably annoy any other Unit Owner. No outside burning of trash or garbage is permitted.

(s) Holiday Lighting and Decorations and Other Lighting**.** Holiday lighting and decorations shall be permitted to be placed upon the exterior portions of the Limited Common Elements appurtenant to each Unit in the manner permitted hereunder commencing on Thanksgiving and shall be removed not later than January 15th of the following year. With regard to those portions of any Limited Common Elements that are maintained or serviced by the Association, no lighting or any facilities or electrical cords or wiring related thereto or any decorations shall be permitted to be placed upon or across any portion of the Limited Common Element Yard Area maintained by the Association, including but not limited to sidewalks, driveways, lawn or landscaped areas and the Association and its agents shall be permitted, but shall not be required, to remove any such items which serve as impediments to the any such maintenance, and the Owner, by placement of any lighting or decorations, hereby assumes the risk that such lighting and decorations may be inadvertently damaged or destroyed. An Owner shall be permitted to place holiday lighting and decorations on and within the shrubs located in the front of the Limited Common Element Yard Area appurtenant to such Owner's Unit, provided that (i) the Association shall not be required to maintain such shrubs for such period of time as the

decorations, lighting and cords are contained within the shrubs, and (ii) such placement shall not otherwise interfere with any maintenance, services or other obligations or responsibilities imposed upon the Association. Except for seasonal holiday lights, all exterior lighting shall require the approval of the Executive Board. As part of the Rules and Regulations, the Executive Board may establish reasonable standards and guidelines for holiday lights, including the right to require the removal of any excessive lighting that creates a nuisance to adjacent or adjoining Unit Owners.

(t) Utilities and Stormwater Management Facilities. No Unit Owner may alter, amend or otherwise interfere with the utilities or storm water management and/or drainage facilities or water easement areas as identified on the Master Plan, the Declaration Plan, or any recorded document in the Recorder's Office as each may be amended or any utilities or irrigation system within any Common Element including any Limited Common Element Yard Area. Neither any Unit Owner nor the Association may alter, amend or otherwise interfere with the utilities, storm water management and/or drainage facilities without first submitting a plan for such alteration, amendment or interference to Declarant (so long as Declarant holds title to any of the Expansion Area), the County and any applicable utility provider for review and approval. The Association or the Unit Owner, as applicable, shall be solely responsible for all costs and expenses associated with any such proposed modifications, including but not limited to all reasonable expenses, including reasonable attorney's fees incurred by any of the foregoing parties with respect to their review of any such proposed modifications. In addition, in the event that such utilities, systems or facilities (whether comprised of swales, pipes, pumps, water body slopes, or other improvements) is adversely affected by any changes to landscaping, structures, or additions undertaken by a Unit Owner whether approved or not by the Executive Board, then any costs and expenses to correct, repair, maintain or replace any impacted utilities or drainage system and/or facilities and any resulting damages to any Unit or Common Element shall be sole obligation and responsibility of the Owner who made such changes. By way of example, and not of limitation, if an Owner plants a tree within its Limited Common Element Yard Area (pursuant to Executive Board approval) and the roots of such tree subsequently affect pipes or other drainage facilities within another Unit or the Common Elements, then such Owner shall be solely responsible for the costs and expenses of removal of the roots as directed by the Executive Board.

(u) Solar Panels. Solar panels and accessory equipment shall be permitted to be installed and maintained solely and exclusively on rear and side roofs of the Units within the Condominium at the sole cost and expense of the applicable Unit Owner. Any installation, maintenance, repairs, replacements, removal and/or disposal shall be first subject to the review and approval of the Executive Board of Association (which shall not be unreasonably withheld, conditioned or delayed), including the approval of the installer and maintenance or service provider. Without limiting the foregoing, any and all maintenance, repairs, replacements as well as any attendant damages resulting from such installation and/or other permitted or required activities such as (but not limited to) the creation of holes, roof penetrations, tie-ins to existing electrical service, ductwork and equipment, access panels, or the relocation of existing equipment that are made as a result of any such activities shall be undertaken and completed at the sole cost and expense of the applicable Unit Owner.

(v) Skylights. Skylights shall be permitted to be installed and maintained solely and exclusively on rear and side roofs of Units within the Condominium at the sole cost and expense of the applicable Unit Owner. Any installation, maintenance, repairs,

replacements, removal and/or disposal shall be first subject to the review and approval of the Executive Board of Association (which shall not be unreasonably withheld, conditioned or delayed), including the approval of the installer and maintenance or service provider. Without limiting the foregoing, any and all maintenance, repairs, replacements as well as any attendant damages resulting from such installation and/or other permitted or required activities such as (but not limited to) the creation of holes and roof penetrations that are made as a result of any such activities shall be undertaken and completed at the sole cost and expense of the applicable Unit Owner.

(w) Use of and Alterations to Limited Common Elements and Limited Common Element Yard Areas. In order to encourage harmonious architectural design and to protect the visual integrity, architectural spirit and long-term property values of the Condominium as may be necessary to cause the Condominium to remain an "upscale" community (both aesthetically and functionally) consistent with other similar projects in the County and as required by the Condominium Documents and in accordance with Legal Requirements, including the Act (the "Required Community Condition"), the Executive Board and Declarant reserves the right to adopt Rules and Regulations with respect to reasonable conditions on the use and enjoyment of the Limited Common Element Yard Areas. Except for the initial landscaping package, fence, and other Limited Common Elements constructed by the Declarant and/or a Participating Builder within the Limited Common Element Yard Area of each Unit, no other dwelling, structure, improvement, landscaping or other man-made object that are not otherwise expressly prohibited under this Declaration or other Condominium Documents, including but not limited to tennis courts, basketball courts, children's recreation equipment or other recreational or sporting facilities designed to be located and installed in a fixed location (by way of illustration, swing sets, trampolines or jungle gyms), decks, patios, porches, swimming pools, greenhouses, tool or storage sheds, ponds, gardens, driveways, paved areas, satellite dishes, radio antennas, communications equipment or facilities, fences, walls, together with all forms or types of hardscaping or exterior lighting (collectively, the "Yard Area Improvements") shall be designed, constructed, maintained, altered, extended, added to, removed or otherwise modified without the express written consent and approval of the Executive Board and otherwise in compliance with the Rules and Regulations and the Condominium Documents. No tree, hedge or other landscape feature shall be planted or maintained within any Limited Common Element Yard Area in a location which obstructs sight-lines for vehicular traffic on public streets or on private streets and roadways or sight-lines from adjoining, adjacent or surrounding Units. Notwithstanding anything contained in this Section 9(w) to the contrary, the Executive Board shall have no authority or jurisdiction to grant approval or authorization for any Yard Area Improvements which would otherwise be specifically prohibited under this Declaration or the other Condominium Documents or in contravention of any Legal Requirements. In addition, no Yard Area Improvements, once approved by the Executive Board shall be altered, extended, added to, removed or otherwise modified, nor shall any additional structures of any nature be erected, used or maintained nor shall any exterior change or alteration be made (including exterior facade color changes or change in grade or drainage) to the Yard Area Improvements or the Limited Common Element Yard Area except in accordance with the Condominium Documents. No Owner shall remove soil from any portion of the Limited Common Element Yard Area appurtenant to its Unit, change the grade or topography of the Limited Common Element Yard Areas or plant landscaping or install hardscaping materials or improvements which results in any permanent change in the flow and drainage of surface water. Notwithstanding anything contained in this Declaration to the contrary, any Yard Area

Improvements marketed or sold by Declarant and/or a Participating Builder shall be deemed to have been pre-approved by Declarant, without the need or obligation to obtain any approvals or authorizations from either Declarant or the Executive Board.

(1) Composting. No composting activities of any kind or nature shall be permitted on any portion of the Limited Common Element Yard Area, including natural composting activities. In addition, no Unit Owner shall erect or maintain any composting piles or receptacles or containers on any portion of the Common Elements.

(2) Outdoor Furniture. Outdoor furniture shall be used and maintained in the Limited Common Element Yard Area or patios, decks or porches only, unless otherwise determined by the Executive Board, and shall be maintained in a neat and attractive manner.

(3) Outdoor Equipment. No equipment or machinery (including equipment or machinery for use in connection with the maintenance of any Unit or Limited Common Element Yard Area) shall be stored around the front, rear or side of any Unit and its appurtenant Limited Common Elements. Notwithstanding the foregoing, equipment or machinery may be present when necessary for the purpose of performing work or maintenance to any Unit or Limited Common Element appurtenant thereto provided such equipment or machinery is promptly removed following the completion of such work or maintenance. An exception to this restriction would be Generac type home generators.

(4) Artificial Vegetation. No artificial grass, plants or other artificial vegetation or rocks or other landscape devices, shall be placed or maintained upon the exterior portion of any Unit or any appurtenant Limited Common Element or Limited Common Element Yard Area. All parts of the Unit which are exposed to the elements, including by way of illustration and not limitation, decks, deck rails, patios, porches, stairs, stair carriages and doors, shall not be changed nor shall the appearance of such be changed without obtaining the prior written approval of the Executive Board.

(5) Outdoor Laundry. No clothing, towels, sheets, or other items may be hung, draped, or allowed to be placed upon or over decks, deck rails, or patios of the Limited Common Elements of the Units.

(6) Outdoor Grills. The Executive Board shall have the right to restrict the use against gas grills or gas barbeque facilities within the Limited Common Element Yard Areas pursuant to the Rules and Regulations. Gas grilling shall be permitted only within the designated Recreation Area whereby the grilling equipment will be equipped with timers/automatic shutoff.

(7) Decorations. No decorative objects, including, but not limited to, birdbaths, light fixtures, sculptures, statutes, weather vanes, or flagpoles shall be installed or placed within or upon any portion of the Limited Common Elements appurtenant to each Unit without the prior written approval of the Executive Board.

(8) Privacy Screens. No privacy screens, walls or fences shall be erected or installed within or upon any portion of the Limited Common Elements appurtenant to each Unit without the prior written approval of the Executive Board.

(9) Sports Equipment**.** No recreational, playground or sports equipment shall be installed or placed within or about any portion of the Limited Common Elements or Limited Common Element Yard Area of any Unit for an extended period of time except for periodic use not extending more than seven (7) consecutive days during any month without prior written consent of the Executive Board. The use of any such recreational, playground or sports equipment within or about any portion of the Limited Common Elements or Limited Common Element Yard Area that is kept within a Unit when not in active use shall be permitted. No basketball backboards, skateboard ramps, or play structures will be permitted without written approval by the Executive Board. Any such approved equipment shall be located at the rear of the Limited Common Elements or Limited Common Element Yard Area of the Unit. Tree houses or platforms of a similar nature shall not be constructed on any part of the Limited Common Elements or Limited Common Element Yard Area of a Unit. No basketball hoop shall be attached to the Limited Common Elements or Limited Common Element Yard Area of a Unit and any portable basketball hoop must be stored inside the garage of the Unit.

(10) Outdoor Storage**.** No temporary or permanent utility or storage shed, storage building, tent, or other structure or improvement, including but not limited to storage pods or trailers shall be permitted and no other similar structure or improvement shall be constructed, erected, altered, modified or maintained without the prior approval of the Executive Board, which approval shall conform to the requirements of this Declaration.

(x) Fences. No fence shall be constructed or maintained upon any Limited Common Element Yard Area until the plans for the same have been submitted to and approved in writing by the Executive Board in accordance with the provisions of the Bylaws including the location thereof relative to certain infrastructure, including but not limited to existing utilities and lines, drainage swales, irrigation systems, utility and other improvements together with such other reasonable terms and conditions as may be imposed by the Executive Board. Fences should be white vinyl or composite material for low maintenance, four (4) feet in height installed with a forty-eight (48) inch gate for access. If the Unit Owner selects a fence to be installed either by Declarant or Participating Builder, or after settlement by Unit Owner's fence installer, then the Unit Owner shall pay any assessed cost with the annual dues for the added expense of mowing and landscaping control of the fence, said cost is subject to change annually with the annual Budget. Notwithstanding the foregoing, this Section 9(x) shall not apply to temporary above ground fences installed by or on behalf of Declarant or any Participating Builder during the construction and development of the Condominium, which in the sole opinion of Declarant or such Participating Builder, as applicable, shall be required, convenient or incidental to Declarant's or such Participating Builder's, as applicable, construction, development, marketing, leasing and sales activities within the Condominium, all of which shall be temporary in nature and shall be promptly removed when the need for such fencing is no longer needed in connection with the foregoing activities.

(y) General Reservation for Declarant, Participating Builders and Association. Notwithstanding any other provision in this Declaration to the contrary, the foregoing

provisions, restrictions and limitations set forth in this Section 9 shall not apply to any activities reasonably undertaken and performed in connection with the development, construction, improvement, installation, maintenance, repair or replacement activities with respect to any Buildings, Units, Common Elements or Expansion Areas by the Declarant or any Participating Builder or in the exercise of the Association's maintenance, repair, replacement obligations and responsibilities and services provided to the Unit Owners under the Condominium Documents or any other document or agreement pertaining to the operation or use of the Condominium, or to actions taken to comply with any Legal Requirements.

10. Repair and Replacement Reserve. The Association shall create and maintain, in addition to any reserve for contingencies, (a) a fully funded repair and replacement reserve (as defined in §81-103(39) of the Act) for the General Common Elements (the "General Common Elements Repair and Replacement Reserve") based upon a current reserve study (as defined in §81-103(40) of the Act) (the "Reserve Study") in accordance with the Act, (b) a fully funded repair and replacement reserve (as defined in §81-103(39) of the Act) for the General Common Elements (the "General Common Elements Repair and Replacement Reserve") based upon a current Reserve Study in accordance with the Act.

(a) All assessments to fund the General Common Elements Repair and Replacement Reserve shall be a General Common Element Expense and shall be due and payable by each Unit Owner.

(b) All assessments to fund the General Common Elements Repair and Replacement Reserve shall be a General Common Element Expense and shall be due and payable by each Single Family Home Unit Owner.

11. Maintenance Repair and Replacement of Limited Common Elements by the Unit Owners. Notwithstanding anything contained in the Condominium Documents to the contrary, each Owner shall have the affirmative obligation to undertake, perform and complete as provided hereunder any and all maintenance, repairs and replacement of any and all Limited Common Elements appurtenant to such Unit Owner's Unit that should arise from time to time to properly maintain and keep any such Limited Common Element in good repair, condition and appearance and as necessary to maintain the Required Community Condition other than those Limited Common Elements which shall be maintained, repaired and replaced by the Association. Any and all such maintenance, repair and/or replacement of any such Limited Common Elements shall be the sole obligation, responsibility of and shall be at the sole cost and expense of the Owner of the Unit as required hereunder and under §81-3107(a) of the Act. In addition, the Executive Board shall determine in its reasonable judgment when and to what extent such maintenance, repairs and replacements shall be required to any such Limited Common Elements in order to maintain the Required Community Condition and as otherwise required by and provided for in the Condominium Documents, including but not limited to the rights and remedies of the Association as provided in the Bylaws in the event of any Unit Owner's failure to timely perform any such maintenance, repairs and/or replacements obligations as required under the Condominium Documents. For purposes of maintaining Limited Common Elements, Unit Owners shall refrain from using salt to treat snow/ice on any concrete surface.

12. Alienation of Units, Restrictions on Sales and Leases of Units, Registration

Requirements for Subleases, Rental Agreements and Mortgages.

(a) No Severance of Ownership. No Unit Owner shall execute any instrument of assignment, conveyance or other transfer document or any lease, mortgage, or other instrument conveying or mortgaging the title to such Owner's Unit without including therein the undivided interest of such Unit in the Common Elements, it being the intention hereof to prevent any severance of such combined ownership. Any such instrument of assignment, conveyance or other transfer document or any such lease, mortgage, or other instrument purporting to affect one or more of such interests, without including all such interests, shall be deemed and taken to include the interest or interests, so omitted, even though the latter shall not be expressly mentioned or described therein. No part of the interests in the Common Elements of any Unit may be sold, leased, transferred, given, devised, or otherwise disposed of, except as part of the Unit to which such interests are appurtenant, or as part of a sale, lease, transfer, gift, devise or other disposition of such part of the interests in the Common Elements of all Units. The Common Elements are not subject to partition, and any purported conveyance, encumbrance, judicial sale, or other voluntary or involuntary transfer of an undivided or individual interest in the Common Elements made without the Unit to which that interest is allocated is void.

(b) Registration of Leases and Rental Agreements. Every Unit Owner, within ten (10) days of entering into a lease or any other agreement, written or oral, for the occupancy or use of such Owner's Unit (including, but not limited to, any rental agreement that may be excluded under the Delaware Landlord Tenant Code under 25 Del. C. § 5102) (such lease or other agreement being referred in this subsection as a "lease") shall supply a copy of any such lease to the Executive Board together (i) an acknowledgment by the tenant under such lease that such tenant has received a copy of the Condominium Documents, including, but not limited to, the Rules and Regulations, and (ii) the payment of a reasonable administrative fee to process such registration of each lease as may be determined by the Executive Board. Such Unit Owner shall obtain from the Executive Board and deliver to or otherwise make available to each tenant of such Unit Owner's Unit, at the time the lease is executed or, in the absence of a written lease when the tenancy begins, a current copy of the Condominium Documents as furnished by the Executive Board and shall deliver to or otherwise make available to the tenant a copy of any additions or revisions to the Condominium Documents as such additions or revisions are adopted and noticed to the Unit Owners by the Executive Board. A tenant shall be bound to comply with the noticed Condominium Documents and the Unit Owner leasing to the tenant shall take all lawful action against a tenant who materially violates the noticed Condominium Documents. By entering into a lease for a Unit, the Unit Owner of such Unit irrevocably appoints the Executive Board as attorney-in-fact coupled with an interest to have the right and authority (but not the obligation) to enforce the Condominium Documents against the tenant of that lease in the event that the Unit Owner shall fail, within a reasonable time after written demand by the Executive Board, to take what the Executive Board reasonably regards as adequate enforcement action against the tenant in material violation of noticed Condominium Documents. In the event of enforcement action (including any summary action for possession at law or a petition for injunctive relief in equity) under this subsection, the tenant shall have no resort to any defense based upon lack of contractual privity with the Executive Board. Any such lease shall also be in writing, have a term of no less than thirty (30) days, shall have not have term for subleasing within that thirty (30) day period, and is, and shall expressly provide, that such lease is subject to the provisions of the Act and the Condominium Documents, and that any failure of the lessee to comply with such provisions shall

constitute a default under the rental agreement.

(c) Registration of Mortgages with Executive Board. In order to enable the Association and the Executive Board to timely and efficiently administer and perform any required notification procedures in connection with required notices to Mortgagees under this Declaration, including but not limited to Section 21(d) relating to Material Amendment notices, every Unit Owner, within ten (10) business days following the execution of any mortgage on the Unit Owner's Unit, shall individually (or through the Unit Owner's attorney who conducts the settlement on the Unit or conducts a refinance on the Unit which results in the creation of one or more mortgages on the Unit) shall supply either (i) a copy of such mortgage as certified by a license attorney in the State of Delaware together with a recorder's receipt showing the book and page (or other applicable instrument reference which evidences the recordation of such mortgage) or a copy of the mortgage as recorded in the Recorder's Office (each a "Unit Mortgage") to the Executive Board or to the property management company retained by the Executive Board if applicable and if directed to do so in writing by the Executive Board (the "Management Company"). Each Unit Mortgage shall include or be accompanied by the name and address of the Mortgagee. In addition, in the event any such Unit Mortgage is assigned to a new Mortgagee, then within ten (10) business days of the Unit Owner receiving notification of any such assignment (the "Unit Mortgage Assignment"), the Unit Owner shall deliver a copy of any such Unit Mortgage Assignment notification to the Executive Board or to the Property Management Company as and if provided above. Each Unit Owner who obtains a Unit Mortgage and any subsequent Unit Mortgage Assignment shall be responsible for the assessment and payment of a reasonable administrative fee to process such registration of each Unit Mortgage and Unit Mortgage Assignment as may be determined by the Executive Board from time to time. Each Unit Owner covenants and agrees to confirm in writing from time to time to the Executive Board or to the Property Management Company as and if provided above upon written request whether such Unit Owner has any mortgages secured by such Unit Owner's Unit and to provide copies of any such Unit Mortgages and Unit Mortgage Assignments if not previously provided as required hereunder. In the event the Executive Board determines that any Unit Owner has failed to timely and properly notify and/or otherwise provide to the Executive Board or to the Property Management Company as and if provided above after being directed to do so in writing by the Executive Board, then the Unit Owner shall be responsible for and liable to the Association for all reasonable costs and expenses incurred by the Association in determining the absence or existence of any Unit Mortgages and/or Unit Mortgage Assignments on such Unit Owner's Unit. The Executive Board shall have the authority to establish, create, modify, supplement and otherwise change these registration requirements and the associated fees and costs in administering and enforcing these requirements pursuant to and otherwise in accordance with the Bylaws.

13. Decoration and Fixturing of Interior Surfaces of Walls and Ceilings. Each Unit Owner shall have the right, at any time and from time to time, to install, at such Owner's own cost and expense, such decorations, additions, fixtures, and coverings (including but not limited to, painting, finishing, wall papering and carpeting) to the surfaces of walls and ceilings which face the interior of such Owner's Unit, provided that the same do not impair the structural integrity of the Building within which any such Unit is a part of. All window coverings must appear white or "off white" when viewed from the exterior.

14. Creation of Executive Board and Initial Members of the Executive Board.

The names of the initial Members/Directors of the Executive Board to serve until their successors are chosen and qualified pursuant to the Bylaws are:

(a) David Hart
(b) Jamie Savino
(c) John Murray

15. Encroachments. If any portion of the Common Elements now or subsequently encroaches upon any Unit, or if any Unit now or subsequently encroaches upon any other Unit or upon any portion of the Common Elements in general as a result of the construction of any Building or if any such encroachment shall occur after the recording of this Declaration as a result of settling or shifting of any Building, a valid and perpetual and non-exclusive easement for such encroachment and for the maintenance, repair, reconstruction and replacement of the same shall exist so long as such Building shall stand. In the event any Building, any Unit, any adjoining Unit, or any adjoining Common Elements shall be partially or totally destroyed as a result of fire or other casualty or as a result of condemnation or eminent domain proceedings, and then re-built; encroachments of parts of the Common Elements upon any Unit or Building, or of any Unit upon any other Unit or any portion of the Common Elements or any Building, or of any Building upon any other Building or any portion of the Common Elements or any Unit, due to such rebuilding, shall be permitted, and valid perpetual easements for such encroachments and for the maintenance, repair, reconstruction and replacement of the same shall exist so long as such reconstructed Building, Unit or Common Element shall stand.

16. Pipe Ducts, Cables, Wires, Conduits, Public Utility Lines and Other Common Elements Located Inside of Units: Support. Each Unit Owner shall have a perpetual and non-exclusive easement in common with the Owners of all other Units to use all pipes, wires, ducts, cables, conduits, public utility lines and other Common Elements located in any of the other Units that serves such Owner's Unit. Each Unit shall be subject to a perpetual and non-exclusive easement in favor of the Owners of all other Units to use pipes, ducts, cables, wires, conduits, public utility lines and other Common Elements serving such other Units and located in such Unit. The Executive Board or its representative shall have a right of access to each Unit to inspect the same, to remove violations therefrom and to maintain, repair or replace the Common Elements contained therein or elsewhere in the Buildings. Every portion of a Unit which contributes to the structural support of a Building shall be burdened with a perpetual and non-exclusive easement of structural support for the benefit of all other Units and Common Elements contained within such Building.

17. Units Subject to Easements and Licenses for Ingress and Egress Through Common Elements; Other Unit Owner Easements. Subject to §§81-302(a)(6) and 81-312 of the Act, (a) each Unit Owner shall have a non-exclusive easement and license in common with Declarant, the other Unit Owners for ingress and egress through all Common Elements reasonably necessary for the use and enjoyment of such Unit Owner's and (b) each Unit shall be subject to a non-exclusive easement and license for ingress and egress through all Common Elements by persons lawfully using or entitled to the same.

18. Units Subject to Construction Easements and Licenses on Common Elements. Each Unit shall be subject to a non-exclusive easement and license of ingress and egress

through all Common Elements for design, construction, maintenance, repairs and replacement of all improvements (including, but not limited to, utilities) installed or to be built on the Common Elements and for the construction, maintenance, repairs, and completion of certain Units, by all construction personnel, personnel of Declarant, the Participating Builders, the Executive Board, and the Unit Owners and their respective employees, agents, and invitees, together with the use of construction equipment, tools and services associated therewith.

19. Units Subject to Condominium Documents. All present and future Unit Owners, lessees, mortgagees, tenants and occupants of Units shall be subject to, and shall comply with, the provisions of the Condominium Documents, as they may be amended from time to time. The acceptance of an instrument of assignment, conveyance or other transfer document or the entering into of a lease or the entering into occupancy of any Unit shall constitute an agreement that the provisions of the Condominium Documents are accepted and ratified by such Owner, tenant, or occupant and all of such provisions shall be deemed and taken to be enforceable equitable servitudes and covenants running with the Land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every instrument of assignment, conveyance or other transfer document or any lease thereof.

20. Unit Ownership and Ownership of Common Elements. Each Unit Owner shall own the interest in such Owner's Unit and the undivided Common Element Percentage Interest of such Unit in the Common Elements appurtenant to such Unit.

21. Amendment of Declaration.

(a) During the Declarant Control Period, no amendment may be made to this Declaration without the written consent of Declarant, which consent may be granted or withheld for any reason or no reason whatsoever, in Declarant's sole subjective and absolute discretion. Thereafter and subject to Section 32 hereof, this Declaration shall be amended in accordance with the terms of this Declaration.

(b) Notwithstanding the provisions of Section 21(a) hereof, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to this Declaration or has the right to expand the Condominium Regime in accordance with the Condominium Documents, including, but not limited to, Sections 5 and 6 hereof, no amendment to this Declaration shall be adopted which, in Declarant's sole subjective and absolute opinion, may materially or adversely interfere with or affect (i) the lease, sale, other disposition or use of the Expansion Area or any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Building(s) and Unit(s), (ii) the value, use, or marketability of any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Building(s) and Unit(s), (iii) any expansion rights granted to Declarant under any one or more of the Condominium Documents, or (iv) the financing available to Declarant with respect to any of the foregoing.

(c) Notwithstanding the provisions of Section 21(a) hereof, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to this Declaration or has the right to expand the Condominium Regime in accordance with the

Condominium Documents, including, but not limited to, Sections 5 and 6 hereof, Declarant also shall have the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, at any time and from time to time, in Declarant's sole subjective and absolute discretion, to amend any one or more of the Condominium Documents to cause each or all of them to be amended by filing with the Recorder's Office instruments and plans as permitted hereunder or as necessary to (i) correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all applicable laws and legal requirements, (ii) achieve compliance with the requirements of Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Federal Housing Authority, Veterans Administration or other governmental agency or their successors, or (iii) conform the Condominium Documents to be consistent with the provisions required or allowed by the Act, or to comply with any Legal Requirements.

(d) Subject to Sections 21(a), (b) and (c) hereof and Declarant's right to expand the Condominium Regime in accordance with the Condominium Documents, including, by way of example and not of limitation, Sections 5 and 6 hereof, captioned "Expansion" and "Adjustments to General Common Element Percentage Interests", respectively, and any and all rights granted to or reserved by Declarant in the aforesaid Sections 5 and 6, this Declaration may be amended by the vote of a Majority of the Unit Owners, cast in person or by proxy at a meeting duly held in accordance with the provisions of the Bylaws; provided, however, that any action to terminate the legal status of the Condominium must be approved by Unit Owners holding no less then eighty percent (80%) of the Common Element Percentage Interests and approved by Mortgagees that represent at least sixty-seven percent (67%) of the Common Element Percentage Interests held by Unit Owners of the Units subject to a mortgage, and, provided, further, that any such amendments of a material adverse nature ("Material Amendments") must be approved by Unit Owners holding no less then sixty-seven percent (67%) of the Common Element Percentage Interests and approved by Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a mortgage. For purposes of this Section 21(d) the term "Material Amendments" shall be defined to mean a change or amendment to this Declaration pertaining to any one or more of the following:

(1) Voting rights;

(2) Any assessment increase which is more than 25% of the previously applicable assessment, or the priority of assessment liens;

(3) Reduction in reserves for maintenance, repair, and replacement of Common Elements;

(4) Responsibility for maintenance and repairs;

(5) Reallocation of interests in the Common Elements or the rights to their use;

(6) Redefinition of any Unit boundaries;

(7) Convertibility of Units into Common Elements or, vice versa;

(8) Expansion or contraction of the Condominium, or the addition, annexation, or withdrawal of property to or from the Condominium;

(9) Hazard or fidelity insurance or bonds requirements;

(10) Imposition of any new restriction relating to the leasing of Units;

(11) A decision by the Association of Owners to establish self-management, if professional management had been required previously by the Condominium Documents, Department of Housing and Urban Development, Veterans Administration, Federal National Mortgage Association, or Federal Home Loan Mortgage Corporation;

(12) Restoration or repair of any Buildings (after damage or a partial condemnation) in a manner other than that specified in the Condominium Documents;

(13) Any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs;

(14) Any provisions that expressly benefit mortgage holders, insurers, or guarantors;

(15) Any reallocation of interests in the Common Elements resulting from a partial condemnation or partial destruction of the Condominium;

(16) Assessments, assessment liens or subordination of such liens;

(17) Rights to use of the Common Elements; or

(18) Imposition of any right of first refusal or any restriction on the right of a Unit Owner to sell, transfer, or otherwise convey his Unit.

Subject to Sections 21(a), (b) and (c) hereof and Declarant's right to expand the Condominium Regime in accordance with the Condominium Documents, including, by way of example and not of limitation, Sections 5 and 6 hereof, captioned "Expansion" and "Adjustments to Common Element Percentage Interests", respectively, and any and all rights granted to or reserved by Declarant in the aforesaid Sections 5 and 6, no such amendment shall be effective until duly recorded in the Recorder's Office; provided, however, that neither the Common Element Percentage Interests shall be changed except by unanimous consent of all the Unit Owners affected thereby, and the mortgagees of those affected Units, such change being evidenced by an appropriate amendatory declaration to such effect, duly executed and recorded in the Recorder's Office. The failure of any Mortgagee to respond to any such proposed notice of an amendment as aforesaid sent by certified mail or registered mail, return receipt requested, within sixty (60) days after notice issues to such Mortgagee shall be deemed to be a consent of such Mortgagee to such

amendment. Each such amendment shall be effective upon recordation of the same in the Recorder's Office of an appropriate instrument setting forth such amendment.

(e) If any amendment is necessary in the judgment of the Executive Board to cure any ambiguity or to correct or supplement any provision of this Declaration or the Bylaws which is incorrect, defective or inconsistent with any other provision hereof or thereof or with the Act, or to change, correct or supplement any aspect of the Declaration Plan which is incorrect, defective, or similarly inconsistent, and which is not a Material Amendment, then the Executive Board may effect an appropriate corrective amendment without the approval of the Unit Owners as long as the Executive Board shall have received an opinion of counsel (as to any amendment pertaining to this Declaration or the Bylaws) or of an independent registered architect or licensed professional engineer (as to any such amendment pertaining to the Declaration Plan); and, in either case, such opinion shall and must recommend and approve the proposed amendment. Each such amendment shall be effective upon recordation of the same in the Recorder's Office of an appropriate instrument setting forth such amendment.

(f) If there are one or more amendments to this Declaration, the Declaration Plan or the Bylaws, all references thereafter to this Declaration, the Declaration Plan and the Bylaws (unless otherwise specifically designated) shall mean this Declaration, the Declaration Plan or the Code of Regulation as amended to the date of such reference. Any amendment to this Declaration, the Declaration Plan and the Bylaws shall be deemed in proper form for filing and recording when such amendment is executed by the President of the Association and when accompanied by certification that such amendment has been duly enacted in accordance with the provisions of this Declaration or the Bylaws, as the case may be.

(g) Notwithstanding the foregoing provisions for the amendment of this Declaration, Declarant, its successors and assigns, shall have an irrevocable power of attorney, coupled with an interest, for the purpose of amending any one or more of the Condominium Documents, including, but not limited to, the applicable Schedules of this Declaration attached hereto and the Declaration Plan under the reservation and powers given unto Declarant in Sections 5 and 6 of this Declaration, for the purposes stated in any one or more of the said Sections 5 and 6, respectively. The provisions for annexing land and improvements by Declarant and all other provisions of said Sections 5 and 6, respectively, are incorporated into this Section by reference as though each and every statement contained in said Sections 5 and 6, respectively, were fully set forth herein.

(h) Amendment to Schedule K. Notwithstanding any provisions for the amendment of this Declaration to the contrary, no amendment may be made of to Schedule K without the prior written consent of the Declarant.

22. No Partition of Common Elements/Percentage Interests. The Common Elements are not subject to partition, and any purported conveyance, encumbrance, judicial sale, or other voluntary or involuntary transfer of an undivided interest in the Common Elements made without the Unit to which that interest is allocated is void. Neither the Common Element Percentage Interests nor the General Common Element Percentage Interests shall be separated from the Unit to which they appertain and shall be deemed conveyed, leased or encumbered with the Unit though the interest is not expressly mentioned or described in the conveyance or other

instrument.

23. No Revocation. Except in the event of substantial destruction as provided in the Bylaws and the Act, the dedication of the Property under the Act shall not be removed, waived, revoked, or terminated unless all of the Unit Owners and the mortgagees of all of the mortgages covering the Units and all other affected judgment and other lien holders with respect to the Units unanimously agree to such removal, revocation, waiver, or termination.

24. Eminent Domain. Whenever all or part of the Common Elements shall be taken, injured or destroyed by eminent domain, the Association shall represent the Unit Owners in negotiations, settlements and agreements with the condemning authority. Each Unit Owner appoints the Association as attorney-in-fact for this purpose under an irrevocable power of attorney coupled with an interest to effectuate, execute, acknowledge and deliver any and all agreements or other documents that may be required or necessary to consummate and complete any such settlements and/or agreements with the condemning authority or other third parties; and each Unit Owner shall be deemed to have agreed and covenanted to execute such further instruments, agreements, or documents, if any, as may be required by the Association, its successors or assigns, to properly accomplish the purposes of this Section. Each Unit Owner shall be entitled to notice thereof, but in any proceedings for the determination of damages, such damages shall be determined for such taking, injury, or destruction as a whole and not for each Unit Owner's interest therein. The award or proceeds of settlement shall be payable to the Association for the use and benefit of the Unit Owners and their mortgagees as their interests may appear, and as otherwise provided in the Bylaws.

25. Invalidity. The invalidity of any provision of this Declaration shall not be deemed to impair or affect in any manner the validity, enforceability or effect of the remainder of this Declaration, and, in such event, all of the other provisions of this Declaration shall continue in full force and effect as if such invalid provision had never been included herein.

26. Waiver. No provision contained in this Declaration shall be deemed to have been abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches which may occur.

27. Gender. The use of the masculine gender in this Declaration shall be deemed to refer to the feminine gender and neuter gender and the use of the singular shall be deemed to refer to the plural, and vice versa, whenever the context so requires.

28. Successors and Assigns. Whenever "FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company" is used such reference shall also refer to its successors or assigns.

29. Captions. The captions herein are inserted only as a matter of convenience and for reference, and in no way define, limit, or describe the scope of this Declaration or the intent of any provision thereof.

30. Joinder of Mortgagee. By means of the Mortgagee Joinder and Subordination Addendum attached hereto and incorporated by reference herein, the Lender (as defined in such Addendum) joins in the execution of this Declaration to acknowledge both (a) the

Lender's consent to the establishment with respect to the Property of the Condominium Regime hereby documented and (b) the subordination of the Lender's existing mortgage lien with respect to the Property to the terms of the Condominium Documents, as amended from time to time in accordance with the Condominium Documents.

31. Assessments and Taxes. Each Unit and its Common Element Percentage Interest in the Common Elements shall be assessed and taxed for all purposes as a separate parcel of real estate in accordance with §81-105 of the Act and any such real estate taxes and assessments applicable to each such Unit shall be the sole responsibility of such Unit Owner.

32. Declarant's Right to Amend. Notwithstanding anything contained in this Declaration to the contrary, so long as Declarant holds title to one or more of the Units which are being offered for sale or has the right to expand the Condominium Regime in accordance with the Condominium Documents, including, but not limited to, Sections 5 and 6 hereof, Declarant reserves the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, to change the interior design and arrangement of, or alter the boundaries between Buildings and Units owned by Declarant at any time and from time to time after this Declaration or any amendment thereto is filed in the Recorder's Office. To accomplish any of the foregoing, Declarant shall have the right to amend any one or more of the Condominium Documents so as to reflect such change, without previously or subsequently obtaining the consent, approval, authorization, signature or other action or non-action of the Association, the Executive Board, any Unit Owner, any Mortgagee, any holder of any lien on any Unit or any occupant of the Property or any Unit or any other Person. Notwithstanding any law, custom or usage to the contrary, Declarant also shall have the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, to amend any one or more of the Condominium Documents to cause each or all of them to be amended by filing with the Recorder's Office instruments and plans as permitted hereunder or as necessary to correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all applicable laws and legal requirements. To accomplish any of the foregoing, Declarant shall have the right to amend any one or more of the Condominium Documents so as to reflect such correction, without previously or subsequently obtaining the consent, approval, authorization, signature or other action or non-action of the Association, the Executive Board, any Unit Owner, any Mortgagee, any holder of any lien on any Unit or any occupant of the Property or any Unit or any other Person.

33. Declarant Easements. Declarant shall have a perpetual, free and non-exclusive easement through the Common Elements as may be reasonably necessary for the purpose of discharging Declarant's obligations or exercising special declarant rights, whether arising under the Act or reserved in this Declaration.

34. Perpetuities. If any of the covenants, conditions, easements, restrictions, or other provisions of any one or more of the Condominium Documents shall be unlawfully void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of Donald Trump, the forty-fifth (45th) President of the United States of America.

35. Declarant Reserved Right. Notwithstanding anything contained in any one

or more of the Condominium Documents to the contrary, any building, structure, or other improvement constructed, maintained, repaired, replaced, marketed or sold by Declarant or its successor or assignees shall be deemed to have complied with the provisions of the Condominium Documents and Declarant shall have the right to construct, maintain, repair, replace, market or sell such buildings, structures, or other improvement all without the approval of the Association, Executive Board, any Owners or any holders of any existing mortgages.

36. Conflicts. Notwithstanding anything contained in this Declaration to the contrary, (a) to the extent that the provisions of this Declaration or the Bylaws might conflict with or be inconsistent with the Act, the Act shall govern and control, except as otherwise provided under the Act; and (b) to the extent that the provisions of the Bylaws might conflict with or be inconsistent with this Declaration, this Declaration shall govern and control.

[END OF TEXT - SIGNATURE PAGE FOLLOWS]

DRAFT

IN WITNESS WHEREOF, Declarant has caused its name and its seal to be affixed hereto this _____ day of _____, 2024.

FOXLANE HOMES DELAWARE , LLC

_____ BY:_____(SEAL)
WITNESS , Manager/Authorized Member

STATE OF DELAWARE )
) SS:
COUNTY OF SUSSEX )

BE IT REMEMBERED, that on this _____ day of _____, 2024, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, _____, Manager/Authorized Member of FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, party to this Declaration, known to me personally to be such, and he acknowledged this Declaration to be his act and deed on behalf of said entity.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

_____
NOTARY PUBLIC

PRINT NAME:_____

COMMISSION EXPIRES:_____

DRAFT

LIST OF SCHEDULES

Schedule A Land Description

Schedule B Building and Improvements

Schedule C General Common Elements Percentage Interests

Schedule D Declaration Of Easement Together With An Irrevocable Power Of Attorney Coupled With An Interest

Schedule E Irrevocable Power Of Attorney Coupled With An Interest

Schedule F Single Family Home Buildings; Applicable Provisions

DRAFT

DECLARATION OF
GLEN COVE CONDOMINIUM

SCHEDULE A
LAND DESCRIPTION

ALL that certain tract, piece or parcel of land situate, lying and being in Baltimore Hundred, Sussex County, Delaware, said to contain 12.4 acres of land, more or less, as shown on a plat entitled "GLEN COVE" prepared by CEA, LLC and recorded in Plot Book ___, Page ___ and being more particularly described as follows, to wit:

Insert metes and bounds description

DRAFT

DECLARATION OF
GLEN COVE CONDOMINIUM

SCHEDULE B

Buildings and Improvements

BUILDING:

The Land has been improved by One (1) Building designated as Unit 1, Phase 1 all as more particularly shown and set forth on the Declaration Plan.

IMPROVEMENTS:

The Land is further improved as more particularly shown on the Declaration Plan by paved driveways and parking areas, paved walkways and landscaping and lighting fixtures, as well as sanitary sewer systems, drainage systems, water, electrical, telephone, conduits and lines (title to which systems may, in certain instances, remain vested in the utility company providing services through such systems) and infrastructure currently constructed to the Units in the Building(s), all such improvements being constructed in accordance with the Declaration Plan.

DECLARATION OF
GLEN COVE CONDOMINIUM

SCHEDULE C

General Common Elements Percentage Interests

The following percentages represent (1) the respective undivided percentages of ownership of each Unit in the General Common Elements, (2) the number of votes of each Unit expressed as a percentage, and (3) each Unit's percentage share of the General Common Element Expenses, which percentages shall be adjusted based on the actual number of Units submitted to the Condominium Regime in accordance with this Declaration.

| Building | Unit # | General Common Element Percentage Interests |
|---|---|---|
| 1 | 1 | 100% |
| | | |
| Total | | 100%* |

Between the recordation of this Declaration and the completion of all the Units, each Unit Owner's General Common Element Percentage Interests shall be adjusted in accordance with the terms of this Declaration and this Schedule shall be amended as provided under this Declaration to document such adjustment to the General Common Element Percentage Interests.

The General Common Element Percentage Interests shall be used, in addition to voting or other rights and obligations expressly provided under the Condominium Documents, to allocate the obligation of each Unit Owner to pay its proportionate share of the General Common Element Expenses.

*Pursuant to 25 Del. C. § 81-07(e), except for minor variations due to rounding, the sum of the undivided interests in the common elements allocated at any time to all the units must equal 1 if stated as a fraction or 100 percent if stated as a percentage. In the event of any discrepancy between an allocated interest and the result derived from application of the pertinent formula, then the allocated interest prevails.

DECLARATION OF
GLEN COVE CONDOMINIUM

SCHEDULE D

Declaration of Easement

Tax Map Parcel Number: 1-34-12.00-374.01, 3445.00 through 3460.00
Tax Map Parcel Number: 134-12.00-375.00

Prepared by and Return to:
Baird Mandalas Brockstedt LLC
1413 Savannah Road, Suite 1
Lewes, DE 19958

**DECLARATION OF EASEMENT TOGETHER WITH AN IRREVOCABLE POWER OF ATTORNEY COUPLED WITH AN INTEREST**

This Declaration of Easement Together With An Irrevocable Power Of Attorney Coupled With An Interest (this "**Declaration of Easement**") made effective this _____ day of _____, 20___, is reserved unto FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, its successors and assigns ("**Grantor**").

RECITALS

WHEREAS, Grantor is the owner of an interest in that certain real property located in BALTIMORE Hundred, Sussex County, Delaware, which property is more particularly described in **Exhibit A** attached hereto and made a part hereof; and

WHEREAS, said property is to be submitted by Grantor to a plan of condominium ownership under the Delaware Uniform Common Interest Ownership Act, 25 Del. C. §81-101, et seq., as amended (hereinafter referred to as the "**Act**"), by, and in accordance with, the Declaration Of GLEN COVE Condominium (the "**Declaration**") to be filed of record in the Office of the Recorder of Deeds, in and for, Sussex County, Delaware (the "**Recorder's Office**"), after the filing of this Declaration of Easement; and

WHEREAS, any term or definition not otherwise expressly defined herein shall have the meaning and definition as provided in the Declaration; and

WHEREAS, as of the date hereof, Grantor has constructed the Initial Building and Initial Units; and

WHEREAS, the Declaration, in Sections 5 and 6 of the Declaration, captioned "Expansion" and "Adjustments to Percentage Interests", respectively, reserves to Grantor the right, *inter alia*, by and unto itself to (1) annex into the land and the improvements constituting the Property of the Condominium; and thereby to submit to each and every of the provisions of the Declaration and the Act and the Condominium Regime, all or any portion of the Expansion Area, including, but not limited to, the Expansion Buildings and Units, and (2) change the location of any one or more of the proposed Expansion Buildings and Units in order to improve views to and from the Buildings and Units, improve parking areas and harmonize the Property to the sewer, water and other utilities service distribution plans.

WHEREAS, it is intended that the Common Elements be subject to this Declaration of Easement in order to facilitate the possible minor relocation of said Buildings and Units.

NOW, THEREFORE, in consideration of the matters hereinabove set forth:

DECLARATION OF EASEMENT

Grantor hereby reserves unto itself the exclusive, free, perpetual right, privilege and easement (but not the obligation) to (1) annex into the land and the improvements constituting the Property of the Condominium; and thereby to submit to each and every of the provisions of the Declaration, the Act and the Condominium Regime, all or any portion of the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, (2) change the location of any one or more of the Expansion Buildings and Units in order to improve views to and from the Buildings and Units, improve parking areas and harmonize the Property to the sewer, water and other utilities service distribution plans, (3) construct (a) one or more of the Expansion Buildings and Units as delineated on the Declaration Plan, and/or (b) all of the necessary parking lots, walks and other appurtenances (including, but not limited to, utilities and roadways) requisite to service all or any portion of the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, and (4) provide for the necessary ingress and egress to the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, together with such other rights, privileges, licenses, easements and rights-of-ways as may be deemed necessary or desirable to submit all or any portion of the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, to the Condominium Regime and the Act as contemplated and provided for under the Declaration, Declaration Plan, Site Plan and Bylaws.

This reservation of easement shall be perpetual during the continued existence of the Condominium.

This reservation of easement shall run with the Land and shall be binding upon each Unit Owner and mortgagee of a Unit in the Condominium and their respective heirs, personal representatives, successors and assigns and shall be deemed to have granted unto the Grantor, its successors and assigns, an irrevocable power of attorney coupled with an interest, to effectuate, execute, acknowledge and deliver any such amendment; and each such Unit Owner and mortgagee shall be deemed to have agreed and covenanted to execute such further instruments, if any, as may be required by the Grantor, its successors or assigns, to properly accomplish the purposes of this Declaration of Easement.

IN WITNESS WHEREOF, the Grantor has caused its name and its seal to be affixed hereto the day and year first above-written.

FOXLANE HOMES DELAWARE, LLC

_____ BY:_____(SEAL)
WITNESS , Manager

STATE OF DELAWARE )
) SS:
COUNTY OF SUSSEX )

BE IT REMEMBERED, that on this ___ day of _____, 20___, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, _____, Manager of FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, party to this Indenture, known to me personally to be such, and he acknowledged this Indenture to be his act and deed on behalf of said entity.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

_____
NOTARY PUBLIC
PRINT NAME:_____
COMMISSION EXPIRES:_____

**EXHIBIT A to Schedule D**

ALL that certain tract, piece or parcel of land situate, lying and being in Baltimore Hundred, Sussex County, Delaware, said to contain 12.4 acres of land, more or less, as shown on a plat entitled "Glen Cove", prepared by CEA, LLC and recorded in Plot Book ___, Page ___ and being more particularly described as follows, to wit:

Insert metes and bounds description

DECLARATION OF
GLEN COVE CONDOMINIUM

SCHEDULE E

Sample Irrevocable Power of Attorney

Tax Map Parcel Number: 1-34-12.00-374.01, 3445.00 through 3460.00
Tax Map Parcel Number: 134-12.00-375.00
Unit _____

Prepared By and Return To:

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**IRREVOCABLE POWER OF ATTORNEY COUPLED WITH AN INTEREST**

**GLEN COVE CONDOMINIUM**

**KNOW ALL MEN BY THESE PRESENTS**, that, for the period commencing on the date hereof and ending on the date which is **_____ (___) years** after the date hereof, I/we, _____ owners of Unit _____ (the "**Unit**") in GLEN COVE Condominium (the "**Condominium**") hereby make constitute and appoint FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company ("**Declarant**"), and its successors and assigns, to be my/our true and lawful attorney, and in my/our name, place and stead and in my/our behalf, and hereby grant Declarant, and its successors and assigns, the absolute right, power and authority, together with an irrevocable power of attorney, coupled with an interest, to do and execute all or any of the following acts, deeds and things, at any time and from time to time:

1. To execute, acknowledge, deliver and record any one or more instruments, documents, amendments or plans as may be required to amend, modify, or otherwise change any one or more of the Condominium Documents, including, but not limited to, the Declaration Plan, Declaration, Bylaws, Rules and Regulations and/or Declaration of Easement (all as defined in the Declaration) for any one or more of the purposes expressly provided under any one or more of the Condominium Documents, including, but not limited to, under the Declaration in Section 4, captioned "Buildings/Units", Section 5, captioned "Expansion", Section 6, captioned "Adjustments to General Common Element Percentage Interests", Section 21, captioned "Amendment of Declaration", and Section 32, captioned "Declarant's Right to Amend", and under the Bylaws in Article XI, captioned "Amendments to Bylaws" and Article XIV, captioned "Provisions Applicable to Declarant", all to be accomplished in accordance with the terms and conditions of the Condominium Documents, including, but not limited to, the Declaration, Bylaws and Declaration Plan, as recorded in the Office of the Recorder of Deed in and for Sussex County, Delaware (the "**Recorder's Office**"), at _____, _____, and _____, respectively; and

2. To take any and all such actions which Declarant deems necessary or desirable, in Declarant's sole subjective and absolute discretion, for the purpose of constructing additional condominium units and submitting any one or more Expansion Phases, including, but not limited to, any one or more Expansion Buildings and Units, to the Act and the Condominium Regime, including, but not limited to, for the purpose of reallocating the Common Element Percentage Interests and General Common Element Percentage Interests for each unit (including the Unit) in the Common Elements by proportionately reducing the Percentage Interests of the Common Elements appurtenant to each unit (including the Unit) in the Condominium; and

3. To amend, modify, or otherwise change any one or more of the Condominium Documents, including, but not limited to, the Site Plan, Declaration, Bylaws, Rules and Regulations, Declaration Plan, and/or Declaration of Easement, or to cause each or all of them to be amended by filing with the Recorder's Office instruments, documents, amendments and plans required or necessary to (a) annex into the land and the improvements constituting the Property of the Condominium; and thereby to submit to each and every of the provisions of the Declaration and the Act and the Condominium Regime, all or any portion of the Expansion Area, including, but not limited to, the Expansion Buildings and Units, and (b) correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all applicable laws and legal requirements – all without previously or subsequently obtaining the consent, approval, authorization, signature or other action or non-action of the Undersigned, the Association, the Executive Board, any Unit Owner, any Mortgagee, or the holder of any lien on any Unit or any other occupant of the Property or any Unit or any other third party; and

4. Without in any way detracting from the hereinabove authorized powers, I/we specifically request and authorize that my/our hereinabove designated true and lawful attorney to be authorized and directed to take any and all such action which it deems necessary for the purposes of, or in fulfillment of, any of the provisions contained herein, including, but not limited to, any such amendments, subdivisions or dedications; hereby giving unto my/our said attorney full power to do and perform every act whatsoever requisite or convenient to be done in the premises as fully to all intents and purposes as I/we could do if personally present and acting.

And I/we hereby, for myself/ourselves, my/our heirs, executors, administrators and assigns, confirm and agree to ratify and confirm whatsoever my/our said attorney may lawfully do by virtue of these presents, it being understood that this instrument is intended to be, and is, an irrevocable power of attorney coupled with an interest, and that this instrument shall bind all current and future owners and mortgagees of the Unit and shall run with and bind the Unit.

Whenever used, the singular number shall include the plural, the plural the singular and the use of any gender shall include all genders.

If any of the covenants, conditions, easements, restrictions, or other provisions of any one or more of the Condominium Documents shall be unlawfully void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of Donald Trump, the forty-fifth (45$^{th}$) President of the United States of America.

Any defined terms not otherwise expressly defined in this Irrevocable Power of Attorney Coupled With An Interest shall have the meanings and definitions provided in the Declaration.

IN WITNESS WHEREOF, I/we have hereunto set our hands and seals, this _____ day of _____, 20___.

_____ _____(SEAL)
Witness

_____ _____(SEAL)
Witness

STATE OF _____ :
:ss.
COUNTY OF_____ :

BE IT REMEMBERED, that on this _____ day of, _____, 20__, personally, came before me, the Subscriber, a Notary Public for the State and County aforesaid _____, _____, parties to this foregoing Irrevocable Power of Attorney Coupled With An Interest, known to me personally to be such, and acknowledged said Irrevocable Power of Attorney Coupled With An Interest and Release and Waiver to be his/her their voluntary act and deed.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

_____
NOTARY PUBLIC

_____
Print Name

_____
Date Commission Expires

DECLARATION OF
GLEN COVE CONDOMINIUM

SCHEDULE F

Single Family Home Buildings and Single Family Home Units; Applicable Provisions

1. Single Family Home Buildings. Declarant has reserved the right to expand the Condominium Regime to include up to five (5) Single Family Home Buildings (the "**Expansion Single Family Home Building(s)**") consisting of an aggregate of fifty (50) Single Family Home Units (the "**Expansion Single Family Home Unit(s)**") each of which Declarant has the right (but not the obligation) to construct in the future (the Expansion Single Family Home Building(s) and Expansion Single Family Home Unit(s) are collectively referred to as the "**Expansion Single Family Home Building(s) and Unit(s)**"). If constructed in the future, each of the Expansion Single Family Home Building(s) and Unit(s), as they are built, will be, located in substantial conformity with and as depicted on the Declaration Plan and will be substantially consistent, in terms of quality of construction, with the other Single Family Home Buildings and Units; provided, however, that (a) the Declarant may effect minor changes in the location of any and all Expansion Single Family Home Building(s) and Unit(s) constructed in the future, if any, in order to improve views to and from such Expansion Single Family Home Building(s) and Unit(s), improve parking areas and harmonize the Property to the sewer, water and other utilities service distribution plans; (b) no assurances are made with respect to (i) the architectural style and size of any such Expansion Single Family Home Building(s) and Unit(s); (ii) the descriptions of Common Elements that may be created within any part of the Condominium; or (iii) any limitations as to the locations of any such Expansion Single Family Home Building(s) and Unit(s) or Common Elements that may be made within any part of the Condominium; and (c) Declarant reserves the right, from time to time, to change the size, type, design, location, layout, number, and configuration of such Expansion Single Family Home Building(s) and Unit(s) and Common Elements, as Declarant, in Declarant's sole subjective and absolute discretion, deems necessary due to site conditions, construction problems, revisions to applicable building codes, circumstances dictated by the needs of the market place, or such other factors or circumstances that Declarant encounters from time to time that requires such changes in Declarant's sole subjective and absolute judgment.

2. Single Family Home Units. Each Single Family Home Unit consists of the space measured horizontally between the unfinished (unexposed) surfaces of the drywall enclosing such Single Family Home Unit and measured vertically from the finished (exposed) exterior side of the slab or basement surface of such Single Family Home Unit to the unfinished (unexposed) surface of the drywall ceiling of such Single Family Home Unit. Included as part of each such Single Family Home Unit are (a) the non-structural walls and framing constituting the entrance of such Single Family Home Unit; (b) the electric panel located within such Single Family Home Unit for such Single Family Home Unit; (c) the hot water heater for such Single Family Home Unit; (d) interior nonload-bearing walls or partitions located within such Single Family Home Unit; (e) all electrical outlets and lights serving such Single Family Home Unit (whether within or without such

Single Family Home Unit); (f) all stoves, refrigerators, microwave and garbage disposal, heat and air conditioning units, ceiling fans, washer-dryers, sinks, baths, or other plumbing or heating or cooling facilities, and insulation located within or without such Single Family Home Unit but solely serving such Single Family Home Unit, including any air conditioner-heat pump; (g) the plumbing and water lines serving such Single Family Home Unit commencing at the collector from the main lines serving such Single Family Home Unit; (h) all interior stairs, stair wells, and stair carriages solely serving such Single Family Home Unit; (i) any storage areas solely serving such Single Family Home Unit; (j) all windows and doors servicing such Single Family Home Unit; (k) all screens and storm window inserts pertinent to the windows and doors servicing such Single Family Home Unit; (l) any lamp post and other betterments appurtenant to such Single Family Home Unit, located within the yard immediately adjacent to such Single Family Home Unit and installed initially by Declarant; and (m) any garage deemed to be party of such Single Family Home Unit, together with all mechanical systems located within such garage, including by way of illustration and not limitation, any garage door openers and mechanical apparatus associated with the door of such garage.

3. Common Elements.

(a) "Single Family Home Limited Common Elements" consist of any and all Common Elements identified on the Declaration Plan as Single Family Home Limited Common Elements or as described herein or as otherwise reasonably intended for the use by the Owner or occupant of a specific Single Family Home Unit or Single Family Home Units (i.e., one or more but less than all of the Single Family Home Units). Single Family Home Limited Common Elements shall include, by way of example and not limitation, (i) the front, rear and, if any, side yard areas adjacent to a Single Family Home Unit and depicted as a as a Limited Common Element Yard Area on the Declaration Plan, (ii) those porches, decks, balconies, patios, parking areas, hallways, stairs, driveways, and walkways accessible directly from a Single Family Home Unit, or appurtenant to a Single Family Home Unit, and designated as a Single Family Home Limited Common Element on the Declaration Plan, (iii) the spaces enclosed by a Single Family Home Building's roof assembly, and (iv) any other Common Element intended for use by the Owner or occupant of a specific Single Family Home Unit or Single Family Home Units but accessible solely through a particular Single Family Home Unit or Single Family Home Units and not directly from a General Common Element or otherwise dedicated to the use of one or more but less than all of the Single Family Home Unit Owners. Single Family Home Limited Common Elements of the type described in this paragraph shall automatically be allocated as Single Family Home Limited Common Elements for the exclusive use and benefit of the Single Family Home Unit(s) they are designed and constructed to serve, or to which they are allocated as provided herein, without any further action or document required, whether or not such Single Family Home Limited Common Elements are expressly so designated on the Declaration Plan. No Single Family Home Limited Common Elements may be reallocated without the prior written consent of a majority of the Single Family Home Unit Owners and then only in accordance with the Act.

(b) "General Common Elements" consist of any and all Common Elements located solely within, or a part of, a Single Family Home Building, expressly excepting and

excluding any Single Family Home Units and Single Family Home Limited Common Elements. As such, the General Common Elements includes, without limitation, the following:

(i) All lighting facilities, and equipment and wiring installed to illuminate any of the Common Elements located within, or a part of, a Single Family Home Building which are not otherwise Single Family Home Limited Common Elements;

(ii) All of the foundations, structural walls, outside exterior walls of a Single Family Home Building, all of the supports and other components, floors and ceilings (including the respective parts thereof expressly included within the Single Family Home Units located within a Single Family Home Building) of a Single Family Home Building, and all roofs and roof assemblies of a Single Family Home Building as and to the extent any of the foregoing are not specifically, by this Declaration, included within a Single Family Home Unit;

(iii) All equipment, apparatus and installations existing for common use by one or more Single Family Home Unit Owners, including trash and related facilities, entrance signs, perimeter fencing, and landscaping, if any, located within or adjacent to a Single Family Home Building;

(iv) All installations of and systems for central services and utilities serving more than one Single Family Home Unit which are located in or about a Single Family Home Building, including, but not limited to, systems for electricity, plumbing, light, water, gas, sewer, drainage, communications, security, and telephone service as well as all other apparatus and installations existing for common use of the Single Family Home Unit Owners, including all pipes, ducts, wires, cables and conduits used in connection therewith, except as and to the extent the same are located within and serve only a single Single Family Home Unit and as and to the extent that all or parts of any utility systems are owned by the municipality or utility supplying the particular services involved;

(v) Motors, pumps, tanks, boilers, security systems and any other equipment used to provide any service available for use by more than one Single Family Home Unit Owner;

(vi) Perpetual easements or licenses located within a Single Family Home Building for access, maintenance, repair, reconstruction or replacement of structural members, equipment, utilities, rights-of-ways, installations and appurtenances, and for all other services necessary or convenient to the existence, maintenance, repair, safety and use of the Property; and

(vii) All other elements of the Property located within a Single Family Home Building, other than the Single Family Home Units and the Single Family Home Limited Common Elements, necessary or convenient to their existence, operation, maintenance, repair and replacement, safety or normally in common use.

Tax Map Parcel Number: 1-34-12.00-374.01, 3445.00 through 3460.00
Tax Map Parcel Number: 134-12.00-375.00

Prepared By and Return To:
Baird Mandalas Brockstedt LLC
1413 Savannah Road, Suite 1
Lewes, DE 19958

CODE OF REGULATIONS/BYLAWS FOR
GLEN COVE CONDOMINIUM
BALTIMORE HUNDRED, SUSSEX COUNTY, DELAWARE

ARTICLE I

PLAN OF OWNERSHIP

Section 1. Unit Ownership. The Property (as defined in that certain Declaration of GLEN COVE Condominium recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware (the "**Recorder's Office**"), contemporaneously herewith, at Deed Book _____, Page _____ (the "**Declaration**")) located in Baltimore Hundred, Sussex County (the "**County**"), Delaware, has been submitted to the provisions of the Delaware Unit Property Act ("UPA") 25 Del.C. Chapter 22 (hereinafter referred to as the "Act") and only to those cited, applicable provisions of the Delaware Uniform Common Interest Ownership Act ("DUCIOA"), 25 Del. C. § 81-106 (Applicability of local ordinances, regulations, and building codes) and 81-107 of this title (Eminent domain), as this community is specifically exempt from DUCIOA as per section 81 Del.C. §81-117 (the "**Act**"), by the Declaration created and imposed by FOXLANE HOMES DELAWARE, LLC ("**Declarant**"), a Delaware Limited Liability Company, and shall hereinafter be known as "GLEN COVE Condominium" (the "**Condominium**") and is more particularly depicted and described on that certain Condominium Declaration Plan recorded in the Recorder's Office at Plot Book ___, Page ___.

Section 2. Capitalized Terms. Any capitalized terms or words not otherwise defined in these Bylaws shall have the definition and meaning ascribed thereto in the Declaration.

Section 3. Applicability of Code of Regulations/Bylaws. The provisions of these Code of Regulations, also and hereinafter referred to as "Bylaws", are applicable to the Property and to the use and occupancy thereof. All present and future owners, mortgagees, lessees and occupants of Units and their employees, and any other person who may use the facilities of the Property in any manner, are subject to the Condominium Documents. The acceptance of an instrument of assignment, conveyance or other transfer document or the entering into of a lease or the act of occupancy of a Unit shall conclusively establish the acceptance and ratification of the Condominium Documents as they may be amended from time to time, by the person so assuming, acquiring, encumbering, leasing, or occupying a Unit and shall constitute and evidence an agreement by such person to comply with the same.

Section 4. Office. The office of the Association (as hereinafter defined) and of the Executive Board shall be located at the Condominium or at such other place as may be designated from time to time by the Executive Board.

## ARTICLE II

## ASSOCIATION

Section 1. Composition. All of the Units Owners, acting as a group in accordance with these Bylaws, the Act and Declaration, shall constitute the "**Association**," a Delaware unincorporated association pursuant to §81-301 of the Act called "**Glen Cove Condominium Association**". The Association, acting in accordance with the Act, the Declaration and these Bylaws, shall have the responsibility of administering the Condominium, establishing the means and methods of collecting the contributions of the Common Expenses, arranging for the management of the Condominium, and performing all of the other acts that may be required to be performed by the Association by the Ac and the Condominium Documents. Except as to those matters which the Act specifically requires to be performed by the vote of the Unit Owners, the administration of the foregoing responsibilities shall be performed by the Executive Board as more particularly set forth in Article III hereof.

Section 2. Initial and Subsequent Annual Meetings. A meeting of the Association will be held at a date to be set by Council following the tenth (10th) Unit settlement. Thereafter, the meetings of the Association shall be held on an annual basis as determined by a majority of the Executive Board.

Section 3. Place of Meeting. Meetings of the Association shall be held at a suitable place or via electronic means convenient to the Unit Owners as may be designated by the Executive Board.

Section 4. Special Meetings. Special meetings of the Association may be called by the President, a majority of the Executive Board, or by Unit Owners having at least twenty percent (20%) of the General Common Element Percentage Interest of all Unit Owners. It shall be the duty of the President to call a special meeting of the Association, if so directed, by resolution of a majority of the Executive Board or upon a petition signed and presented to the Secretary of a majority of Unit Owners.

Section 5. Notice of Meetings. Except in cases of emergency meetings, which may be held without prior notice, not fewer than ten (10) nor more than sixty (60) days in advance of any regular or special meeting of the Unit Owners, the Secretary shall cause notice of that meeting to be delivered to each Unit Owner by any means described in §81-127 of the Act, including electronic means, or sent prepaid by United States mail to any mailing address designated in writing by such Unit Owner. The notice of any meeting must state the time and place of the meeting and the items on the agenda, or must state the website address where the agenda is located, including: (a) a statement of the general nature of any proposed amendment to the Declaration or Bylaws; (b) a statement that in the absence of objection from any Unit Owner

present at the meeting, the President may add items to the agenda; (c) any budget changes; and (d) any proposal to remove an officer or member of the Executive Board. The agenda may be posted on the website of the Association, in lieu of being included in the notice, provided that the Association shall, by any means described in § 81-127 of the Act, furnish to any Unit Owner who so requests a copy of the agenda prior to the meeting. Regardless of the agenda, Unit Owners shall be given a reasonable opportunity at any meeting to offer comments to the Executive Board regarding any matter affecting the Condominium. If the Association does not notify Unit Owners of a special meeting within thirty (30) days after the requisite number or percentage of the Executive Board or Unit Owners, as applicable, requested the Secretary to do so, the requesting members or Unit Owners, as applicable, may directly notify all the Unit Owners of that meeting. Only matters described in the meeting notice required by this Section may be considered at a special meeting.

Section 6. Adjournment of Meetings. If any meetings of the Association cannot be held because a quorum is not present, Unit Owners owning a majority of the General Common Element Percentage Interests who are present at such meeting, either in person or by proxy, may adjourn the meeting to a time not less than forty-eight (48) hours from the time the original meeting was called.

Section 7. Order of Business. The order of business at all annual meetings of the Association shall be as follows:

(a) Roll Call.
(b) Proof of Notice of meeting.
(c) Reading of minutes of preceding meeting.
(d) Report of officers.
(e) Reports of the Executive Board.
(f) Reports of committees.
(g) Election of inspectors of election (when so required).
(h) Election of member of the Executive Board (when so required).
(i) Unfinished business.
(j) New business.
() Adjournment.

Section 8. Title to Units. Title to Units may be taken in the name of an individual or in the names of two or more persons, as tenants in common or as joint tenants or as tenants by the entirety, or in the name of a corporation, partnership, limited liability company, other legal entity or in the name of a fiduciary.

Section 9. Voting. Voting at all meetings of the Association shall be on a percentage basis and the percentages of the vote to which each Unit Owner is entitled shall be the General Common Element Percentage Interest assigned to such Owner's Unit in the Declaration. If only one (1) of several Owners of a Unit is present at a meeting of the Association, that Owner is entitled to cast all the votes allocated to that Unit. The vote of each Unit shall be exercised as the Owners of the Unit, among themselves determine, but in no event shall more than one (1) vote be cast with respect to any such Unit. In the event of multiple or disputed votes by and between

the applicable Owners of a Unit, then such votes shall be ruled invalid and the Executive Board shall disregard any such multiple or disputed votes cast by the Owners of the Unit. Any such invalidated votes shall not, however, invalidate or otherwise alter the effectiveness of such Unit Owners attendance at the meeting by proxy or otherwise for quorum purposes. Whenever the approval or disapproval of a Unit Owner is required by the Act, the Declaration or these Bylaws, such approval or disapproval shall only be made by the person who would be entitled to cast the vote for the Unit Owner at any meeting of the Association. Except where a greater number is required by the Act, the Declaration or these Bylaws, a majority of the votes cast in person, by proxy, electronic means, or by ballot at a meeting of Unit Owners where a quorum is present shall determine the outcome of any action of the Association where a vote is taken so long as the number of votes cast in favor comprise at least a majority of the number of votes required for a quorum for that meeting. Votes allocated to a Unit owned by the Association may not be cast and shall not be calculated either in a quorum or in any percentage of unit votes needed for any action by the Unit Owners.

Section 10. Proxies & Electronic Voting. A vote may be cast in person, by proxy or by electronic voting. Proxies shall be valid only for the particular meeting designated therein, must be in writing and must be filed with the Secretary before the appointed time of the meeting. Electronic voting, as permitted by statute, may be from a source known to the Association or property manager governing the Association's property, including an e-mail address registered with the Association or property manager using electronic voting software selected by the Association. If a Unit is owned by more than one (1) person, each Owner of the Unit may vote or register protest to the casting of votes by the other Owners of the Unit through a duly executed proxy. A Unit Owner may revoke a proxy given only by actual notice of revocation to the person presiding over the meeting of the Association. A proxy is void if it is not dated or purports to be revocable without notice. A proxy terminates one (1) year after its date, unless it specifies a shorter term.

Section 11. Majority of Unit Owners. As used in these Bylaws, the term "**majority of the Unit Owners**" shall mean those Unit Owners having more than fifty percent (50%) of the aggregate interest of the undivided ownership of the General Common Elements as specified in the Condominium Documents.

Section 12. Quorum. Except as otherwise provided in these Bylaws, the presence in person or by proxy of twenty percent (20%) of the Owners shall constitute a quorum at all meetings of the Association. The votes of a majority of the Owners present at a meeting at which a quorum is present shall constitute the decision of the Association.

Section 13. Conduct of Meeting. The President shall preside over all meetings of the Association and the Secretary shall keep the minutes for the meeting and record in a minute book all resolutions adopted by the meeting as well as a record of all transactions occurring thereat. Roberts Rules of Order shall govern the conduct of all meetings of the Association when not in conflict with the Declaration, these Bylaws or the Act.

ARTICLE III

EXECUTIVE BOARD

Section 1. Number, Election and Appointment, Term, Qualification, etc.

(a) Number. The property and business of the Association shall be managed and controlled by the Executive Board, which shall initially consist of three (3) members, to be expanded to five (5) members as provided below. Each member of the Executive Board is herein sometimes referred to as a "**Director**."

(b) Election and Appointment.

(i) Appointment During Declarant Control Period. During the Declarant Control Period, Declarant shall have the sole right, power, and authority to appoint the members of the Executive Board (who need not be Unit Owners or residents of the State of Delaware), subject to the provisions of Sections 1(b)(ii) through 1(b)(iv) below. The initial Directors shall be as provided in the Declaration.

(ii) Not later than sixty (60) days after conveyance of seventy percent (75%) of the total number of Units that may be created to Owners other than Declarant or a Participating Builder, at least one (1) member and not less than twenty-five percent (25%) of the members of the Executive Board shall be elected by the members other than Declarant or a Participating Builder.

(iii) Election After Declarant Control Period. Upon the termination of the Declarant Control Period, (A) the members of the Executive Board shall be elected by plurality vote of the members, (B) the Executive Board shall consist of at least three (3) members, and (C) at least a majority of the members of the Executive Board shall be Owners or, if an Owner is a corporation, limited liability company, partnership, trust or other entity, an officer, director, managing member or other authorized representative designated in writing by such Owner.

Section 2. Term. Except for the Directors appointed by Declarant, who shall serve until the earlier of their death, resignation, or removal by Declarant (in each such case, their successor to be appointed by Declarant) or the date of the next annual meeting next following the termination of the Declarant Control Period, the initial term of office of one (1) member of the Executive Board shall be fixed at three (3) years, the initial term of office for one (1) member of the Executive Board shall be fixed at two (2) years, and the initial term of office of one (1) member of the Executive Board shall be fixed at one (1) year. The Executive Board shall determine which members have the initial terms of one (1), two (2), and three (3) years. At the expiration of the initial term of each respective member of the Executive Board, his or her successor shall be appointed or elected, as applicable, to serve for a term of three (3) years. The members of the Executive Board shall hold office until their respective successors shall have been appointed or elected, as applicable, by Declarant or Association, as applicable, in accordance with Section 1 of this Article III.

Section 3. Directors shall be elected for a one (1) year term and shall hold office until the next annual election and until their successors are elected and the successors' willingness to

serve confirmed. Unless such timing coincides with an annual meeting, the President shall call a special meeting for any election by the members as provided in Article III of these Bylaws.

Section 4. Removal and Vacancy. Except for Directors appointed by Declarant, who shall serve until the earlier of their death, resignation, or removal by Declarant (in each such case, their successor to be appointed by Declarant) or the date of the next annual meeting next following the termination of the Declarant Control Period, any Director may be removed from the Executive Board at any time, with or without cause, by a two-thirds (2/3) vote of the members of the Association present in person or by proxy and entitled to vote at any meeting of the members at which a quorum is present. In the event of death, resignation or removal of a Director, except for Directors appointed by Declarant, who shall serve until the earlier of their death, resignation, or removal by Declarant (in each such case, their successor to be appointed by Declarant) or the date of the next annual meeting next following the termination of the Declarant Control Period, a successor shall be selected by a two-thirds (2/3) vote of the members of the Association present in person or by proxy and entitled to vote at any meeting of the members at which a quorum is present.

Section 5. Compensation. No Director shall receive compensation for any service rendered to the Association in such Director's capacity as a Director. However, any Director may be reimbursed for actual expenses incurred in the performance of such Director's duties.

Section 6. Action taken without a meeting. The Directors shall have the right to take any action without a meeting which they could take at a meeting by obtaining the written approval, including electronic means, of the Directors. Any action so approved shall have the same effect as though taken at an in-person meeting of the Directors.

Section 7. Powers and Duties. The affairs of the Condominium shall be governed by the Executive Board provided, however, that the Executive Board may not act on behalf of the Association to amend the Condominium Documents, to terminate the Condominium, or to elect members of the Executive Board or determine the qualifications, powers and duties, or terms of office of Executive Board members, but the Executive Board may fill vacancies in its membership for the unexpired portion of any term. The Executive Board shall have all of the powers and duties necessary for the administration of the affairs of the Condominium and may do all such acts and things as are not by the Act or by the Condominium Documents directed to be exercised and done by the Association. The Executive Board shall have the power from time to time to adopt any rules and regulations deemed necessary for the enjoyment of the Condominium provided such rules and regulations shall not be in conflict with the Act or the Condominium Documents. The Executive Board shall delegate to one of its members the authority to act on behalf of the Executive Board on all matters relating to the duties of the Managing Agent, if any, which might arise between meetings of the Executive Board. In addition to the duties imposed by these Bylaws or by any resolution of the Association that may hereafter be adopted, the Executive Board shall have the power to, and be responsible for, the following:

(a) The Executive Board shall adopt and may amend recorded bylaws consistent with §81-306 of the Act and the terms of these Bylaws.

(b) The Executive Board shall adopt and amend budgets pursuant to §81-324 of the Act and collect Assessments, including funds for the Repair and Replacement Reserves (as defined below), from Unit Owners.

(c) The Executive Board shall maintain the following records in written form or in another form capable of conversion into written form within a reasonable time: (1) detailed records of receipts and expenditures affecting the operation and administration of the Association and other appropriate accounting records, including those for the Repair and Replacement Reserves (all financial records shall be kept in accordance with generally accepted accounting practices); (2) minutes of all meetings of its members and the Executive Board; (3) a record of its members in a form that permits preparation of a list of the names and addresses of all members, in alphabetical order by class, showing the number of votes each member is entitled to cast and the members' class of membership, if any; and (4) a copy of the following records at its principal office: (i) its original or restated certificate of incorporation, if any, and the Declaration and Rules and Regulations and these Bylaws and all amendments to them currently in effect; (ii) the minutes of all members' meetings and records of all action taken by members without a meeting for the past three (3) years; (iii) any financial statements and tax returns of the Association prepared for the past three (3) years, together with the report of the auditors of the financial records; (iv) a list of the names and business addresses of its current directors and officers; (v) its most recent annual report delivered to the Secretary of the State; (vi) the Association's most recent Reserve Study; and (vii) financial and other records sufficiently detailed to enable the Association to comply with §81-409 of the Act. Subject to the provisions of this Subsection below, all records kept by the Association, including the Association's membership list and address, and aggregate salary information of employees of the Association, shall be available for examination and copying by a Unit Owner or the Unit Owner's authorized agent so long as the request is made in good faith and for a proper purpose related to the Owner's membership in the Association. This right of examination may be exercised: (1) only during reasonable business hours or at a mutually convenient time and location, and (2) upon five (5) days written notice reasonably identifying the purpose for the request and the specific records of the Association requested. Records kept by the Association may be withheld from inspection and copying to the extent that they concern: (1) personnel matters relating to specific persons or a person's medical records; (2) contracts, leases, and other commercial transactions to purchase or provide goods or services, currently in or under negotiation; (3) pending or threatened litigation, arbitration, mediation or other administrative proceedings; (4) matters involving federal, state or local administrative or other formal proceedings before a government tribunal for enforcement of the Condominium Documents; (5) communications with legal counsel which are otherwise protected by the attorney-client privilege or the attorney work product doctrine; (6) disclosure of information in violation of law; (7) meeting minutes or other confidential records of an executive session of the Executive Board; and (8) individual Unit Owner files other than those of the requesting Owner. The Association may charge a fee for providing copies of any records under this Section including the cost for staffing to be present while the records are review, but that fee may not exceed the actual cost of the materials and labor incurred by the Association. Records may be shown in electronic format in lieu of printed documentation. All books and records shall be audited at least once a year by an outside auditor employed by the Executive Board who shall not be a resident of the Condominium or an Owner of a Unit therein and the cost of such audit shall be a Common Expense.

(d) Making Assessments against the applicable Unit Owners to defray the costs and expenses associated with the Common Expenses that apply to such Owner's Unit as defined in the Declaration as determined by the Executive Board from time to time, including but not limited to: (1) bulk utility/telecommunication and trash services; (2) the costs and expenses set forth under §81-315(a)(2) of the Act regarding repair and replacement reserves as well as for the maintenance, repair, or replacement of the General Common Elements, the Single Family Home General Common Elements under §81- 315(c)(1) of the Act and the Condominium Documents; (3) the maintenance, repair and replacement of the irrigation systems that are located within the General Common Element as well as any which are installed within any Limited Common Element Yard Area; and (4) any Assessments against individual Unit Owners who fail to perform such Unit Owner(s) obligations as provided under the Condominium Documents, including but not limited to Section 11 of the Declaration captioned "Maintenance, Repair and Replacement of Limited Common Elements" as well as any individualized fees for services provided to some but not all of the Unit Owners based on their use and consumption of services as provided under §81- 315(c)(2) of the Act.

(e) Establishing the means and methods of collecting such Assessments from the Unit Owners and establishing the period of the installment payment of the annual Assessment for the Common Expenses. Unless otherwise determined or modified by the Executive Board, the annual Assessment against each Unit Owner for his proportionate share of the Common Expenses which are applicable to such Owner's Unit shall be payable in equal quarterly installments, each such installment to be due and payable in advance on the first day of each quarter for said year or as otherwise determined by the Executive Board.

(f) Providing for the operation, care, upkeep, maintenance and surveillance, if any, of all of the Common Elements and services of the Condominium for which the Association is responsible for providing.

(g) Designating, hiring and dismissing the personnel necessary for the maintenance, operation, repair and replacement of the Common Elements for which it is responsible for, and providing services for the Property, and, where appropriate, providing for the compensation of such personnel and for the purchase of equipment, supplies and materials to be used by such personnel in the performance of their duties, which supplies and equipment shall be deemed the common property of the Unit Owners.

(h) Collecting the Assessments against the Unit Owners, depositing the proceeds thereof in a bank depository which it shall approve, and using the proceeds to carry out the administration of the Property and the Condominium.

(i) Making and amending the Rules and Regulations respecting the use of the Property, including the power to levy fines for infractions or violations of the Condominium Documents on a uniform and non-discriminatory basis. Before adopting or substantially amending any Rules and Regulations, the Executive Board must notify all Unit Owners of: (1) its intention to adopt the proposed Rules and Regulations and (2) a date on which the Executive Board will convene a meeting to receive comments on them from the Unit Owners. The Association may only adopt Rules and Regulations that affect the use of or behavior in Units that

may be used for residential purposes to: (1) prevent any use of a Unit which violates the Condominium Documents; (2) regulate any behavior in or occupancy of a Unit which violates the Condominium Documents or adversely affects the use and enjoyment of other Units or the Common Elements by other Unit Owners; or (3) regulate the method, manner, means and/or medium used for subleasing the Units and/or restrict the subleasing of residential Units to the extent those restrictions in any Rules and Regulations are reasonably designed to meet underwriting requirements of institutional lenders who regularly lend money secured by first mortgages on Units or regularly purchase those mortgages.

(j) Opening of bank accounts on behalf of the Condominium and designating the signatories required therefor.

(k) Making, or contracting for the making of, repairs, additions, and improvements to, or alterations of, the Property and repairs to, and restoration of, the Property in accordance with the other provisions of these Bylaws, after damage or destruction by fire or other casualty.

(l) Enforcing by legal means including, but not limited to, the levying of fines, the provisions of the Condominium Documents for the use of the Property adopted by it, and bringing any proceedings which may be instituted on behalf of the Unit Owners.

(m) Obtaining and carrying insurance against casualties and liabilities, as provided in Article VI of these Bylaws, and paying the premium cost thereof.

(n) Paying the cost of all services rendered to the Condominium, which are not otherwise the sole responsibility and obligation of, and not billed to, one or more Unit Owners of individual Units.

(o) Granting permits, licenses and easements over the Common Elements for utilities, roads and other purposes necessary for the proper operation of the Property, in common with others entitled thereto.

(p) Entering into or satisfying management contracts as well as leases, licenses or other contractual agreements for the operation, use, maintenance or management of the various Common Elements, the cost of which shall be either a General Common Expense or a Townhouse General Common Expense; provided that, no such lease, license or other contractual agreement may bind the Association unless such lease, license or other contractual agreement provides for the right of the Association to terminate the same without cause or penalty at any time after transfer of control of the Association from Declarant to the Unit Owners, upon not less than ninety (90) days' notice. In addition, if entered into before the Executive Board elected by the Unit Owners (as opposed to appointed by Declarant) in accordance with this Declaration takes office: (1) any management contract, employment contract, or lease of recreational or parking areas or facilities, (2) any other contract or lease between the Association and Declarant or an affiliate of Declarant, or (3) any contract or lease that is not bona fide or was unconscionable to the Unit Owners at the time entered into under the circumstances then prevailing, may be terminated without penalty by the Association at any time

after the Executive Board elected by the Unit Owners (as opposed to appointed by Declarant) in accordance with this Declaration takes office upon not less than ninety (90) days' notice to the other party; provided, that, this shall not apply to: (i) any lease the termination of which would terminate the Condominium or reduce its size, unless the real estate subject to that lease was included in the Condominium for the purpose of avoiding the right of the Association to terminate a lease under this section, or (ii) a proprietary lease.

(q) Managing the business operations and affairs of the Property and for such purposes, engage employees and appoint agents and to define their duties and fix their compensation, enter into contracts, leases and other written instruments or documents and to authorize the execution thereof by officers elected by the Executive Board.

(r) Providing each Mortgagee written notice, or copies, of: (1) any condemnation or casualty loss that affects either a material part of the Property or the Unit securing its mortgage; (2) any sixty (60) day delinquency in payment of Assessments or charges owed by the Unit Owner on which it holds the mortgage; (3) a lapse, cancellation, or material modification of any insurance policy maintained by the Association; (4) any proposed action that requires the consent of a specified percentage of Mortgagees; (5) any proposed termination of the Condominium; (6) any proposed amendment of the Condominium Documents effecting a change in (i) the boundaries of any Unit or the exclusive easement rights appertaining thereto, (ii) the interest in the General Common Elements or Limited Common Elements appertaining to any Unit or the liability for the applicable Common Expenses appertaining thereto, (iii) the number of votes in the Association appertaining to any Unit, or (iv) the purpose to which any Unit or Common Elements are restricted; (7) any default by the Unit Owner which is obligated to such Mortgagee; and (8) audited financial statements of the operation of the Property (such audited financial statements shall be made available no later than one hundred twenty (120) days after the end of the Association's fiscal year).

(s) Pursuant to §81- 302(a)(11) of the Act, the Executive Board may suspend any privileges of Unit Owners (other than the right of a Unit Owner to vote on any matter submitted to a vote of Unit Owners) or services provided to Unit Owners by the Association (other than those necessary for the habitability of the Owner's Unit) for non-payment of Assessments; may impose charges for late payment of Assessments; and, after notice and an opportunity to be heard, may levy reasonable fines for violations of the Declaration, Bylaws and Rules and Regulations of the Association.

(t) Arrange for the performance by the Association of the notification requirements regarding any transfers or conveyances of Units as set forth under the Environmental Covenant and as provided under the Declaration.

(u) To do such other things and acts provided under § 81-302(a) of the Act and such other things and acts not inconsistent with the Act and the Condominium Documents which it may be authorized to do by a resolution of the Association.

Section 8. Managing Agent. The Executive Board shall employ for the Condominium a professional Managing Agent at a compensation established by the Executive

Board, to perform such duties and services as the Executive Board shall authorize. The initial Managing Agent to be retained by the Executive Board shall be **SeaScape Property Management**, having a current address of 17563 Nassau Commons Boulevard, Lewes, Delaware 19958 or such other address as may be provided to the Unit Owners from time to time by the Executive Board. The Executive Board may delegate to the Managing Agent some or all of the powers granted to the Executive Board by these Bylaws other than the powers set forth in Sections 2(a), (b), (h) and (i) of this Article III. Any such delegation shall be in writing reflecting the consent of the Executive Board and shall expressly provide that such delegation may be terminated and revoked at any time upon written notice. No agreement with a professional Managing Agent may bind the Association unless said agreement provides for the right of the Association to terminate the same without cause or penalty at any time after transfer of control of the Association from Declarant to the Unit Owners, upon not more than ninety (90) days' notice. Any such agreement shall be for a reasonable term.

Section 9. Initial and Subsequent Meetings. A meeting of the Executive Board must be held at least once each calendar year after the Initial meeting as set forth in Article II, Section 2.

Section 10. Special Meetings. Special meetings of the Executive Board may be called by the President or a majority of the Executive Board. It shall be the duty of the President to call a special meeting of the Executive Board if so directed by resolution of a majority of the Executive Board.

Section 11. Notice of Meetings. Except when a schedule of meetings has been distributed to Unit Owners that identifies the meeting in question or in cases of emergency meetings that may be held without prior notice, the Secretary shall cause notice of any regular or special Executive Board meeting to be delivered to each Unit Owner by any means described in §81-127 of the Act not fewer than ten (10) nor more than sixty (60) days in advance of the meeting (but not later than the time notice of the meeting is sent to members of the Executive Board). The notice must state the time and place of the meeting and the items on the agenda, including an opportunity for Unit Owners to offer comments to the Executive Board regarding any matter affecting the Condominium.

(a) Upon the expiration or earlier termination of the Declarant Control Period, all meetings of the Executive Board shall be open to the Unit Owners except for executive sessions held for purposes of: (1) consulting with the Association's lawyer regarding, or Executive Board discussion of, litigation, mediation, arbitration or administrative proceedings or any contract matters; (2) discussing labor or personnel matters; (3) discussing matters related to contract negotiations, including the review of bids or proposals, if premature general knowledge of those matters would place the Association at a disadvantage; (4) discussion of any complaint from or alleged violation by a Unit Owner, when the Executive Board determines that public knowledge would violate the privacy of the Unit Owner; or (5) discussing any other matter that Declarant determines, in its sole subjective and absolute discretion, should be discussed in executive session and not open to the Unit Owners.

(b) After the expiration or earlier termination of the Declarant Control Period, all meetings of the Executive Board shall be open to the Unit Owners except for executive sessions held for purposes of: (1) consulting with the Association's lawyer regarding, or Executive Board discussion of, litigation, mediation, arbitration or administrative proceedings or any contract matters; (2) discussing labor or personnel matters; (3) discussing matters related to contract negotiations, including the review of bids or proposals, if premature general knowledge of those matters would place the Association at a disadvantage; or (4) discussion of any complaint from or alleged violation by a Unit Owner, when the Executive Board determines that public knowledge would violate the privacy of the Unit Owner.

(c) If any materials are distributed to the Executive Board before the meeting, the Association shall at the same time make copies of those materials reasonably available to the Unit Owners, except that the Association need not distribute copies of unapproved minutes or materials that are to be considered in executive session.

(d) The Executive Board may meet in a telephonic or video conference call or interactive electronic communication process provided that: (1) the meeting notice must indicate that the meeting is to be a telephonic, video or other conference and, if not a meeting in executive session, provide information as to how Unit Owners may participate in the conference directly or by meeting at a central location or conference connection; and (2) the process must provide all Unit Owners the opportunity to hear the discussion and offer comments.

(e) After the expiration or earlier termination of the Declarant Control Period, in lieu of a meeting, the Executive Board may act by unanimous consent as documented in a record signed by all its members, but the Executive Board may not act by unanimous consent to: (1) adopt a rule, budget or special Assessment, (2) impose a fine or take action to enforce the Declaration or the Rules and Regulations or these Bylaws, (3) buy or sell real property, (4) borrow money, or (5) contract for any sum greater than one percent (1%) of the Association's annual budget. The Secretary shall promptly notify all Unit Owners of any action taken by unanimous consent.

(f) The Executive Board shall maintain written minutes of all meetings of the Executive Board; and, upon written request delivered to the Secretary, such minutes shall be made available to any Unit Owner and to any Mortgagee.

(g) Waiver of Notice. Any member may, at any time, in writing waive notice of any meeting of the Executive Board, and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a member at any meeting the Executive Board shall constitute a waiver of notice by him at the time and place of such meeting. If all members are present at any meeting of the Executive Board, no notice shall be required and any business may be transacted at such meeting, not otherwise inconsistent with the Act.

Section 12. Quorum of Executive Board. At all meetings of the Executive Board, a majority of the members of the Executive Board shall constitute a quorum for the transaction of business, and the votes of a majority of the members of the Executive Board present at any meeting at which a quorum is present shall constitute the decisions of the Executive Board.

Section 13. Conduct of Meeting. The President shall preside over all meetings of the Executive Board and the Secretary shall keep a minute book of the Executive Board recording therein all resolutions adopted by the Executive Board and a record of all transactions and proceedings occurring at such meetings. Roberts Rules of Order shall govern the conduct of the meetings of the Executive Board when not in conflict with the Declaration, these Bylaws or the Act.

Section 14. Fidelity Bonds. Unless the Unit Owners, by Majority Vote, otherwise determine (with the requisite consent of Mortgagees, as applicable), the Executive Board shall require fidelity bonds for all officers and employees of the Condominium handling or responsible for Condominium funds, with coverage being an amount equal to (1) one quarter of the annual Common Expenses plus (2) all reserve funds controlled by the Executive Board. The premiums on such bonds shall constitute a Common Expense.

Section 15. Director and Officer Liability Insurance. The Executive Board shall obtain Director and Officer Liability Insurance for all Executive Board members and officers of the Executive Board and the premiums on such Insurance shall constitute a Common Expense.

Section 16. Liability of the Members of the Executive Board. The members of the Executive Board shall not be liable to the Unit Owners for any mistake of judgment, negligence, or otherwise except for their own individual willful misconduct or bad faith. The Association shall indemnify and hold harmless each of the members of the Executive Board from and against all contractual liability to others arising out of contracts made by the Executive Board on behalf of the Unit Owners unless any such contract shall have been made in bad faith. It is intended that the members of the Executive Board shall have no personal liability with respect to any contract made by them on behalf of the Unit Owners. It is also intended that the liability of any Unit Owner arising out of any contract made by the Executive Board or out of the aforesaid indemnity in favor of the members of the Executive Board shall be limited to such proportion of the total liability thereunder as his Percentage Interest bears to the Percentage Interests of all of the Unit Owners. Every agreement made by the Executive Board or by the Managing Agent on behalf of the Owners shall, if obtainable, provide that the members of the Executive Board, or the Managing Agent, as the case may be, are acting only as agents for the Unit Owners and shall have no personal liability thereunder (except as Unit Owners), and that each Unit Owner's liability thereunder shall be limited to such proportion of the total liability thereunder as his Percentage Interest bears to the Percentage Interests of all Unit Owners. The Unit Owners shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding by reason of the fact that he is or was a member of the Executive Board, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believes to be in or not opposed to the best interests of the Unit Owners.

Section 17. Executive Board Committees. The Executive Board may, from time to time, establish such one or more ad hoc committees as it may deem necessary or appropriate for the administration of the affairs of the Executive Board or of the Property. Each such committee, shall have such discretionary, decision making or advisory powers as the Executive Board shall

determine; provided, however, that the Executive Board shall retain full responsibility for all acts undertaken by any committee within the authority granted to such committee. The members of any such committee shall be appointed from among the members of the Executive Board or from those persons entitled to vote at any meeting of Unit Owners, or any combination thereof. After the sale of the fifteenth (15) Unit and during the Declarant Control Period, there may be appointed a Transition committee which shall consist of three (3) Unit Owners who wish to volunteer and shall be selected by the Executive Board to serve as a point of contact between the Declarant and the Unit Owners to discuss issues of concern directly with the Declarant that may arise during the Declarant Control Period.

Section 18. Inspection of and Access to Books and Records. The books and accounts of the Association, vouchers accrediting the entries made thereupon and all other records maintained by the Association, as well as current copies of the Declaration, Bylaws, Declaration Plan and the Rules and Regulations shall be available for examination by the Unit Owners as well as their duly authorized agents or attorneys, and by the lenders, holders, insurers, and guarantors of any first mortgage on any Unit and their respective duly authorized agents or attorneys, during normal business hours and for purposes reasonably related to their respective interest and after reasonable notice. The books and accounts of the Association, vouchers accrediting the entries made thereupon and all other records maintained by the Association, as well as current copies of the Declaration, Bylaws, Declaration Plan and Rules and Regulations, and the most recent annual audited financial statement, if such is prepared, shall be available for examination by any prospective purchaser of a Unit in the Condominium during normal business hours and for purposes reasonably related to their respective interest and after reasonable notice.

## ARTICLE IV

## OFFICERS

Section 1. Designation. The principal officers of the Association shall be the President, Vice-President, Secretary and Treasurer, all of whom shall be appointed by the Executive Board, who need not be Unit Owners or residents of the State of Delaware. The Executive Board may appoint an assistant treasurer, an assistant secretary, and such other officers as in its judgment may be necessary. The President shall be a member of the Executive Board. Any other officers may be, but shall not be required to be, members of the Executive Board.

Section 2. Election of Officers. The officers of the Association shall be elected annually by the Executive Board at the organization meeting of each new Executive Board and shall hold office at the pleasure of the Executive Board. Any vacancy in an office shall be filled by the Executive Board at a regular meeting or special meeting called for such purpose.

Section 3. Removal of Officers. Upon the affirmative vote of a majority of the members of the Executive Board, any officer may be removed, either with or without cause, and such officer's successor may be elected at any regular meeting of the Executive Board or at any special meeting of the Executive Board called for such purpose.

Section 4. Term of Office. The term of office of the President, Vice-President, Secretary and Treasurer shall be fixed at three (3) years, except as to the initial staggered terms established under Article III, Section 2, in which case the terms of the respective offices shall coincide with the term of the Director associated with such office. At the expiration of the term of the President, Vice-President, Secretary and Treasurer, as applicable, his or her successor shall be appointed by the Executive Board. Each officer shall hold office until his or her successor shall have been appointed by the Association.

Section 5. Vacancies. Any Vacancy of any principal officer position shall be filled by appointment by the Executive Board and each person so appointed shall serve for the remainder of the term of the office to which they are appointed by the Executive Board.

Section 6. President. The President shall be the chief executive of the Condominium. The President shall preside at all meetings of the Association and of the Executive Board. The President shall have all of the general powers and duties which are incident to the office of president of a stock corporation organized under the General Corporation Law of the State of Delaware, including, but not limited to, the power to appoint committees from among the Owners from time to time as the President may in the President's discretion decide is appropriate to assist in the conduct of the affairs of the Condominium. The President or Vice-President may prepare, execute, certify and record amendments to the Condominium Documents on behalf of the Association.

Section 7. Vice-President. The Vice-President shall take the place of the President and perform the President's duties whenever the President shall be absent or unable to act. If neither the President nor the Vice-President is able to act, the Executive Board shall appoint some other member of the Executive Board to act in the place of the President, on an interim basis. The Vice-President shall also perform such duties as shall from time to time be imposed upon the Vice-President by the Executive Board or by the President. The President or Vice-President may prepare, execute, certify and record amendments to the Condominium Documents on behalf of the Association.

Section 8. Secretary. The Secretary shall keep the minutes of all meetings of the Association and of the Executive Board; shall have charge of such books and papers as the Executive Board may direct, and shall, in general, perform all the duties incident to the office of secretary of a stock corporation organized under the General Corporation Law of the State of Delaware.

Section 9. Treasurer. The Treasurer shall have the responsibility for Condominium funds and securities and shall be responsible for keeping full and accurate financial records and books of account showing all receipts and disbursements, and for the preparation of all required financial data; shall be responsible for the deposit of all monies and other valuable effects in the name of the Executive Board, or the Managing Agent, in such depositories as may from time to time be designated by the Executive Board, and shall, in general, perform all the duties incident to the office of treasurer of a stock corporation organized under the General Corporation law of the State of Delaware

Section 10. Agreements, Contracts, Deeds, Checks, etc. All agreements, contracts, deeds, leases, checks and other instruments of the Association for expenditures or obligations of over $1,000.00, shall be executed by any two officers of the Association or by such other person or persons as may be designated by the Executive Board. All such instruments for expenditures or obligations of less than $1,000.00, may be executed by any one officer of the Association or by such other person as may be designated by the Executive Board.

Section 11. Compensation of Officers. No officer shall receive any compensation from the Condominium for acting as such. Officers shall be reimbursed for their actual out-of-pocket expenses necessarily incurred in connection with the performance of their duties and services as officers of the Executive Board on behalf of the Condominium.

## ARTICLE V

## OPERATION OF THE PROPERTY

Section 1. Determination of Common Expenses and Assessments Against Owners.

(a) Fiscal Year. The fiscal year of the Condominium shall consist of the twelve-month period commencing on January 1 of each year and terminating on December 31 of the same year.

(b) Preparation and Adoption of Annual Budget. Each year on or before November 1st, the Executive Board shall adopt a budget for the Condominium for the next ensuing fiscal year, containing (1) a line item for any required funding of the Repair and Replacement Reserves sufficient to achieve the level of funding noted in the Reserve Study and to provide cash reserves to repair and replace the General Common Elements, the Single Family Home General Common Elements on the Property that are not Units as are necessary to maintain the Required Community Condition and in accordance with Legal Requirements (including the Act), or maintain the Repair and Replacement Reserves at such levels and (2) an estimate of the total amount which it considers necessary to pay the normal and recurring costs and expenses of (i) maintaining, managing, operating, repairing and replacing the General Common Elements, the Single Family Home General Common Elements that the Executive Board is responsible for maintaining, repairing and replacing under the Act, these Bylaws or the Declaration, (ii) wages, materials, insurance premiums, services, supplies and other expenses that may be declared to be Common Expenses by the Act, these Bylaws, the Declaration or a resolution of the Association, (iii) the Working Capital and Operating Reserve (as defined in this Article V below) so as to replenish any funds withdrawn from the Working Capital and Operating Reserve and not replenished by funds received under Section 1(h)(3) of this Article V below, (iv) the Repair and Replacement Reserves, and (v) such other reasonable amounts as the Executive Board considers necessary to provide working capital for the Property, a general operating reserve for the Property, reserves for contingencies and replacements related to the Property, and for the administration, operation, maintenance and repair of the Property that the Association is responsible for under the Condominium Documents and the Act and the rendering to the Unit Owners of all related services. The budget shall constitute the basis for determining each Unit Owner's contribution for the Common Expenses of the Condominium applicable to such Unit

Owner's Unit. When the first Executive Board appointed by Declarant under these Bylaws takes office, it shall determine the budget, as defined in this Section, for the period commencing upon the sale of the first Unit by Declarant and ending on December 31st of the fiscal year in which such first sale occurs. Regular Assessments shall be assessed and levied against the Unit Owners during said period as provided in this Section but in no event later than sixty (60) days after the first Unit is conveyed by Declarant.

(c) Adoption Prior to Expiration of Declarant Control Period. Until the expiration or earlier termination of the Declarant Control Period, within thirty (30) days after the adoption of any budget, the Executive Board shall send to each Unit Owner a copy of the budget, in a reasonably itemized form which sets forth the amount of the Common Expenses payable by each Unit Owner.

(d) Adoption After Expiration of Declarant Control Period After the expiration or earlier termination of the Declarant Control Period, within thirty (30) days after the adoption of any budget, the Executive Board shall (1) provide to all Unit Owners a summary of the budget, including any reserves and a statement of the basis on which any reserves are calculated and funded and (2) simultaneously set a date for a meeting of the Unit Owners to consider ratification of the budget not less than fourteen (14) nor more than sixty (60) days after providing the summary. Unless at that meeting sixty-seven percent (67%) of the Percentage Interests entitled to vote reject the budget, the budget shall be deemed ratified, whether or not a quorum is present. If a proposed periodic budget is rejected, the periodic budget last ratified by the Unit Owners shall be continued until such time as the Unit Owners ratify a subsequent budget proposed by the Executive Board.

(e) Regular Assessments and Payment of Common Expenses. The total amount of the estimated funds required for the operation of the Property set forth in the budget for each fiscal year shall be assessed against each Unit Owner in proportion to such Owner's respective Percentage Interest that is applicable to such Owner's Unit. On or before the first day of each fiscal year, and the first day of each of the succeeding eleven (11) months in such fiscal year, each Unit Owner shall be obligated to pay to the Executive Board or the Managing Agent (as determined by the Executive Board), one-twelfth (1/12) of the Assessment for such fiscal year made pursuant to the foregoing provisions; provided, however, if the Executive Board so determines, Assessments may be collected quarterly in which event each Unit Owner shall be obligated to pay to the Executive Board or the Managing Agent (as determined by the Executive Board) one-fourth (1/4) of the Assessment for such fiscal year on the first day of each fiscal year, and one-fourth (1/4) on the first day of the fourth, seventh and tenth months of each fiscal year or such other intervals that the Executive Board may determine. Within sixty (60) days after the end of each fiscal year, the Executive Board shall supply to all Unit Owners an itemized accounting of the Common Expenses for such fiscal year actually incurred and paid, together with a tabulation of the amounts collected pursuant to the budget adopted by the Executive Board for such fiscal year, and showing the net amount over or short of the actual expenditures plus reserves. Any amount accumulated in excess of the amount required for actual expenses and reserves shall be either credited according to the percentage of the portion of total budget allocated to the General Common Expenses that are applicable to each Unit to the next monthly, quarterly or other interval as determined by the Executive Board of installments due from Unit

Owners under the current fiscal year's budget until exhausted, refunded to each Unit Owner, or applied in any other manner as the Executive Board shall determine in its sole subjective and absolute discretion. Any net shortage shall, if the Executive Board deems it advisable, be added, in accordance with the above allocations, to the installments due in the succeeding six (6) months after the rendering of the accounting.

(f) Special Assessments. Extraordinary expenditures not originally included in the annual budget which may become necessary during the year shall be charged first against the Working Capital and Operating Reserve.

(1) Prior to Expiration of Declarant Control Period. Until the expiration or earlier termination of the Declarant Control Period, if the Working Capital and Operating Reserve is inadequate for any reason, including nonpayment of any Unit Owner's Assessment, the Executive Board may at any time levy a special Assessment, which shall be assessed against the Unit Owners according to their respective Percentage Interests, and which shall be payable in a lump sum or in installments as the Executive Board may determine, in its sole subjective and absolute discretion. The Executive Board shall notify all Unit Owners, in writing, of any such special Assessment disclosing the amount and reasons therefore; and such special Assessment, unless otherwise specified in such notice, shall become effective with the next monthly (or quarterly, if payments are required by the Executive Board to be made quarterly) payment of regular Assessments due more than ten (10) days after the delivery or mailing of such notice of such special Assessment. All Unit Owners shall be obligated to pay the adjusted monthly (quarterly or such other interval as determined by the Executive Board) amount or, if the special Assessment is not payable in installments, the amount of such special Assessment.

(2) After Expiration of Declarant Control Period. After the expiration or earlier termination of the Declarant Control Period, the Executive Board may at any time propose a budget which would require a special Assessment against all the Units for any General Common Expenses and against all the Single Family Home Unit Owners for Single Family Home General Common Expenses. Except as provided in this Subsection 1(f)(2) below, the special Assessment is effective only if the Executive Board follows the procedures for ratification of a budget described in Subsection 1(d) of this Article V above and a majority of the Unit Owners affected by such special Assessment do not reject that proposed special Assessment. Notwithstanding the foregoing provisions of this Subsection 1(f)(2), if the Executive Board determines by unanimous vote that a special Assessment is necessary in order to respond to an emergency or otherwise to comply with the requirements of the Act, then: (i) the special Assessment shall become effective immediately in accordance with the terms of the vote; (ii) notice of the emergency Assessment shall be promptly provided to all Unit Owners affected by such special Assessment; and (iii) the Executive Board shall spend the funds paid on account of the emergency Assessment solely for the purposes described in the vote.

(3) In the event that any Reserve Study applicable to the General Common Elements shows, at any time and from time to time, that there are insufficient funds allocated to the General Common Elements in the Repair and Replacement Reserve for the projected time when the costs of repairs and/or replacements of any of the General Common

Elements will be incurred as required under the Declaration or these Bylaws, the Executive Board shall have the right to make a special Assessment to the Unit Owners to pay, based on the their proportionate share of the General Common Element Expenses, which special Assessment shall be payable over the necessary period (as set forth in the then current Reserve Study applicable to the General Common Elements) to eliminate any projected shortfall in the funds allocated to the General Common Elements within the Repair and Replacement Reserve.

(4) In the event that any Reserve Study applicable to the Single Family Home General Common Elements shows, at any time and from time to time, that there are insufficient funds allocated to the Single Family Home General Common Elements in the Repair and Replacement Reserve for the projected time when the costs of repairs and/or replacements of any of the Single Family Home General Common Elements will be incurred as required under the Declaration or these Bylaws, the Executive Board shall have the right to make a special Assessment to the Owners of the Single Family Home Units to pay, based on the their proportionate share of the Single Family Home General Common Element Expenses, which special Assessment shall be payable over the necessary period (as set forth in the then current Reserve Study applicable to the Single Family Home General Common Elements) to eliminate any projected shortfall in the funds allocated to the Single Family Home General Common Elements within the Repair and Replacement Reserve.

(g) Executive Board Unit Assessments. If the Executive Board purchases a Unit for the use and occupancy of a resident manager for the Property, the cost of such Unit shall be treated as a General Common Expense. That portion of the General Common Expenses directly attributable to the purchase of the Unit to be used and occupied by the resident manager shall be allocated among the Unit Owners in an amount equal to the amount by which such Unit Owner's General Common Percentage Interest bears to the aggregate General Common Percentage Interest of all such Units Owners and collected through a special Assessment which shall be collectable in whatever manner the Executive Board, in its sole subjective and absolute discretion, decides.

(h) Reserves.

(1) Working Capital and Operating Reserve. In addition to all other Assessments hereunder, the Association (or, if the Association has not been formed, until the Association has been formed, Declarant) shall build up and maintain a working capital and operating reserve to meet unforeseen capital and operating expenditures, to purchase any additional equipment and/or provide services (the "**Working Capital and Operating Reserve**"). The amounts paid into the Working Capital and Operating Reserve shall not be considered as advance payments of regular or special Assessments. Declarant shall not use any portion of the Working Capital and Operating Reserve to defray any of its or the Association's expenses, reserve contributions, or construction costs or to make up any budget deficits while Declarant is in control of the Association. Notwithstanding anything contained herein to the contrary, Declarant shall be entitled to receive reimbursement for any funds it paid to the Association for an unsold Unit's share of the Working Capital and Operating Reserve from funds collected from the purchaser of such Unit at closing when such Unit is sold.

(2) Repair and Replacement Reserve. Upon the recordation of these Bylaws, the Association (or, if the Association has not been formed, until the Association has been formed, Declarant) shall create and maintain, in addition to any reserve for contingencies, a repair and replacement reserve with respect to each of the (i) General Common Elements to be designated and maintained as the General Common Elements Repair and Replacement Reserve, and (ii) Single Family Home General Common Elements to be designated and maintained as the Single Family Home General Common Element Repair and Replacement Reserve.

(i) Unit Owner Contributions to the Working Capital and Repair, Replacement and Operating Reserve. Upon the sale of each Unit by Declarant and/or a Participating Builder to a third party purchaser (which is not a Participating Builder), the Unit Owner purchasing such Unit shall contribute a sum of ONE THOUSAND DOLLARS ($1,000.00) to the Working Capital and Operating Reserve account. Thereafter each subsequent purchaser of such Unit shall contribute a sum of ONE THOUSAND DOLLARS ($1,000.00) to such Working Capital and Operating Reserve account.

(j) Reserve Account. The Working Capital and Repair, Replacement and Operating Reserve account are referred to as the "**Reserve Account**". In addition to the contributions that will be made by each Unit Owner as provided above, the Association shall include as part of each annual Assessment an assessment towards a contribution equal to at least **ten percent (10%) of the then current annual budget** to be allocated by the Executive Board as needed or required with respect to the obligations of the Unit Owners to one or more of the Reserve Account into which each Unit Owner, as applicable, is responsible to contribute to from time to time. All funds accumulated for the Reserve Account shall be segregated from the general operating funds, and, if the Executive Board deems it advisable, funds accumulated for each type of reserve shall be kept in a separate bank account, identified by reference to the specific category of reserve and as otherwise provided or required under the Declaration.

(k) Effect of Failure to Prepare or Adopt Budget. The failure or delay of the Executive Board to prepare or adopt the annual budget for any fiscal year shall not constitute a waiver or release in any manner of a Unit Owner's obligation to pay the Unit Owner's allocable share of its applicable Common Expenses, whenever the same shall be determined; and, in the absence of any annual budget or adjusted budget, each Unit Owner shall continue to pay the applicable Common Expenses assessment rate established for the immediately preceding fiscal period until the adjusted budget shall have been mailed or delivered. With respect to any differential between the rate for such immediately preceding fiscal year and the rate calculable pursuant to the annual budget, once adopted, for the new fiscal year, the Executive Board shall be entitled to assess or credit such differential as the Executive Board determines.

(l) Accounts. Unless the Unit Owners otherwise direct by Majority Vote, the Executive Board shall be entitled to commingle into a single fund all sums collected by the Executive Board with respect to Assessments against the Unit Owners except that any sums collected with respect to Reserve Account shall at all times be kept in segregated funds.

(m) Increase of Assessments. Any increase in Assessments that would increase the annual Assessments more than twenty-five percent (25%) from the previous year

shall require the affirmative approval of sixty-seven percent (67%) of the Percentage Interests entitled to vote with respect to such Assessment and such other approvals as otherwise provided under Article XI of these Bylaws.

(n) Exceptions for Declarant's, Participating Builder's and Executive Board's Units. Notwithstanding anything contained in the Condominium Documents to the contrary, no lawsuit, suspension of utilities or other action shall be taken by or on behalf of the Executive Board or any Unit Owner, Mortgagee, occupant, mortgagee or other lienor to collect any Assessment made against any Unit owned by Declarant, Participating Builder or the Executive Board, or their respective successors or assigns, which relates to any period of time or times during which the Unit was not actually being occupied as a residence (and the performance of work on any Units owned by Declarant or Participating Builder to construct, complete, repair, rehabilitate, modify or improve same shall not constitute occupancy thereof), unless and except to the extent that such Assessment is for actual cash expenditures made by the Executive Board for the cost of utilities, services, insurance premiums, or maintenance personnel directly consumed or utilized, in fact, by such Unit, independent of and apart from its interest in the Common Elements. To the extent that Declarant or Participating Builder owes any Assessment on a Unit (computed in accordance with the limitations regarding unoccupied Units owned by Declarant or Participating Builder as set forth in the immediately preceding sentence) at the time when that Unit is being conveyed, the amount due shall be reimbursed to the Executive Board without interest, from the net proceeds of sale received by Declarant or Participating Builder, as applicable, but only insofar as such net proceeds are adequate. Any deficiency shall be allocated to Declarant's or Participating Builder's unsold Units in proportion to the Percentage Interest attributed to each such Unit.

(o) Assessments and Common Expenses During Declarant Control Period. Notwithstanding anything contained in the Condominium Documents to the contrary, during the Declarant Control Period, (i) Assessments shall be assessed against each Unit Owner in proportion to such Unit Owner's Single Family Home Common Elements Percentage Interests, Percentage Interests, as applicable, that are assigned to such Unit in **Schedule "C"**, as attached to the Declaration, and (ii) the remaining balance of the Assessments attributable to each annual operating budget (exclusive of any Assessments assessed in order to fund the Reserve Account) that are required to eliminate a deficit in such annual operating budget (exclusive of any Assessments assessed in order to fund the Reserve Account) shall be paid by Declarant (the "**Declarant's Deficit Contribution**") on a monthly or quarterly basis as determined by the Executive Board in accordance with the terms of Article V hereof. For avoidance of doubt, the Assessments under this Section 1(r) for each Unit Owner shall include all amounts required to fund the Repair and Replacement Reserve with respect the Single Family Home General Common Elements, as applicable to each Unit in accordance with the Reserve Study during the Declarant Control Period. Upon the expiration of the Declarant Control Period, the Assessments shall be assessed or re-assessed, as applicable, in accordance with the provisions contained in Article V hereof, and Declarant's obligation to pay the Declarant's Deficit Contribution shall immediately cease, become void and of no further force or effect. For purposes of this Section 1(r), if Declarant terminates the Declarant Control Period under clause (iv) of the definition of Declarant Control Period in the Declaration, Declarant's obligation under this Section 1(r) to pay the Declarant's Deficit Contribution shall expire upon the earlier (A) sixty (60) days after the

date on which seventy-five percent (75%) or more of the proposed Units, including any and all Units submitted to the Act and the Condominium in accordance with the Act and any and all Expansion Units have been conveyed to Units Owner other than Declarant or (B) ten (10) years after the date on which the first Unit has been conveyed to a Unit Owner other than Declarant.

(p) Surplus Funds. Any surplus funds of the Association remaining after payment of or provision for Common Expenses and any prepayment of reserves shall be applied to any future deficits or future projects, to one or more of the Reserve Account in a manner consistent with an equitable allocation of such surplus attributable to the amount of the payments made into a Reserve Account unless the Executive Board determines after consultation with the Managing Agent and the Association's accountant that the funds applied to Reserve Accounts are adequately funded as required or contemplated by these Bylaws and some or all of the surplus can be credited to the Unit Owners in proportion to their payments made and their respective Percentage Interests in the applicable General Common Elements or some other fair and equitable method adopted by the Executive Board based on the factors resulting in the creation of any such surplus in order to reduce one or more future Assessments.

Section 2. Payment of Common Expenses.

(a) Prior to Establishment of Association and Initial Assessment. Pursuant to § 81-315(a)(11) of the Act until the Association is validly established pursuant to the Act and makes a Common Expense Assessment, Declarant shall pay all Common Expenses together with all sums necessary to fully fund the Reserve until the Association makes its first Assessment.

(b) Subsequent to Establishment of Association and Initial Assessment. All Unit Owners shall be personally liable for and obligated to pay the Common Expenses applicable to each Owner's Unit as assessed by the Executive Board pursuant to the provisions of the Condominium Documents, including, but not limited to, Section 1 of this Article V. No Unit Owner may exempt himself from liability for his contribution toward his applicable Common Expenses by waiver of the use of enjoyment of any of the Common Elements or by abandonment of his or her Unit. The purchaser of a Unit shall be jointly and severally liable with the selling Unit Owner for all unpaid Assessments against the latter for his applicable Percentage Interest of his Common Expenses applicable to his Unit up to the time of the conveyance, without prejudice to the purchaser's right to recover from the selling Unit Owner the amounts paid by the purchaser therefor; provided, however, that any such purchaser shall be entitled to a statement from the Executive Board or Managing Agent setting forth the amount of the unpaid Assessments against the selling Unit Owner and such purchaser shall not be liable for, nor shall the Unit conveyed be subject to a lien for, any unpaid Assessments in excess of the amount therein set forth; and provided, further, that if a mortgagee of a first mortgage of record or other purchaser of a Unit obtains title to the Unit as a result of foreclosure of a first mortgage, or through the other remedies provided for in the first mortgage, such purchaser, its successors and assigns, shall not be liable for, and such Unit shall not be subject to, a lien for the payment of Common Expenses assessed prior to the acquisition of title to such Unit by such purchaser pursuant to the foreclosure sale, or through the other remedies provided for in the first mortgage; provided, however that the purchase of any such Unit as a result of any such foreclosure of a first mortgage, or through the other remedies provided for in the first mortgage, shall be without

prejudice to the Association's right to recover from the selling or prior Unit Owner any past due or delinquent Assessments. Any such unpaid share of the Common Expenses assessed prior to the acquisition of title to such Unit by such purchaser pursuant to a voluntary sale (but excluding an acquisition of title to a Unit pursuant to a foreclosure sale) for which a statement was provided to such purchaser by the Executive Board, shall be collectible from all Unit Owners, including the purchaser of such Unit, in proportion to their respective Percentage Interests in the applicable Common Elements appurtenant to each Owner's Unit.

(c) During the Declarant Control Period. Notwithstanding anything contained in the Condominium Documents to the contrary, during the Declarant Control Period, (i) Unit Owners shall pay their applicable Common Expenses based on the amount of Assessment under Article V, Section 1(r) above and (ii) Declarant shall pay the Declarant's Deficit Contribution assessed under Article V, Section 1(r). For purposes of this Section 2(c), if Declarant terminates the Declarant Control Period under clause (iv) of the definition of Declarant Control Period in the Declaration, Declarant's obligation under this Section 2(c) to pay the Declarant's Deficit Contribution shall expire upon the earlier (A) sixty (60) days after the date on which seventy-five percent (75%) or more of the proposed Units, including any and all Units submitted to the Act and the Condominium in accordance with the Act and any and all Expansion Units have been conveyed to Units Owner other than Declarant or (B) ten (10) years after the date on which the first Unit has been conveyed to a Unit Owner other than Declarant.

Section 3. Collection of Assessments. The Executive Board shall take prompt action to collect any Assessments due from any Unit Owner which remain unpaid for more than thirty (30) days from the due date for payment thereof, together with interest thereon as imposed under Article IX, Section 1 below. To the extent permitted under Legal Requirements (including the Act), the Association shall have a statutory lien against a Unit for any Assessment levied against the Unit or fines imposed against its Unit Owner, as provided under § 81-316 of the Act.

Section 4. Statement of Unpaid Assessments. The Association upon written request shall furnish to a Unit Owner a statement setting forth the amount of unpaid Assessments against the Unit. Such statement must be in recordable form. The statement must be furnished within ten (10) business days after receipt of the request and is binding on the Association, the Executive Board, and every Unit Owner.

Section 5. Maintenance, Repair and Replacement.

(a) By the Executive Board. Pursuant to § 81-307(a) of the Act, the Executive Board shall be responsible for and shall determine when and to what extent the maintenance, repair and replacement of the following shall be required and otherwise necessary to maintain the Required Community Condition, the cost of which shall be charged to each Unit Owner as a General Common Element Expense, as applicable (unless necessitated by the negligence, misuse or neglect of a Unit Owner, in which case such expense shall be charged to such Unit Owner):

(1) All of the General Common Elements.

(2) With respect to the Limited Common Element, the maintenance, repair and replacement of the irrigation systems that are located within any Limited Common Element Yard of each Unit, as well as mowing, fertilizing, trimming, pruning and/or otherwise maintaining all or any portion of the grass, shrubs, bushes, trees and other planted materials installed by the Declarant and/or a Participating Builder, and any replacements thereof, as may be located within the Limited Common Element Lawn Area of each Unit, but expressly excluding any maintenance, repairs or replacements to any Limited Common Elements appurtenant to each Unit not otherwise expressly the responsibility of the Association as provided herein (including but not limited to any approved Yard Area Improvements made by the Unit Owner within its Limited Common Element Yard Area) which the Unit Owner shall be responsible for under Section 5(b) below.

(3) All incidental damage caused to any Unit, or its appurtenant Limited Common Elements or any other Common Element by such work as may be done or caused to be done by the Executive Board in accordance therewith.

Each Unit Owner shall promptly report to the Executive Board or the Managing Agent any defect or need for repairs for which the Executive Board is responsible.

(b) By the Unit Owner. As provided under Section 11 of the Declaration captioned "Maintenance Repair and Replacement of Limited Common Elements by the Unit Owners", each Unit Owner shall keep such Unit Owner's Unit and any Limited Common Elements which are a part of and appurtenant to such Unit (including but not limited to any Limited Common Element Yard Area and any Yard Area Improvements) in good order, condition and repair and in a clean and sanitary condition, and shall do all redecorating, painting cleaning, power washing and varnishing which may at any time be necessary to maintain the good appearance and condition of such Unit and any Limited Common Elements which are a part of and appurtenant to such Unit, inclusive (by way of example and not limitation) of installing and maintaining window treatments in all windows and assuring that the same, to the extent visible from the exterior of the Unit as provided in the Declaration. Pursuant to § 81-307(a) of the Act the Executive Board shall determine when and to what extent any such maintenance, repairs and replacements associated with the Units and any Limited Common Elements which are a part of and appurtenant to such Units shall be required from time to time in order to comply with the Condominium Documents, the Act and as required in order to maintain the Required Community Condition. In addition, each Unit Owner shall be responsible for all damages to any and all other Units or to the Common Elements resulting from such Unit Owner's failure to make or perform any of the maintenance, repairs, and/or replacements required to be made by such Unit Owner by this Section. Each Unit Owner shall perform such Unit Owner's responsibility in such manner as shall not unreasonably disturb or interfere with the other Unit Owners and as otherwise directed by the Executive Board.

(c) Manner of Maintenance, Repair and Replacement. All maintenance, repairs and replacements of any Common Element, including any Limited Common Elements whether the obligations of the Association or a Unit Owner hereunder shall be in a manner to keep the foregoing in good order, condition and repair and in a clean and sanitary condition consistent with and substantially similar to the original construction and installation and in

accordance with the Condominium Documents, the Act and as required in order to maintain the Required Community Condition.

(d) Executive Board's Right of Self-Help. In the event that any Unit Owner fails to maintain, repair or replace such Owner's Unit, or any Limited Common Elements which are such Unit Owner's responsibility under the Declaration and these Bylaws as directed by the Executive Board, the Executive Board shall have the right (but not the obligation) to make an Assessment for and/or undertake the maintenance, repair and/or replacement of such Owner's Unit and any appurtenant Limited Common Elements, the Assessment and/or costs and expenses of which shall be a lien against such Owner's Unit and payable by such Unit Owner upon demand therefor by the Executive Board and otherwise as provided and permitted under §81-316 of the Act.

Section 6. Additions, Alterations or Improvements by the Executive Board.

(a) Whenever in the judgment of the Executive Board the General Common Elements shall require additions, alterations, or improvements costing in excess of TEN THOUSAND DOLLARS ($10,000.00) during any twelve (12) consecutive months, and the making of such additions, alterations or improvement shall have been approved by a vote of a majority of the Unit Owners, the Executive Board shall proceed with such additions, cost thereof as a General Common Element Expense. Any additions, alterations or improvements costing TEN THOUSAND DOLLARS ($10,000.00) or less during any period of twelve (12) consecutive months may be made by the Executive Board without the approval of the Unit Owners and the cost thereof shall constitute part of the General Common Element Expenses.

(b) Whenever in the judgment of the Executive Board the Single Family Home General Common Elements shall require additions, alterations, or improvements costing in excess of TEN THOUSAND DOLLARS ($10,000.00) during any twelve (12) consecutive months, and the making of such additions, alterations or improvement shall have been approved by a vote of a majority of the Single Family Home Unit Owners, the Executive Board shall proceed with such additions, cost thereof as a Single Family Home General Common Element Expense. Any additions, alterations or improvements costing TEN THOUSAND DOLLARS ($10,000.00) or less during any period of twelve (12) consecutive months may be made by the Executive Board without the approval of the Single Family Home Unit Owners and the cost thereof shall constitute part of the Single Family Home General Common Element Expenses.

Section 7. Additions, Alterations or Improvements by Unit Owners. No Unit Owner shall make any structural addition, alteration or improvement to any of the Common Elements, including but not limited to any Limited Common Elements that comprise the exterior of such Unit Owner's Unit without the prior written consent thereto of the Declarant and the Executive Board and otherwise subject to and in accordance with the provisions of § 81-211 and § 81-212 of the Act and in compliance with the Condominium Documents as well as in a manner consistent with and materially similar to the original construction and installation and otherwise in compliance with the Required Community Condition. Any application to any governmental authority for a permit to make any approved addition, alteration or improvement in or to any Unit or its appurtenant Limited Common Elements or any other Common Element may be

executed by the Executive Board without however, incurring any liability on the part of the Executive Board or any of them to any contractor, subcontractor or materialman on account of such addition, alteration or improvement, or to any person having any claim for injury to person or damage to property arising therefrom.

Section 8. Restrictions on Use of Units and Common Elements. Each Unit and the Common Elements shall be occupied and used in accordance with the provisions of the Condominium Documents.

Section 9. Right to Access. Each Unit Owner shall grant a right of access to such Unit Owner's Unit and the appurtenant Limited Common Elements to the Executive Board or the Managing Agent, or any other person authorized by the Executive Board or the Managing Agent, or any group of the foregoing, for the purpose of making inspections or for the purpose of correcting any condition originating in such Unit or the appurtenant Limited Common Elements and threatening another Unit or any of the other Common Elements, or for the purpose of performing installations, alterations or repairs to the mechanical or electrical services of the Common Elements applicable to such Unit or elsewhere in the Property, or to correct any condition which violates the provisions of any mortgage covering another Unit and its appurtenant Limited Common Elements provided that requests for entry are made in advance and that any such entry is at a time reasonably convenient to the Unit Owner. In case of an emergency, such right of entry shall be immediate, not require notice, and whether the Unit Owner is present at the time or not. Each Unit Owner shall provide, upon the request of the Executive Board or the Managing Agent with emergency contact information from time to time to enable the Executive Board or the Managing Agent to respond in a timely manner to any situation that may necessitate the need to exercise the foregoing right of access. The Unit Owner shall, at all times, cause a key to its Unit to be in the possession of the Executive Board or the Managing Agent.

Section 10. Electricity. Electricity shall be supplied by the public utility company, Delmarva Power, serving the Units directly to each Unit through separate meters and each Unit Owner shall be required to pay the bills for electricity consumed or used in its Unit and any appurtenant Limited Common Elements. The electricity serving the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for electricity consumed in such portions of the General Common Elements as a General Common Element Expense.

Section 11. Sewer Service. Sewer service shall be supplied to each Unit by Sussex County. The cost for all maintenance, repair and replacement of the sewer lines located within the General Common Elements to each Unit, (but not within the Unit or appurtenant Limited Common Element) shall be a General Common Element Expense. Each Unit Owner shall be responsible for the sewer fees for its Unit. Any sewer service to the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for such sewer service provided to the General Common Elements as a General Common Element Expense.

Section 12. Water Service. Water service shall be supplied by Tidewater Utilities, Inc. (or its successors or assigns) directly to each Unit and the user fees for which, including any irrigation of any Limited Common Elements appurtenant to each Unit shall be billed directly to

the individual Unit Owners. Any water service to the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for such water service provided to the General Common Elements as a General Common Element Expense.

Section 13. Gas Supply. Propane gas shall be supplied by Service Energy Services (or its successors or assigns) directly to each Unit and the user fees for which shall be billed directly to the individual Unit Owners. Any gas service to the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for such gas service provided to the General Common Elements as a Common Expense.

Section 14. Roads/Access Easements. The roads, and any access easements designated on the Declaration Plan, the Declaration or which are otherwise appurtenant to and benefit the Property shall be maintained, repaired and/or replaced from time to time as a General Common Element and shall be available for use on a non-exclusive basis by the Declarant, any Participating Builder, the Association, Unit Owners and their respective, agents, representatives, contractors, subcontractors, venders, licensees, employees and invitees (each a "**Responsible Party**") and shall be subject to such reasonable Rules and Regulations that may be promulgated from time to time by the Declarant and the Executive Board or as otherwise provided in any applicable easements or other documents recorded in the Recorder's Office pertaining to such roads or access easements. Notwithstanding anything contained herein to the contrary, a non-exclusive easement over and across said roads and access easements for ingress, egress, and regress is retained by the Declarant and Participating Builders, their successors and assigns, for their respective use in the development of the Condominium and in the event the Expansion Building(s) Unit(s) and additional improvements are constructed and annexed into the Condominium subject to the terms provided in the Declaration. The cost of any maintenance, repairs and replacement of all such roads and access easements shall be a General Common Element Expense payable by, and assessed to, all Unit Owners; provided, however, each Unit Owner shall be responsible for any and all damages to any other Units or to the Common Elements resulting from such Unit Owner's negligent acts or omissions arising out of the use of any such roads and access easements.

Section 15. Unit Decks and Balconies. Each Unit Owner shall be responsible for the maintenance, repair and replacement at its own expense of all decks, patios and balconies appurtenant to such Unit Owner's Unit and designated as either a part of the Unit and/or as a Limited Common Element appurtenant to such Unit Owner's Unit in the Declaration and/or the Declaration Plan as directed by the Executive Board pursuant to the Condominium Documents in order to maintain a uniform appearance and as necessary to maintain the Required Community Condition.

Section 16. Legal Proceedings. Due to the potential adverse financial impact to the Association and the Unit Owners of defending or pursuing any administrative, legal or equitable proceeding or action in connection with any dispute, claim, cause of action or proceeding arising out of or under or in connection with any one or more of the Condominium Documents (collectively, the "**Legal Proceedings**"), the decision to initiate any Legal Proceedings (except for the recovery of dues and Assessments from Unit Owners and for those matters or causes of actions that would arise under Article IX hereof) must be made by a resolution duly adopted at a

properly noticed regular or special meeting of the Association held for such purpose. Such resolution shall require the affirmative vote of the Unit Owners representing not less than sixty-seven percent (67%) of the Common Element Percentage Interests held by the Unit Owners and approved or consented to by Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a mortgage. If the Association shall incur or potentially be obligated as a result of such resolution to incur attorney's fees, expert fees or other costs or expenses associated with such Legal Proceedings, totaling in excess of $25,000.00 or if the amount recoverable by an attorney for the Association pursuant to a contingency fee agreement shall exceed $50,000.00, then such resolution shall require the affirmative vote of the Unit Owners representing not less than seventy-five percent (75%) percent of the Unit Owners and their Mortgagees. Neither the Executive Board, the Association nor the Unit Owners shall borrow on behalf of the Association nor use any funds from reserves of the Association to pay such legal costs, but the same shall be paid from and limited to the amounts provided in the annual budget for such expenditures for the fiscal year and shall be raised by special Assessment levied against the Unit Owners for such purpose. If such Legal Proceedings are not concluded within one (1) year of the date of such resolution, the continued prosecution of such Legal Proceedings beyond such period must be reaffirmed annually at a special meeting held for such purpose by the percentage vote of the Association as was required to adopt the original resolution. If the continued prosecution of such Legal Proceedings is not reaffirmed, the action shall be discontinued and the Executive Board shall have no further authority to act as the attorney-in-fact for the Association in the further prosecution or defense of such Legal Proceedings but may, with the affirmative vote of a majority of the vote in the Association, act as its attorney-in-fact with respect to any settlement or compromise of such Legal Proceedings; provided the same is completed within six (6) months thereafter. If the Association, by resolution approved in accordance with this section, authorizes the Executive Board to initiate Legal Proceedings, then the decisions relating to the conduct of the Legal Proceedings shall be made by the Executive Board for such purposes. Decisions regarding the conduct of any Legal Proceedings are nondelegable. Notwithstanding anything contained herein or in the Declaration to the contrary, the provisions of this Section shall not be modified or amended without Declarant's written consent so long as Declarant owns any property within the Condominium or the Expansion Area; thereafter this Section shall not be modified or amended except by a written instrument, executed by the Unit Owners representing not less than sixty-seven percent (67%) of the Common Element Percentage Interests held by the Unit Owners and approved or consented to by Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of Units subject to a mortgage, and be recorded with the Recorder's Office. The failure of a Mortgagee to respond to a notice of any such Legal Proceedings sent certified mail or registered mail, return receipt requested within sixty (60) days after notice of any such Legal Proceedings issues to such Mortgagee shall be deemed to be a consent by such Mortgagee to such Legal Proceedings.

Section 17. Trash Removal. The company providing trash removal services for the Condominium, including, but not limited to, for each of the Units, shall be selected by the Executive Board and each Unit Owner shall be obligated to individually contract with the aforementioned company for such trash removal services related to such Unit Owner's Unit. The expenses related to trash removal services for the General Common Elements shall be paid by the Executive Board as a General Common Element Expense. The expenses related to trash

removal services for each Unit shall be the sole responsibility and obligation of the Unit Owner of such Unit and shall be paid by such Unit Owner directly to such company in accordance with such company's standard billing practices. Other than the company selected by the Executive Board, no Unit Owner shall contract with any other company for trash removal services related to such Unit Owner's Unit.

(a) Snow Removal, Mowing Irrigation and Landscaping. All snow, sanding/ice treatment (no salt to be used), mowing, irrigation and landscaping services with respect to and related to any General Common Elements shall be arranged for and paid by the Executive Board as a General Common Element Expense. In addition the Executive Board shall arrange for the mowing of the lawns in the Limited Common Element Yard Area, the trimming and pruning of trees and shrubbery located in the Limited Common Element Yard Area, and the removing and replacing of diseased, infested, unsightly, or dead trees and shrubbery in the Limited Common Element Yard Area and as otherwise provided under Section 5(a)(2) under Article V above, all as a General Common Element Expense. Each Unit Owner shall be responsible, at his or her own expense, for obtaining any additional services that are not otherwise provided by the Association as a General Common Element Expenses, such as snow removal and sanding/ice treatment (no salt to be used) with respect to and related to any and all decks, balconies, porches, sidewalks, and driveways appurtenant to such Unit Owner's Unit and/or denoted as a Limited Common Element, or additional irrigation, landscaping and other Limited Common Element Yard Area related services that are desired by any Unit Owner which exceeds the level, degree or scope of the Association Seasonal Care Maintenance as defined below (the "**Unit Owner Seasonal Care Maintenance**"). Agricultural Wells servicing an individual Unit Owner or any part of the Project shall be permitted subject to the approvals of the Association and state agencies regulating same. Unit Owner Seasonal Care Maintenance may, at the election of the Executive Board be provided to individual Unit Owners at their request, upon such terms, conditions and the fees or costs as may be offered by the Association from time to time, subject to assessment and payment for the fees or costs for such individualized services provided to some but not all of the Unit Owners pursuant to § 81-315(c)(2) of the Act (the "**Association Seasonal Care Maintenance**"). Furthermore, the Executive Board shall have the authority, under the Rules and Regulations to establish terms and conditions regarding the level, scope, quality and frequency of any such Unit Owner Seasonal Care Maintenance which shall be no less comparable and consistent with the Association Seasonal Care Maintenance that is offered and/or provided by the Association and in all respects shall be compliant with the Required Community Condition. The failure of any such Unit Owner to timely perform any of Unit Owner Seasonal Care Maintenance as required by this Section after written notice from the Association and an opportunity to remedy or correct any such failure(s) as provided in the Rules and Regulations shall obligate such Unit Owner to receive the Association Seasonal Care Maintenance and to be assessed and required to pay for the costs thereof in addition to the payment of any other fines and other costs and expenses incurred by the Association to remedy or correct any such failure(s) that may be necessary to bring such areas covered by the Association Seasonal Care Maintenance into the required condition for compliance with the Condominium Documents and the Required Community Condition.

ARTICLE VI

INSURANCE

Section 1. Authority to Purchase. Except as otherwise provided in Section 3 and Section 6 of this Article VI, all insurance policies relating to the Property shall be purchased by the Executive Board as trustee for the Unit Owners and their respective mortgagees, as their interests may appear, which insurance shall name the Association as a named insured, and, to the extent available, provide coverage for at least the following:

(a) Casualty or physical damage insurance in an amount equal to the full replacement value (with a maximum deductible amount which shall be the lesser of $10,000.00 or 1% of the policy face amount) of the Condominium, excluding the Units, with an "agreed amount" endorsement, "Condominium replacement cost" endorsement, an "Inflation Guard" endorsement if available, "Building Ordinance" or "Law Endorsement" endorsement, if applicable, "Steam Boiler and Maximum Coverage" endorsement and a "Special Condominium" endorsement and such other endorsements that may be required from time to time under Part II, Subject Standards, Chapter 7: Insurance Requirements of the Federal National Mortgage Association Selling Guide (the "**FNMA Guidelines**"), without deduction or allowance for depreciation (said amount to be redetermined annually by the Executive Board with the assistance of the insurance company affording such coverage), such coverage to afford protection against at least the following:

(1) All risks of direct physical loss commonly insured against by projects similar in construction, location and use;

(2) Loss or damage by fire or other hazards covered by the standard extended coverage endorsement; and

(3) Such other risks as shall customarily be covered with respect to projects similar in construction, location and use, including, but not limited to, vandalism, malicious mischief, windstorm, water damage, machinery explosion or damage, and such other insurance as the Executive Board may from time to time determine;

(b) Commercial General Liability Insurance in such amounts (but not less than Two Million Dollars ($2,000,000.00) per occurrence and Five Million Dollars ($5,000,000.00) annual aggregate) and in such form as may be considered appropriate by the Executive Board covering all occurrences commonly insured against for death, bodily injury, and property damage arising out of or in connection with the use, ownership, or maintenance of the Common Elements including, but not limited to, medical payments insurance, water damage, legal liability, hired automobile, non-owned automobile and any and all other liability incident to the ownership and/or use of the Condominium or any portion thereof, said Commercial General Liability Insurance to name Declarant and the Association as insureds as their interests may appear;

(c) Adequate fidelity insurance for all officers and employees of the Association and from any Managing Agent handling or responsible for Association funds in such

amounts and coverage as may reasonably be determined by the Executive Board or as may be required under the FNMA Guidelines;

(d) During the course of any construction or repair on the Property by the Association, builder's completed value risk insurance against "all risks of physical loss," including collapse and transit coverage, in non-reporting form;

(e) Workmen's compensation insurance to the extent necessary to comply with any Applicable Law;

(f) Flood insurance in the maximum amount available under the Federal Flood Insurance Program up to the lesser of (i) 100% of the replacement cost of the insurable value of the General Common Elements and, if applicable, a "Residential Condominium Building Association" policy or (ii) the maximum coverage available under the appropriate National Flood Insurance Program to the extent the Property is within the Flood plain and deemed necessary by the Executive Board or as may be required under the FMNA Guidelines. The maximum deductible amounts for flood insurance coverage required above shall be the lesser of $5,000.00 or 1% of the policy's face amount; and

(g) Such other policies of insurance, including insurance for other risks of a similar or dissimilar nature, as are or shall hereafter be considered appropriate by the Executive Board.

The Executive Board shall obtain a single master policy covering physical damage for the entire Property under which the insurance company will issue to each Owner and mortgagee of a Unit, upon written request, a certificate or sub-policy specifying the portion of the master policy allocated to each Owner's Percentage Interest in the Common Elements. The insurance policies carried pursuant to Subsections (a) through (c) of this Section must provide that:

(1) Each Unit Owner is an insured person under the policy with respect to liability arising out of such Unit Owner's interest in the Common Elements or membership in the Association;

(2) The insurer waives its right to subrogation under the policy against any Unit Owner or member of the Unit Owner's household;

(3) No act or omission by any Unit Owner, unless acting within the scope of the Unit Owner's authority on behalf of the Association, will void the policy or be a condition to recovery under the policy; and

(4) If, at the time of a loss under the policy, there is other insurance in the name of a Unit Owner covering the same risk covered by the policy, the Association's policy provides primary insurance.

Section 2. Limitations. Except for the insurance required under Section 3 and Section 6 of this Article VI, any insurance obtained pursuant to the requirements of this Article, shall be subject to the following provisions:

(a) All policies shall be written with a company or companies licensed to do business in the State of Delaware and holding a rating of "A XIII" or better general policyholder's rating in "Best's Insurance Report".

(b) Exclusive authority to negotiate losses under said policies shall be vested in the Executive Board or its authorized representative, including any trustee with which the Executive Board or Association may enter into any insurance trust agreement, or any successor trustee, each of which shall be herein referred to as the "**Insurance Trustee**."

(c) In no event shall the insurance coverage obtained and maintained pursuant to the requirements of this Article be brought into contribution with insurance purchased by the Unit Owners or their mortgagees, as herein permitted, and any "no other insurance" or similar clause in any policy obtained by the Executive Board pursuant to the requirements of this Article shall exclude such policies from consideration. An insurance policy issued to the Association shall not prevent a Unit Owner from obtaining insurance for the Unit Owner's own benefit.

(d) An insurer that has issued an insurance policy under this Article shall issue certificates or memoranda of insurance to the Association and, upon written request, to any Unit Owner or holder of a security interest. The insurer issuing the policy may not cancel, refuse to renew or substantially change it until thirty (30) days after notice of the proposed cancellation or nonrenewal has been mailed to the Association, each Unit Owner and each holder of a security interest to whom a certificate or memorandum of insurance has been issued at their respective last known addresses. If requested, the insurer shall also deliver duplicate originals of the insurance policies and all endorsements thereto, together with proof of payment or premiums, to all Unit Owners and all mortgagees of Units at the times such policies are issued and at least thirty (30) days prior to the expiration of the then current policies.

(e) That the net proceeds of such policies, if less than FIVE THOUSAND DOLLARS ($5,000.00), shall be payable to the Executive Board, and if more than FIVE THOUSAND DOLLARS ($5,000.00), shall be payable to the Insurance Trustee designated in Section 4 of this Article. The Insurance Trustee or the Association shall hold any insurance proceeds in trust for the Association, Unit Owners and lien holders as their interests may appear. Subject to the provisions of Subsection 2(e)(i) below, the proceeds must be disbursed first for the repair or restoration of the damaged property, and the Association, Unit Owners, and lien holders are not entitled to receive payment of any portion of the proceeds unless there is a surplus of proceeds after the property has been completely repaired or restored, or the Condominium is terminated.

(f) Any portion of the Condominium for which insurance is required under this Article which is damaged or destroyed must be repaired or replaced as soon as practicable by the Association unless: (i) the Condominium is terminated, in which case §81-218 of the Act applies, (ii) repair or replacement would be illegal under any state or local statute or ordinance governing health or safety, or (iii) eighty percent (80%) of the Unit Owners, including every Owner of a Unit or assigned Limited Common Element that will not be rebuilt, vote not to rebuild. The cost of repair or replacement in excess of insurance proceeds and reserves is a Common Expense. If the entire Condominium is not repaired or replaced: (i) the insurance

proceeds attributable to the damaged Common Elements must be used to restore the damaged area to a condition compatible with the remainder of the Condominium, and (ii) except to the extent that other persons will be distributees, (A) the insurance proceeds attributable to Limited Common Elements that are not rebuilt must be distributed to the Owners of those Units and the Owners of the Units to which those Limited Common Elements were allocated, or to lien holders, as their interests may appear, and (B) the remainder of the proceeds must be distributed to all the Unit Owners, lien holders or Legal Owner, as their interests may appear in proportion to the Percentage Interests of all Units. If the Unit Owners vote not to rebuild any Unit, that Unit's allocated Percentage Interests are automatically reallocated upon the vote as if the Unit had been condemned under §81-107(a) of the Act, and the Association promptly shall prepare, execute, and record an amendment to the Declaration reflecting the reallocations.

(g) To the extent available and economically reasonable (in the reasonable judgment of the Executive Board), all policies shall contain a waiver of subrogation by the insurer as to any claims against the Executive Board, the Unit Owner and/or their respective agents, employees or invitees, and of any defenses based upon co-insurance or invalidity arising from the acts of the insured. To the extent available and economically reasonable (in the reasonable judgment of the Executive Board), said policies cannot be canceled, invalidated or suspended on account of any conduct of the Executive Board, the Unit Owner and/or their respective agents, employees or invitees, and of any defenses based upon co-insurance or invalidity arising from the acts of the insured. If any policy does not include "severability of interest" in its terms, such policy shall contain a specific endorsement to preclude the insurer's denial of a Unit Owner's claim because of negligent acts of the Association or of other Unit Owners.

(h) All policies shall contain the standard mortgagee clause in favor of each mortgagee (together with its successors and assigns) of a Unit to the extent of the portion of the coverage of the master policy allocated to such Unit, which shall provide that the loss, if any, thereunder shall be payable to such mortgagee and the Owner as their interests may appear, subject, however, to the loss payment and adjustment provisions in favor of the Executive Board and the Insurance Trustee contained in this Article. In the event a mortgagee endorsement has been issued as to a Unit, the proceeds payable shall be held in trust for the mortgagee and the Unit Owner as their interests may appear.

Section 3. Separate Insurance for Unit Owners Required. Each Unit Owner shall be required at his or her sole cost and expense to obtain and maintain insurance coverage for his or her own Unit, personal property and improvements not otherwise covered by the Executive Board's policy on the Property and for his or her personal liability in such types and coverage amounts as reasonably determined by the Executive Board based on generally acceptable industry standards or practices in the county in which the Property is located, as applicable from time to time; provided that no Unit Owner shall be entitled to exercise his or her right to acquire or maintain such additional insurance coverage so as to decrease the amount which the Executive Board, on behalf of all Unit Owners, may realize under any insurance policy which it may have in force on the Property at any particular time or to cause any insurance coverage maintained by the Executive Board to be brought into contribution with such additional insurance coverage

obtained by the Unit Owner, and provided further that all such additional policies shall contain waiver of subrogation.

(a) Each Unit Owner shall be required to notify the Executive Board of all improvements made by the Unit Owner to his or her Unit, the value of which is in excess of TWO THOUSAND DOLLARS ($2,000.00).

(b) Each Unit Owner shall be required to file proof of such individual policy or policies with the Executive Board at the time of the Unit Owner's purchase of his or her Unit.

Section 4. Insurance Trustee.

(a) The Executive Board shall have the right to designate any bank, trust company, savings and loan association, insurance company, or any institutional lender as the Insurance Trustee, and all parties beneficially interested in such insurance coverage shall be bound thereby. The Insurance Trustee at the time of the deposit of such policies and endorsements shall acknowledge that the policies and any proceeds thereof will be held in accordance with the terms of these Bylaws. Any and all fees and costs incurred by the Association with respect to any such Insurance Trustee shall be deemed to be a Common Expense and shall not be deducted from any insurance proceeds received but shall be paid as a Common Expense.

(b) The Insurance Trustee shall not be liable for payment of premiums, the renewal of the policies, the sufficiency of coverage, the form or contents of the policies, the correctness of any amounts received by it on account of the proceeds of any insurance proceeds. The sole duty of the Insurance Trustee shall be to receive such proceeds as are paid to it and to hold the same in trust for the purposes elsewhere stated in these Bylaws for the benefit of the Unit Owners and their respective mortgagees.

(c) Executive Board as Agent. The Executive Board is hereby irrevocably appointed the agent for each Unit Owner and for each mortgagee of a Unit and for each Unit Owner of any other interest in the Property to adjust all claims arising under insurance policies purchased by the Executive Board and to execute and deliver releases upon the payment of claims.

(d) Premiums. Premiums for all insurance policies purchased by the Executive Board shall be deemed to be a Common Expense, and assessed and allocated as provided in the Declaration.

Section 5. Additional FNMA Approved Project Requirements.

(a) With respect to the insurance carrier providing the above-referenced insurance policies, (1) under the terms of such insurance carrier's charter, by-laws, or policy, contributions or Assessments may not be made against borrowers, the Federal National Mortgage Association ("**FNMA**"), or Federal Home Loan Mortgage Corporation ("**FHLMC**"), or the designee of FNMA or FHLMC, (2) under the terms of such insurance carrier's charter, by-laws, or policy, loss payments shall not be contingent upon action by such insurance carrier's

board of directors, policyholders, or members, and (3) the policies shall not include any limiting clauses (other than insurance conditions) which could prevent FNMA, FHLMC, or the borrowers from collecting insurance proceeds.

(b) With respect to the above-referenced insurance policies, such insurance policies must provide for the following: (1) recognition of any insurance trust agreement, (2) a waiver of the right of subrogation against Unit Owners individually, (3) that the insurance is not prejudiced by any act or neglect of individual Unit Owners which is not in the control of such Owners collectively, and (4) that the policies are primary in the event the Unit Owner has other insurance covering the same loss.

(c) In the event that the Condominium contains a steam boiler, the Executive Board shall obtain a policy that covers loss or damage resulting from steam boiler equipment accidents in an amount of not less than $50,000 per accident per location (or such greater amount as deemed prudent based on the nature of the property).

## ARTICLE VII

## REPAIR AND RECONSTRUCTION AFTER FIRE OR OTHER CASUALTY

Section 1. When Repair and Reconstruction Are Required. In the event of damage to or destruction of all or any of the Common Elements, as applicable, as a result of fire or other casualty (unless seventy-five percent (75%) of the Unit Owners and seventy-five (75%) of the holders of first mortgages on the Units, with each first mortgage holder to be entitled to one vote, affected by such destruction or damage duly resolve in writing, at a meeting called within ninety (90) days after the occurrence of the casualty, not to proceed with repair or restoration), the Executive Board shall arrange for and supervise the prompt repair and restoration of the Common Elements, as applicable (but expressly excluding and not including any damage to or destruction of all or any of the Units).

Section 2. Procedure for Reconstruction and Repair.

(a) Cost Estimates. Immediately after a fire or other casualty causing damage to any Common Elements, the Executive Board shall obtain reliable and detailed estimates of the cost of repairing and restoring the Common Elements to a condition as good as that existing before such casualty. Such costs may also include professional fees and premiums for such bonds as the Executive Board determines to be necessary.

(b) Assessments. If the proceeds of insurance are not sufficient to defray the said estimated costs of reconstruction and repair as determined by the Executive Board, or if at any time during reconstruction and repair, or upon completion of reconstruction and repair, the funds for the payment of the costs thereof are insufficient, Assessments shall be made against the Unit Owners directly affected by the damage or destruction, in proportion to their respective Percentage Interests as set forth in Schedules C-1, D-1, and E-1, as applicable to each Unit Owner, in sufficient amounts to provide payment of such costs.

(c) Plans and Specifications. Any such reconstruction or repair shall be substantially in accordance with the plans and specifications under which the Property was originally constructed.

(d) Encroachments. Encroachments upon or in favor of Units which may be created as a result of such reconstruction or repair shall not constitute a claim or basis for any proceeding or action by the Unit Owner upon whose property such encroachment exists, provided that such reconstruction is substantially in accordance with the Declaration Plan under which the Property was originally constructed. Such encroachments shall be allowed to continue in existence for so long as the reconstructed Unit or Common Element shall stand.

Section 3. Disbursements of Construction Funds.

(a) Construction Fund. The net proceeds of insurance collected on account of a casualty and the funds collected by the Executive Board from Assessments against Unit Owners on account of such casualty shall constitute a construction fund which shall be disbursed in payment of the cost of reconstruction and repair in the manner set forth in this Section. If the net proceeds of insurance collected on account of a casualty exceed FIVE THOUSAND DOLLARS ($5,000.00), then the funds collected by the Executive Board from Assessments against the Unit Owner shall be deposited by the Executive Board with the Insurance Trustee, and the entire construction fund shall be disbursed by the Insurance Trustee; otherwise the construction fund shall be held and disbursed by the Executive Board.

(b) Method of Disbursement. The construction fund shall be paid by the Executive Board or the Insurance Trustee, as the case may be, in appropriate progress payments, to such contractors, suppliers and personnel engaged in performing the work or supplying materials or services for the repair and reconstruction of the Common Elements, as are designated by the Executive Board.

(c) Surplus. It shall be presumed that the first monies disbursed in payment of the cost of reconstruction and repair shall be from insurance proceeds; and if there is a balance in the construction fund after the payment of all the costs of the reconstruction and repair for which the fund is established, such balance shall be distributed jointly to the Unit Owners and their mortgagees who are the beneficial owners of the fund; provided, however, that the part of the distribution to a beneficial Unit Owner which is not in excess of Assessments paid by the Unit Owner into the construction fund shall not be made payable to any mortgagee.

(d) [Reserved.]

(e) Certificate. The Insurance Trustee shall be entitled to rely upon a certificate executed by the President or Vice-President, and the Secretary or Treasurer of the Condominium certifying (1) whether the damaged property is required to be reconstructed and repaired; (2) the name of the payee and the amount to be paid with respect to disbursements from any construction fund held by it or whether surplus funds to be distributed are less than the Assessments paid by the Unit Owners; and (3) all other matters concerning the holding and

disbursing of any construction fund held by it. Any such certificate shall be delivered to the Insurance Trustee promptly after request.

(f) When Reconstruction is Not Required. If there is substantially total destruction of one or more of the Common Elements, or if seventy-five percent (75%) of the Unit Owners and seventy-five (75%) of the holders of first mortgages on the Units, with each first mortgage holder to be entitled to one vote, directly affected by such destruction or damage duly resolved in writing, at a meeting called within ninety (90) days after the occurrence of the casualty, not to proceed with repair or restoration, then, and in that event, the salvage value of the Property shall be subject to a suit for partition at the suit of any Unit Owner directly affected by such destruction or damage, in which event the net proceeds of the sale, together with the proceeds of insurance policies held by the Executive Board, shall be considered as one fund and, shall be divided among the Unit Owners directly affected by such destruction or damage in proportion with their Percentage Interests after discharging, out of the respective shares of such Unit Owners to the extent sufficient for the purpose, all liens against the Units of such Unit Owners.

## ARTICLE VIII

## MORTGAGES

Section 1. Notice to the Executive Board. A Unit Owner who mortgages such Unit Owner's Unit shall notify the Executive Board of the name and address of such Unit Owner's mortgagee and shall file and register a conformed copy of the mortgage and any amendments and/or assignments thereof with the Executive Board in accordance with and subject to and as otherwise provided under Section 21(d) of the Declaration.

Section 2. Notice of Unpaid Assessments for Common Expenses. The Executive Board shall promptly report any then unpaid Assessments for Common Expenses due for more than 60 days from, or any other default not cured within 60 days by, the Unit Owner of the mortgaged Unit; provided, however, the neglect or failure of the Executive Board to send any notice of any such unpaid Assessments or uncured default to any such mortgagee shall not affect the validity or enforceability of any such Assessment or default upon the Unit Owner.

Section 3. Notice of Default. The Executive Board, when giving notice to a Unit Owner of a default in paying the Assessment for Common Expenses or any other default, shall send a copy of such notice to each mortgagee covering such Unit Owner's Unit whose name and address have theretofore been furnished to the Executive Board by the Unit Owner; provided, however, the neglect or failure of the Executive Board to send any notice of default to any such mortgage holder shall not affect the validity or enforceability of any such notice of default upon the Unit Owner.

Section 4. Notice of Condemnation or Casualty Loss. The Executive Board shall provide a mortgagee with notice of condemnation or casualty loss affecting a material portion of the Property or the Unit securing the mortgage.

Section 5. Miscellaneous Notices. The Executive Board shall provide a mortgagee with notice of any proposed action that requires the consent or approval of a specified percentage of mortgagees either under these Bylaws or the Declaration.

## ARTICLE IX

## COMPLIANCE AND DEFAULT

Section 1. Relief. Each Unit Owner shall be governed by and shall comply with all of the terms of the Condominium Documents. A default by a Unit Owner shall entitle the Association, acting through its Executive Board or through the Managing Agent, to the following relief:

(a) Legal Proceedings. Failure to comply with any of the terms of the Condominium Documents shall be grounds for relief which may include, without limiting the same, an action to recover any sums due for money damages, injunctive relief, foreclosure of the lien for payment of all Assessments, any other relief provided for in the Condominium Documents, or any combination thereof, and all of which relief may be sought by the Association, the Executive Board, the Managing Agent, or, if appropriate, by any aggrieved Unit Owners.

(b) Additional Liability. Each Unit Owner shall be liable for the expense of all maintenance, repair or replacement rendered necessary by his or her or his or her family members, employees, agents, subtenants or licensees' act, neglect or carelessness, but only to the extent that such expense is not covered by the proceeds of insurance carried by the Executive Board. Such liability shall include any increase in fire insurance rates occasioned by use, misuse, occupancy or abandonment of any Unit or its appurtenances. Nothing contained herein, however, shall be construed as modifying any waiver of any insurance company of its rights of subrogation.

(c) Costs and Attorney's Fees. In any proceeding arising out of (i) any alleged default by a Unit Owner, (ii) a dispute between Unit Owners with respect to the Condominium, (iii) a dispute between any Unit Owner and the Association and/or the Executive Board with respect to the Condominium , or (iv) any dispute between any Unit Owner and/or the Association with Legal Owner with respect to the Condominium Documents, the prevailing party shall be entitled to recover the costs of the proceedings, and such reasonable attorneys' fees as may be determined by the court.

(d) No Waiver of Rights. The failure of the Association, the Executive Board, or of a Unit Owner to enforce any right, provision, covenant, or condition which may be granted by any one or more of the Condominium Documents shall not constitute a waiver of the right of the Association, the Executive Board or the Unit Owner to enforce such rights, provisions, covenant, or condition in the future. All rights, remedies and privileges granted to the Association, the Executive Board, or any Unit Owner pursuant to any terms, provision, covenant or condition of any one or more of the Condominium Documents shall be deemed to be

cumulative, and the exercise of any one or more thereof shall not be deemed to constitute an election of remedies, nor shall it preclude the party exercising the same from exercising such privileges as may be granted to such party by any one or more of the Condominium Documents, or at law or in equity.

(e) Interest. In the event of a default by any Unit Owner in paying any Common Expenses or other sum assessed against him which continues for a period in excess of thirty (30) days from the due date, then such Unit Owner shall be obligated to pay interest on the amounts due at the rate of the lesser of eighteen percent (18%) per annum or the highest rate permitted by law.

(f) Abatement and Enjoinment of Violations by Unit Owners. The violation of any rule or regulation adopted by the Executive Board, or the breach of any provision of any one or more of the Condominium Documents, shall give the Executive Board the right, in addition to any other rights pursuant to law or set forth in any such Condominium Documents: (a) to enter the Unit, by appropriate legal proceedings, either at law or in equity, in which, or as to which, such violation or breach exists and summarily to abate and remove, at the expense of the defaulting Unit Owner, any structure, thing or condition that may exist therein contrary to the intent and meaning of the provisions hereof, and the Executive Board shall not thereby be deemed guilty in any manner of trespass; or (b) to enjoin, abate or remedy by appropriate legal proceedings, either at law or in equity, the continuance of any such breach.

Section 2. Lien for Assessments.

(a) The Association has a statutory lien on each Unit for any Assessment levied against that Unit or fees, charges, late charges, fines, and interest charged pursuant to the Act, and any other sums due the Association under the Condominium Documents, the Act or as a result of an administrative or judicial decision, together with court costs and reasonable attorneys' fees incurred in attempting collection of the same. Fees, charges, late charges, fines, and interest charged pursuant to the Act, and any other sums due the Association under the Condominium Documents, the Act or as a result of an administrative or judicial decision, together with court costs and reasonable attorneys' fees incurred in attempting collection of the same, are enforceable in the same manner as unpaid Assessments under the Condominium Documents. If an Assessment is payable in installments, the lien is for the full amount of the Assessment from the time the first installment thereof becomes due. The following restrictions apply to any action by the Association to foreclose its lien under this Section:

(1) No foreclosure action may be commenced unless: (a) the Unit owner, at the time the action is commenced, owes a sum equal to at least three (3) months of Common Expense Assessments based on the periodic budget last adopted by the Association; and (b) the Executive Board expressly votes to commence a foreclosure action against that specific Unit.

(2) The Association shall apply any sums paid by Unit Owners who are delinquent in paying Assessments as follows: (a) first, to the oldest unpaid Assessments, then to the more present Assessments; (b) then to late charges; (c) then to attorneys' fees and other

reasonable collection charges and costs; and (d) finally, to all other unpaid fees, charges, penalties, interest and late charges.

(3) If the only sums due with respect to a Unit consist of fines and related sums levied against that Unit, a foreclosure action may not be commenced against that Unit unless the Association has first secured a judgment against the Unit Owner with respect to those fines and has perfected a judgment lien against the Unit under state law.

(b) In any case where an Assessment against a Unit Owner is payable in installments, upon a default by such Unit Owner in the payment of any single installment, which continues for thirty (30) days after written notice of such default has been sent to the Unit Owner, the maturity of the remaining total of the unpaid installment of such Assessments may be accelerated, at the option of the Executive Board and the then balance owing may be declared due and payable in full by the service of notice to such effect upon the defaulting Unit Owner by the Executive Board or the Managing Agent.

(c) The lien for contribution may be foreclosed in the manner provided by the laws of the State of Delaware by suit brought in the name of the Executive Board or the Managing Agent, acting on behalf of the Association. During the pendency of such suit the Unit Owner shall be required to pay a reasonable rental of the Unit for any period prior to sale pursuant to any judgment or order of any court having jurisdiction over such sale. The plaintiff in such proceeding shall have the right to the appointment of a receiver, if available under the then laws of the State of Delaware.

(d) Suit to recover a money judgment for unpaid contributions shall be maintainable without foreclosing or waiving the lien securing the same, and foreclosure shall be maintainable notwithstanding the pendency of any suit to recover a money judgment.

(e) Any lien for Common Expense Assessments or other charges that the Association has on any Unit shall be subordinate to the lien of the first mortgage on the Unit, if the mortgage was recorded before the delinquent Assessment was due. Any lien for Common Expense Assessments shall not be affected by the sale or transfer of a Unit, unless a foreclosure of a first mortgage is involved, in which case the foreclosure will extinguish the lien for any Assessments that were payable before the foreclosure sale, but will not relieve any subsequent Unit Owner from paying further Assessments.

## ARTICLE X

## MISCELLANEOUS

Section 1. Notices. All notices, demands, bills, statements, or other communications under the Condominium Documents shall be in writing and shall be deemed to have been duly given if delivered personally or if sent by registered or certified mail, return receipt requested, first class postage prepaid; (a) if to a Unit Owner, at the address which the Unit Owner shall designate in writing and file with the Secretary, or if no such address is designated, at the address of the Unit of such Unit Owner, (b) if to the Association, the Executive Board or the Managing Agent, at the principal office of the Executive Board or Managing Agent, as applicable, or at

such other address as shall be designated by notice in writing to the Unit Owners pursuant to this Section.

Section 2. Invalidity. The invalidity of any part of these Bylaws shall not impair or affect in any manner the validity, enforceability or effect of the balance of these Bylaws.

Section 3. Captions. The captions herein are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of these Bylaws, or the intent of any provisions thereof.

Section 4. Gender. The use of the masculine and/or the feminine genders in these Bylaws shall be deemed to include whether one or more persons, group of persons, association, corporation, limited liability company, partnership, trust or other legal entity, or any combination thereof whenever the context so requires and the use of the singular shall be deemed to include the plural, and vice versa, whenever the context so requires.

Section 5. Perpetuities. If any of the covenants, conditions, easements, restrictions, or other provisions of any one or more of the Condominium Documents shall be unlawfully void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of Donald Trump, the forty-fifth (45th) President of the United States of America.

Section 6. Conflicts. Notwithstanding anything contained in these Bylaws to the contrary,

(a) to the extent that the provisions of the Declaration or these Bylaws might conflict with or be inconsistent with the Act, the Act shall govern and control, except as otherwise provided under the Act; and

(b) to the extent that the provisions of these Bylaws might conflict with or be inconsistent with the Declaration, the Declaration shall govern and control.

## ARTICLE XI

## AMENDMENTS TO BYLAWS

Section 1. During the Declarant Control Period, the Executive Board and the Unit Owners (other than Declarant) may make no amendment to these Bylaws without the written consent of Declarant, which consent may be granted or withheld for any reason or no reason whatsoever in Declarant's sole subjective and absolute discretion. Following the expiration of the Declarant Control Period and subject to Article XIV hereof, these Bylaws may be amended in accordance with the terms of these Bylaws.

Section 2. Notwithstanding the provisions of Section 1 of this Article, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to the Declaration or has the right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, no amendment to these Bylaws shall be adopted by the Executive Board or the

Unit Owners which, in Declarant's sole subjective and absolute opinion, may materially or adversely interfere with or affect (a) the lease, sale, other disposition or use of any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Units, (b) the value, use, or marketability of any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Units, (c) any expansion rights granted to Declarant under any one or more of the Condominium Documents, or (d) the financing available to Declarant with respect to any of the foregoing.

Section 3. Notwithstanding the provisions of Section 1 of this Article, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to the Declaration or has the right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, Declarant also shall have the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, at any time and from time to time, in its sole subjective and absolute discretion, to amend any one or more of the Condominium Documents to cause each or all of them to be amended by filing with the Recorder's Office instruments and plans as permitted hereunder or as necessary to (a) correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all Legal Requirements, (b) achieve compliance with the requirements of FNMA, FHLMC, Federal Housing Authority, Veterans Administration or other governmental agency or their successors, or (c) conform the Condominium Documents to be consistent with the provisions required by the Act.

Section 4. Subject to Sections 1, 2, and 3 of this Article and Declarant's right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, and any and all rights granted to or reserved by Declarant in Sections 5 and 6 of the Declaration, these Bylaws may be amended by the vote of a Majority of the Unit Owners, cast in person or by proxy at a meeting duly held in accordance with the provisions of these Bylaws; provided, however, that any action to terminate the legal status of the Condominium must be approved by Unit Owners holding no less than eighty percent (80%) of the Percentage Interests and approved by or consented to Mortgagees that represent at least sixty-seven percent (67%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a, and, provided, further, that any such amendments of a material nature ("**Material Amendments**") must be approved by Unit Owners holding no less than sixty-seven percent (67%) of the Common Element Percentage Interests and approved by or consented to Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a mortgage.. For purposes of this Section 4, the term "**Material Amendments**" shall be defined to mean a change or amendment to this Declaration pertaining to any one or more of the following:

(a) Voting rights;

(b) Any Assessment increase which is more than 25% of the previously applicable Assessment, or the priority of Assessment liens;

(c) Reductions in reserves for maintenance, repair, and replacement of Common Elements;

(d) Responsibility for maintenance and repairs;

(e) Reallocation of interests in the General Common Elements or Limited Common Elements, or the rights to their use;

(f) Redefinition of any Unit boundaries;

(g) Convertibility of Units into Common Elements or, vice versa;

(h) Expansion or contraction of the Condominium, or the addition, annexation, or withdrawal of property to or from the Condominium;

(i) Hazard or fidelity insurance or bonds requirements;

(j) Imposition of any new restriction relating to the leasing of Units;

(k) A decision by the Association to establish self-management, if professional management had been required previously by the Condominium Documents, Department of Housing and Urban Development, Veterans Administration, Federal National Mortgage Association, or Federal Home Loan Mortgage Corporation;

(l) Restoration or repair of any General Common Elements (after damage or a partial condemnation) in a manner other than that specified in the Condominium Documents;

(m) Any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs;

(n) Any provisions that expressly benefit mortgage holders, insurers, or guarantors;

(o) Any reallocation of interests in the Common Elements resulting from a partial condemnation or partial destruction of the Condominium;

(p) Assessments, Assessment liens or subordination of such liens;

(q) Rights to use of the Common Elements; or

(r) Imposition of any right of first refusal or any restriction on the right of a Unit Owner to sell, transfer, or otherwise convey his or her Unit.

Subject to Sections 1, 2, and 3 of this Article XI and Declarant's right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, and any and all rights granted to or reserved by Declarant in Sections 5 and 6 of the Declaration, no such amendment under this Section 4 shall be effective until duly recorded in the Recorder's Office; provided, however, that the Percentage Interests shall not be changed except by consent of sixty-seven percent (67%) of the Unit Owners affected thereby, and the Mortgagees of those affected Units, such change being evidenced by an appropriate amendatory declaration to such effect, duly executed and recorded in the Recorder's Office. The failure of a Mortgagee to respond to any such proposed notice of an amendment as aforesaid sent by certified mail or registered mail,

return receipt requested, within sixty (60) days after notice issues to such Mortgagee shall be deemed to be a consent of such Mortgagee to such amendment. Each such amendment shall be effective upon recordation of the same in the Recorder's Office of an appropriate instrument setting forth such amendment.

Section 5. If any amendment is necessary in the judgment of the Executive Board to cure any ambiguity or to correct or supplement any provision of the Declaration or these Bylaws which is incorrect, defective or inconsistent with any other provision thereof or hereof or with the Act, or to change, correct or supplement any aspect of the Declaration Plan which is incorrect, defective, or similarly inconsistent, and which is not a Material Amendment, then the Executive Board may effect an appropriate corrective amendment without the approval of the Unit Owners as long as the Executive Board shall have received an opinion of counsel (as to any amendment pertaining to the Declaration or these Bylaws) or of an independent registered architect or licensed professional engineer (as to any such amendment pertaining to the Declaration Plan); and, in either case, such opinion shall and must recommend and approve the proposed amendment.

Section 6. If there are one or more amendments to the Declaration, the Declaration Plan or these Bylaws, all references thereafter to the Declaration, the Declaration Plan and these Bylaws (unless otherwise specifically designated) shall mean the Declaration, the Declaration Plan or these Bylaws as amended to the date of such reference. Any amendment to the Declaration, the Declaration Plan and these Bylaws shall be deemed in proper form for filing and recording when such amendment is executed by the members of the Executive Board, and when accompanied by certification that such amendment has been duly enacted in accordance with the provisions of the Declaration or these Bylaws, as the case may be.

Section 7. Notwithstanding the foregoing provisions for the amendment of these Bylaws, Declarant shall have an irrevocable power of attorney, coupled with an interest, for the purpose of amending any one or more of the Condominium Documents, including, but not limited to, the applicable Schedules of the Declaration and the Declaration Plan under the reservation and powers given unto Declarant in Sections 5 and 6 of the Declaration for the purposes stated in any one or more of the said Sections 5 and 6. The provisions for annexing land and improvements by Declarant and all other provisions of said Sections 5 and 6 are incorporated into this Section 7 by reference as though each and every statement contained in said Sections 5 and 6 were fully set forth herein.

## ARTICLE XII

## EMINENT DOMAIN OR CONDEMNATION

Section 1. Partial Taking Without Direct Affect on Units. If part of the Property shall be taken or damaged through the exercise of eminent domain or condemnation power or through the exercise of any right or any obligation on the part of any public authority to purchase the same or as a result of any agreement between the Executive Board, the Unit Owners and said public authority made in lieu of condemnation or eminent domain proceedings such that no Unit nor any part thereof is taken, then all compensation and damages for and on account of such taking, exclusive of compensation for consequential damages to certain affected Units shall be

payable to the Executive Board as Trustee for all Unit Owners and mortgagees according to the loss or damages to their respective interests in such Common Elements. The Executive Board shall have the right to act on behalf of the Unit Owners with respect to the negotiation and litigation of the issues with respect to the taking and compensation affecting the Common Elements without limitation on the right of the Unit Owners or any mortgagees of any one or more Units to represent their own interest. Such proceeds shall, subject to the prior rights of such mortgagees, be used in the same manner as insurance proceeds as heretofore set forth. Nothing herein is to prevent a Unit Owner whose Unit is specifically affected by the condemnation or eminent domain proceedings from joining in such proceedings and petitioning on their own behalf for consequential damages relating to loss of value of the affected Unit or personal improvements therein, exclusive of damages relating to Common Elements. In the event that any award resulting from such action does not allocate consequential damages to specific Unit Owners but by its terms includes an award for reduction in value of Units without such allocation, the award shall be divided between affected Unit Owners subject to the rights of mortgagees of such Units by the Executive Board as Trustee, as aforesaid, as their interests may appear.

Section 2. Partial or Total Taking Directly Affecting Units. If the Property or any part thereof shall be taken or damaged through the exercise of eminent domain or condemnation power, or through the exercise of any right or any obligation on the part of any public authority to purchase the same, or as a result of any agreement between the Executive Board, Unit Owners and said public authority made in lieu of condemnation or eminent domain proceedings, such that any Unit or a part thereof is taken, the Executive Board shall act on behalf of the Unit Owners with respect to the Common Elements as in Section 1 above without limitation on the right of any mortgagees of any one or more Units to represent their own interests, and the proceeds shall be payable as outlined in Section 1 above. The Unit Owners directly affected by such taking and their respective mortgagees shall represent and negotiate for themselves with respect to the damages affecting their respective Units and appurtenant Common Elements, the award so made shall, subject to the prior rights of mortgagees, be used and distributed by the Executive Board, as Trustee, first to restore the Common Elements on the remaining Property in the same manner as provided for to the extent possible, with any excess award distributed among Unit Owners and mortgagees as their interests may appear. In the event that the Executive Board determines that such a taking so removes land containing the Common Elements that they cannot effectively be restored or replaced and unless seventy-five percent (75%) of the Unit Owners and holders of first mortgages encumbering seventy-five (75%) percent of the undivided interest in the Common Elements subject to mortgages vote to accept an alternative plan, then the salvaged value of the Property so taken, if any, shall be subject to partition at the suit of any Unit Owner directly affected thereby, in which event the net proceeds of sale, together with any award held by the Executive Board, shall be considered as one fund and divided among the Unit Owners directly affected thereby in proportion to the respective undivided ownership of the Common Elements after discharging out of the respective shares of the Unit Owners directly affected thereto to the extent sufficient for the purpose all liens against the Units of such Unit Owners.

## ARTICLE XIII

## ABANDONMENT

Section 1. Except as otherwise expressly provided for elsewhere in these Bylaws, in the event of condemnation of, or substantially total destruction to, the Units and/or Common Elements, and subject to all the provisions of Applicable Law, the Executive Board may not, unless all of the Units Owners and all of the holders of first mortgages and judgments and liens on the Units, with each holder of a first mortgage, judgment or other lien being entitled to one vote, give their prior written consent, do the following:

(a) By either act or omission seek to abandon and terminate the Condominium;

(b) Change the Unit Owner's pro rata interest in the Common Elements unless necessary to do so as a consequence of any such condemnation or destruction;

(c) Partition or subdivide any Unit;

(d) Abandon, partition, subdivide, encumber, sell, assign or transfer the Common Elements by either act or omission; and

(e) Use the hazard insurance proceeds for losses for the Units and/or Common Elements for anything other than the repair, replacement and/or reconstruction of the Units and/or Comment Elements.

Section 2. Notwithstanding anything contained herein to the contrary, any election by the Unit Owners and the holders of mortgages, judgments or other liens affecting the Units and the Common Elements to terminate the Condominium shall be subject to the terms and conditions contained in the Act, including, but not limited to, §81-218 of the Act.

## ARTICLE XIV

## PROVISIONS APPLICABLE TO DECLARANT

Notwithstanding anything contained in these Bylaws to the contrary, the following provisions shall apply and, in the event of a conflict between the other terms of these Bylaws and the terms of this Article XIV, the terms of this Article XIV shall govern and control.

Section 1. Amendment. During the Declarant Control Period, Declarant may amend the terms of these Bylaws subject only to the requisite consent of at least fifty-one percent (51%) of any then existing first lien mortgagee(s) as hereinafter provided, and notice to the Unit Owners within thirty (30) days following the effectiveness of such amendment; provided, however, if any such amendment shall be determined to be necessary in the judgment of Declarant to cure any ambiguity or to correct or supplement any provision of any one or more of the Condominium Documents which is incorrect, defective or inconsistent with any other provision hereof or thereof or with the Act, or to change, correct or supplement anything appearing or failing to appear in any one or more of the Condominium Documents which is incorrect, defective, or similarly inconsistent, or as may be required by FMNA, FHA, VA, FHLMC, GNMA or by any governmental agency, or as may be required to comply with all applicable Legal Requirements, then Declarant may also effect an appropriate corrective

amendment without the approval of the Association, Executive Board, any Owners or any holders of any existing mortgages upon Declarant's receipt of favorable opinion of counsel recommending and approving the proposed amendment. In the event any amendment requires the consent of any Mortgagees, all Mortgagees then holding mortgages with respect to any portion of the Property shall be notified of such proposed amendment and consent shall be obtained from Mortgagees holding, in the aggregate, first lien mortgages with respect to at least fifty-one percent (51%) of the Common Element Percentage Interests held by Unit Owners of the Units subject to a mortgage. The failure of any first lien mortgagee to respond to notice of a proposed amendment to cure an ambiguity or to correct or supplement any provision, as aforesaid, within sixty (60) days after such notice to such Mortgagee from Declarant shall be deemed to be a consent by such Mortgagee, provided the notice was delivered by certified or registered mail, with a return receipt requested. Each such amendment shall be effective upon recording in the Recorder's Office of an appropriate instrument setting forth the amendment.

## ARTICLE XV

## DISPUTE RESOLUTION PROCEDURES

Section 1. All disputes arising between the Executive Board, the Managing Agent, any of the Unit Owners (each a "**Party**" and collectively the "**Parties**") from time to time regarding their respective rights, duties and responsibilities with respect to the Required Community Condition or any review and approval by such Party which is not to be unreasonably withheld, conditioned or delayed under these Bylaws, then, to the extent the applicable Parties cannot mutually resolve the same by agreement between themselves, shall be resolved by binding arbitration pursuant to the provisions of this Section and shall not be the subject of any legal action or lawsuit instituted by any such applicable Parties. Such arbitration shall be initiated by notice from the aggrieved Party (the "**Initiating Party**") to the other Party or Parties and shall be in accordance with the Commercial Arbitration Rules of the American Arbitration Association (the "**Arbitration Rules**"), and shall take place in the County. The notice from the Initiating Party shall be in accordance with the Arbitration Rules and the arbitration itself shall be conducted by three (3) arbitrators, each of whom shall be selected from the panel of the American Arbitration Association; provided, however, that one (1) such arbitrator must be engaged in active practice at such time as an attorney at law in the State of Delaware with a minimum of fifteen (15) years of experience in the general subject matter of the dispute; and the remaining two (2) arbitrators shall be professional property managers with a minimum of fifteen (15) years in experience in the management of condominium properties in the State of Delaware. In determining any question, matter, or dispute before the arbitrators, the arbitrators are authorized to determine all questions of reasonableness of any action of any Party under these Bylaws and shall apply the provisions of these Bylaws without varying therefrom in any respect, and shall not have the power or authority to add, modify, or otherwise change any of the provisions of these Bylaws, including, but not limited to the rights and remedies expressly set forth with respect to any breach by the Party of any of the covenants, obligations or provisions hereof. The Parties to the arbitration shall abide by and observe the Arbitration Rules and, further, shall honor any decision rendered by the arbitrators pursuant to the provision of this

Declaration and pursuant to the Arbitration Rules. The award and decision of the three (3) arbitrators made pursuant to the provisions of this Section 1 and pursuant to the Arbitration Rules shall be final and binding upon each Party who is party to the arbitration. No appeal shall be allowed from any such award or decision. Furthermore, any Party or Parties to the arbitration shall be entitled to seek legal action in any court having proper jurisdiction to enforce any decision or determination or award made by the arbitrators pursuant to the provisions of this Section 1 and the cost of such arbitration shall be borne between the Party or Parties as the three arbitrators shall decide.

**[Execution Page Follows]**

DRAFT

IN WITNESS WHEREOF, the undersigned, as the initial members of the Executive Board, have executed this instrument, under seal, this _____day of _____, 2024 (the "**Effective Date**").

| | |
|---|---|
| _____ | _____(SEAL) |
| WITNESS | David Hart |
| _____ | _____(SEAL) |
| WITNESS | Jamie Savino |
| _____ | _____(SEAL) |
| WITNESS | John Murray |

STATE OF DELAWARE :
:ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this _____day of _____, 2024, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, David Hart, Jamie Savino, and Johnn Murray, as the initial members of GLEN COVE Condominium Executive Board, and being known to me personally to be such, acknowledged this Indenture to be their respective acts and deeds and the act and deed of the Executive Board.

Given under my Hand and Seal of Office the day and year aforesaid.

_____
NOTARY PUBLIC
Print Name:_____
My Commission Expires:_____

DRAFT

# GLEN COVE

## DESIGN SUMMARY & SUPPLEMENTAL DATA

### CONDITIONAL USE & REZONING APPLICATIONS CU-2463 & CU-2017

### PROPOSED MR-1 – SINGLE FAMILY CONDOMINIUMS

**BALTIMORE HUNDRED**
**SUSSEX COUNTY, DELAWARE**

FOR:

FOXLANE HOMES

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

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# APPENDIX A

## CONDITIONAL USE APPLICATION FORMS

File #: _____

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✓

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**

Change of zoning from AR-1 to MR-1

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302)732-9366
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7-17-24

***Signature of Owner***

_____ Date: 7-17-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ✓
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**
SINGLE-FAMILY CONDOMINIUMS

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Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302) 732-9364
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

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- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7/17/24

***Signature of Owner***

_____ Date: 7-12-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

# APPENDIX B

## PROPERTY SURVEY AND DEED

13641 #02482 2125

Tax Parcel 1-34-12.00-4.00
1-34-11.00-176.00
1-34-12.00-1.00
1-34-12.00-375.00
1-34-13.00-68.00
RETURN TO GRANTEE
Prepared by: David N. Baker, Esq., P.A.
P O Box 551, 109 S. Race St.
Georgetown, Delaware 19947

NO TITLE OR LIEN SEARCH PERFORMED - NONE REQUESTED

# This Deed, made this 5th day of May

in the year of our Lord Two Thousand.

BETWEEN OMEDA T. COLLINS, TRUSTEE OF THE OMEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, of Rt. 2, Box 23, Clarksville, Delaware 19970, party the first part,

-and-

O. T. COLLINS FAMILY LIMITED PARTNERSHIP, a limited partnership organized and existing under the laws of the State of Delaware, with offices at Rt. 2, Box 23, Clarksville, Delaware 19970, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of One Dollar ($1.00) and other valuable consideration, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, its Successors and Assigns,

Parcel No. 1: 1-34 12.00 4.00

Tract No. 1:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in

Consideration : 0 0.00 Exempt Code: A

| County | State | Total |
|---|---|---|
| 0.00 | 0.00 | 0.00 |
| Grantor | Date: 05/05/2000 | |

Baltimore Hundred, Sussex County, Delaware, lying on the north side of the State Highway leading from Clarksville to Bethany Beach adjoining lands now or formerly of Charles Aydelotte, Manaen Robinson and Roland West, bounded and described as follows, to wit:

BEGINNING at a fence post at the edge of the aforesaid highway; thence running with the same 88-3/4° West 4.12 chains to the center of the outlet road; thence with same North 4-1/4° East 14.50 chains to a post; thence South 85-3/4° East 4.61 chains to a stake in line of a row of cedars; thence with same South 6° West 12 chains to a post; thence South 17-3/4° West 1.64 chains; thence South 7-1/2° West 65 links or 52 feet home to the place of beginning, containing six acres and 97 square perches more or less.

Tract No. 2:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in Baltimore Hundred, Sussex County and State of Delaware and being on the North side of Stone Road leading from Millville to Clarksville, bounded and described as follows, to wit:

BEGINNING at an iron bolt, driven at right of way of said stone road, and corner of lands formerly owned by Edward Hammonds thence running with said lines N. 8-1/2° East 52 feet, N. 17-3/4° E. 108-1/4 feet to a stake in line with row of cedars, thence N. 6° 55' E. 792 feet N. 85° W. 303-3/5 ft. to center of an outlet road thence down said Road N. 5° 10' E. 365 feet to lands now or formerly of Manehn Robinson thence with same down center of Ditch S. 80-3/4° E. 557 feet to land formerly owned by Frank Howard, thence with said Howard line S. 2-3/4° E. 1268 feet to the aforesaid stone road right of way, thence with said right of way 339 feet home to the place of beginning, containing 10-1/2 acres more or less.

Parcel No. 2: 1-34 11.00 176.00

ALL that certain piece, parcel or tract of land lying and being situate in Baltimore Hundred, Sussex County, and State of Delaware, joining lands now or formerly of Smith Murray, Manaen Robinson, Loving Aydelotte and Elmer Murray, bounded and described as follows to wit:

BEGINNING at stone in middle of county road leading from Millville to Clarksville running N. 7 1/2 degrees E. 17.08 chs. to stake; thence S. 85 E. 7.47 chains to cedar stake; thence S. 8 degrees W. 10.14 chs. to stake and lands now or formerly of Elmer Murray; thence with same S.82 degrees E. 3.28 chains to cedar

post and Graveyard lot; thence with said lot S. 5 degrees E. 1.00 ch. to small pine; thence S 88 1/2 W. 1.61 chs. to stake corner of said graveyard; thence S. 4 degrees W. 1.54 chs. to stake; thence S. 84-5/8 degrees E. 1.39 chs. to outlet road; thence with same S. 7-2/5 degrees W. 9.20 chs. to middle of aforesaid county road; thence down same N. 46 1/2 degrees W. 5.03 chs. to stone, home place of beginning, containing ten acres and one hundred and twenty square perches be the same more or less, said outlet road to graveyard is ten feet wide.

WITH THE EXCEPTION of 2.47 acres of land which was conveyed by Herbert Williams and wife to William Clifford Wilson by indenture dated the 18th day of March, 1952, and of record in the aforesaid Office in Deed Record No. 409, Page 347

Parcel No. 3: 1-34 12.00 1.00

ALL that certain triangular lot, piece or parcel of land, situate, lying and being near Clarksville, Baltimore Hundred, Sussex County, Delaware, more particularly bounded and described as follows, to-wit:

BEGINNING at a concrete marker found near the intersection of two ditches; thence, by and with other lands now or formerly of Harold H. Collins and wife, North 11° 00' 55" East, 266.00 feet to a point; thence, by a new line through the lands now or formerly of Calvin C. McComrick and wife, South 35° 12' 33" East, 368.06 feet to a point in the center of a ditch, a corner for this land and other lands now or formerly of Harold H. Collins and wife; thence, by and with the line of the ditch and lands of Harold H. Collins and wife, North 81° 26' West, 266.00 feet, home to the point and place of beginning, containing 35,346.875 square feet of land, more or less. The foregoing description is taken from a survey made by C. Kenneth Carter & Associates, Professional Land Surveyors, dated December 28, 1983, a copy of which survey is of record in the aforesaid Office in Plot Book 27, Page 901.

Parcel No. 4: 1-34 12.00 375.00

ALL that certain lot, piece, parcel or tract of land, lying and being situate in Baltimore Hundred, Sussex County, State of Delaware, bounded as follows: On the North by lands now or formerly of Harry N. Dukes, Jr., on the East by lands now or formerly of Jack Tubbs, on the South by a 30 foot County Road that leads from the Clarksville to Selbyville Road to Millville, on the West by lands now or formerly of the aforementioned Dukes and being more particularly described as follows to wit:

BEGINNING at an oak hub in the Northern right-of-way line of the said County Road, a corner for these lands and lands now or

formerly of Jack Tubbs; thence with the Tubbs line along and with a ditch, North 15° 50' East 506 feet to where a cross ditch intersects the line; thence with the cross ditch, a new division line, 3 courses; North 79° 15' West 213 feet, North 3° 45' East 23 feet, North 81° 45' West 87 feet to where a small ditch intersects the cross ditch, a new corner now established between these lands and lands now or formerly of the aforementioned Dukes; thence with a new division line now established, South 14° 10' West 549 feet to an oak hub in the Northern right-of-way line of the line of the said 30 foot County Road; thence with the Northern right-of-way line, South 84° 15' East 287.9 feet, home to the place of beginning and containing 3.57 acres, be the same more or less.

Parcel No. 5: 1-34 13.00 68.00

ALL that certain piece, parcel or lot of land, lying and being situate in Cedar Neck, Baltimore Hundred, Sussex County, State of Delaware and lying on the westerly side of the slag road leading from Ocean View to Cedar Grove, bounded and described as follows, to-wit:

BEGINNING at a bounder settled on westerly edge of aforesaid slag road right-of-way and corner for land now or formerly of Harry H. Dukes, Jr.; thence with land now or formerly of said Dukes, westerly 345-3/4 feet to a bounder corner for said Dukes, and said described land, thence, with said Dukes land northerly 97-1/3 feet to an iron bolt corner for land now or formerly of Peter Cunningham, thence, with land now or formerly of said Cunningham easterly 345-3/4 feet to an iron bolt driven on westerly side of said slag road right-of-way; thence, with westerly side of said slag road right-of-way southerly 129 feet to Beginning.

BEING a part of the lands conveyed unto Omeda T. Collins, Trustee of the Omeda T. Collins Revocable Trust by deed of Omeda T. Collins dated April 23, 1993 and filed of record in the Office of the Recorder of Deeds, in and for Sussex County, State of Delaware, in Deed Book 1908 at page 335.

#02482 #129

IN WITNESS WHEREOF, the party of the first part has hereunto set her Hand and Seal the day and year first above written.

Witness

Witness

ONEDA T. COLLINS (Seal)
ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 5th day of May, A.D. 2000, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, party to this indenture, known to be personally to be such, and acknowledged this Indenture to be her act and deed.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

DAVID W. BAKER
ATTORNEY AT LAW
NOTARY PUBLIC STATE OF DELAWARE
MY COMMISSION HAS NO EXPIRATION DATE
29 Del.C § 4323 (a) (3)

Notary Public (SEAL)

Received
MAY 08 2000
ASSESSMENT DIVISION
OF SUSSEX CTY

RECORDER OF DEEDS
RICHARD H. BELL, II
00 MAY -5 PM 2:42
SUSSEX COUNTY
DOC. SURCHARGE PAID

5,30/00

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

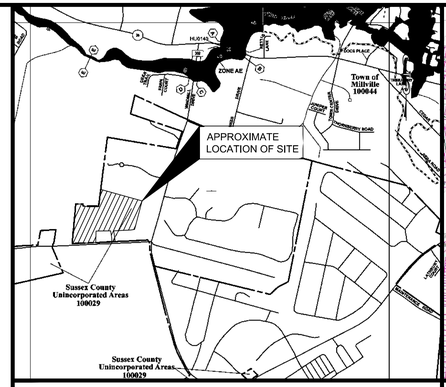
SHEET NO.: **EX-1**

# APPENDIX C

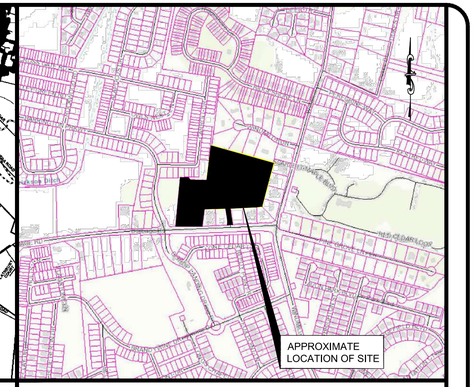
## PRELIMINARY PLANS

# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'




VICINITY MAP
SCALE: 1" = 1000'

## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW |
| ADJACENT RIGHT-OF-WAY | ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE |
| EXISTING SEWER | SS |
| PROPOSED SEWER | 8SS |
| EXISTING WATER | W |
| PROPOSED WATER | W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| RESOURCE BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | S |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | S |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 46 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 46 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 103,891.92 S.F. ± = 2.39 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 79,262.37 S.F. ± = 1.82 AC. ± |
| OPEN SPACE | = 353,662.68 S.F. ± = 8.12 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (46 UNITS)*(2 SPACES) = 92 PARKING SPACES
    PROVIDED: (46 UNITS)*(2 SPACES) + 6 OFF-STREET= 98 PARKING SPACES

15. RESOURCE BUFFER AREA:
    REQUIRED - 16,195 SF (0.37 AC)
    PROVIDED - 16,499 SF (0.38 AC) (ACCESS TO BUFFER WILL EXTEND FROM END OF PRIVATE DRIVE 1)

16. UTILITIES: WATER: TIDEWATER UTILITIES; SANITARY SEWER: SUSSEX COUNTY

17. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

18. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

19. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

20. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27; VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Hanna DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Dean W. Collins DATE 7-17-2024
OT COLLINS FAMILY LIMITED PARTNERSHIP

## CERTIFICATION OF PLAN ACCURACY

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS


| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |


DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |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FAX (302) 376-8834
WWW.CEA-DE.COM


**COVER SHEET** FOR **GLEN COVE**
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: **T-1**

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
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| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

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| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

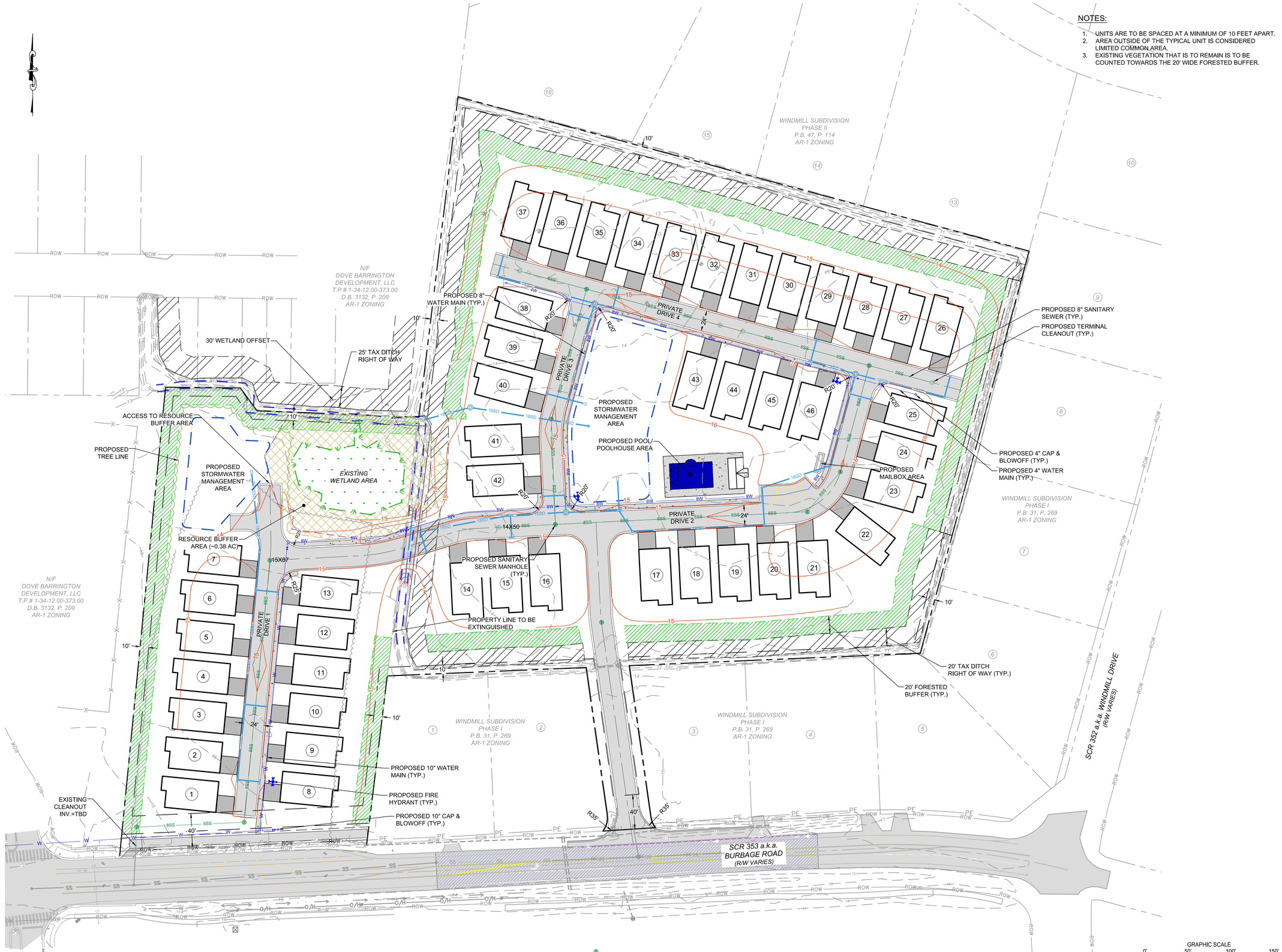
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.




DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

# APPENDIX D

## SUSSEX COUNTY CODE

## DESIGN CONSIDERATIONS (SECTION 99-9.C)

# GLEN COVE
## SUSSEX COUNTY
## DESIGN CONSIDERATIONS
## (SECTION 99-9.C)

### INTEGRATION OF THE PROPOSED SUBDIVISION INTO EXISTING TERRAIN AND SURROUNDING LANDSCAPE

The proposed project consists of 46 single family condominiums surrounded by existing landscaping/woods that will be maintained. Furthermore, landscape buffers will be provided to supplement the surrounding woods.

### MINIMAL USE OF WETLANDS AND FLOODPLAINS

There is a small portion of wetlands on the project property, no impact to the wetlands is anticipated. A resource buffer will be provided.

### PRESERVATION OF NATURAL AND HISTORICAL FEATURES

There are no existing natural or historical features on site.

### PRESERVATION OF OPEN SPACE AND SCENIC VIEWS

The project is surrounded by existing developments and residential areas, there are no existing scenic views from the property. Proposed open space will exceed the 30% requirement.

### MINIMIZATION OF TREE, VEGETATION AND SOIL REMOVAL AND GRADE CHANGES

During construction activities, care will be taken to preserve as many of the large trees around the perimeter of the property as well as any vegetation not impinging on the development. Proposed grades will closely match existing to tie-in to the surrounding developed areas.

### SCREENING OF OBJECTIONABLE FEATURES FROM NEIGHBORING PROPERTIES AND ROADWAYS

As stated above, the property is surrounded by existing woods which will be maintained and supplemented with additional landscaping.

### PROVISION FOR WATER SUPPLY

Water will be provided by Tidewater Utilities.

## PROVISION FOR SEWAGE DISPOSAL

Water will be provided by Sussex County.

## PREVENTION OF POLLUTION OF SURFACE AND GROUNDWATER

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## MINIMIZATION OF EROSION AND SEDIMENTATION, MINIMIZATION OF CHANGES IN GROUNDWATER LEVELS, MINIMIZATION OF INCREASED RATES OF RUNOFF, MINIMIZATION OF POTENTIAL FOR FLOODING AND DESIGN OF DRAINAGE SO THAT GROUNDWATER RECHARGE IS MAXIMIZED

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## PROVISION FOR SAFE VEHICULAR AND PEDESTRIAN MOVEMENT WITHIN THE SITE AND ADJACENT WAYS

The proposed layout of the road consists of twelve (12) foot travel lanes with curbing as well as five (5) foot sidewalks on one side of the road. The site entrance will be located off of Burbage Road within a 50-foot right-of-way through the Windmill Subdivision. A ten (10) foot wide shared use path is also proposed along a portion of the frontage for connection to adjacent ways.

# APPENDIX E

## ENVIRONMENTAL ASSESSMENT & PUBLIC FACILTY EVALUATION REPORT

# ENVIRONMENTAL ASSESSMENT
# &
# PUBLIC FACILITY EVALUATION REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
February 2025

_____
Seal

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# A. EXECUTIVE SUMMARY

## Introduction

This Report has been prepared in accordance with Chapter 115 – Zoning: Article XXV Supplementary Regulations, 194.3 Coastal Area of the Sussex County Code. This Report provides a summary of site-specific information and accompanies the Preliminary Plans submittal, dated April 30, 2024. This report is not required however the Applicant is voluntarily providing this information as they are proposing less than 50 units.

## Scope of Project:

The proposed project will include forty-six (46) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 46 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by two (2) stormwater management areas (wet detention ponds).

## B. ENGINEER'S REPORT

### Drainage and Stormwater Runoff

Stormwater quality will be met by managing the Resource Protection Event (RPv) and quantity management will be met by managing the Conveyance Event and the Flooding Event (Cv and Fv) this will be achieved through two (2) proposed stormwater management areas and will be denoted on the plans as Stormwater Management Area. The proposed Stormwater Management Areas will be wet detention ponds that will collect all of the runoff from the site. It will discharge into an existing ditch that is in good working condition.

The runoff from the areas that are being developed will be collected by several methods. Road runoff will be collected by the proposed storm drain system which outlets into the proposed stormwater management areas. The runoff from the proposed lots will also be collected and directed to the proposed stormwater management areas by downspouts or by grass lined swales.

### Potable Water

A connection to the existing 12-inch waterline at the intersection of Doves Landing and Burbage Road is expected. During the Sussex County approval process Water Plans will be submitted to Tidewater Utilities for approval as well. Once the Tidewater Utilities approves the connection, both domestic and fire flows will be provided.

Since 46 condominium units are being proposed an estimated consumption of 12,500 GPD is anticipated. (46 lots * 250 GPD = 11,500 GPD)

As it is expected to be served by the extension of the existing Tidewater Utilities facilities, no private wells are expected to be impacted.

### Wastewater Treatment and Disposal

The proposed site lies within an existing Sussex County Sanitary Sewer District, it is anticipated to connect and be served by an existing gravity sewer line situated within Burbage Road. Ordinance No. 38 Plans will be submitted to the County for approval.

As it is anticipated to be served by the extension of the existing gravity sewer line situated in the road, no impacts to the surrounding surface or ground waters are expected.

## Impacts to Surrounding Roadways

The Glen Cove development is proposed to contain 49 single family condominium units. Based upon the latest Institute of Transportation Engineers Traffic Generation Manual, a single-family home (Land Use 210) is anticipated to generate approximately 9.43 vehicle trips per day (1/2 entering the site, 1/2 leaving the site), and the site is anticipated to generate approximately 524 vehicle trips per day (262 entering, 262 leaving).

Per DelDOT's Service Level Evaluation Report (SLER), dated August 19, 2024, the project will generate less than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day and therefore the traffic impact was determined to be negligible. Due to this, an Area Wide Study (AWS) will be required in lieu of a Traffic Impact Study (TIS). Based upon the 2023 DelDOT Traffic Counts, Burbage Road currently carries 3,224 average annual daily vehicles within the project area. Therefore, it is anticipated that the Glen Cove development will not cause any adverse impacts to the surrounding road network.

## Endangered or Threatened Species

Field investigations were performed by Watershed Eco, LLC. on the Glen Cove and OT Collins parcels. Based upon field investigations, the existence of any endangered or threatened species is not expected. In addition, A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property.

## Preservation and Protection of Tidal and Non-Tidal Wetlands

A wetland delineation was performed by Watershed Eco Inc. in January 2024. Based on the delineation it was determined that approximately 0.20 Acres of wetlands exist on the site. Subsequently, there will be no disturbance of wetlands associated with development of this project. Per the Drainage and Buffer Ordinance, a wetland buffer will be established on the plans.

## Open Space and Buffers

Under the designed layout of the proposed Glen Cove development, approximately 8.12 acres are provided as open space. The total area of the site is 12.32 acres, which produces 66% of provided open space.

In addition, forested buffer strips are proposed around the project site. These forested buffers strips will be composed of a mix of 70% deciduous shade trees and 30% evergreen trees. They will also follow the Sussex County code requirement of having a minimum total of 15 trees for every one-hundred-foot length of buffer.

## Proposed Public and Private Infrastructure

The surrounding properties are currently provided with sewer and water.

## Economic & Recreational Benefits

The proposed development is anticipated to provide several economic benefits including:

- Increase to the tax base of Sussex County.

The proposed development is anticipated to provide several recreational benefits including:

- Amenity area with pool.
- An aesthetic wet pond.

## Historic and Cultural Resources

There is no known presence of any historic or cultural resources listed on the National register of Historic Places at the site.

## Affirmation of Conformance with Sussex County Comprehensive Plan

The proposed development has been designed in accordance to the current Sussex County Comprehensive Plan. The site is located within the Coastal Area, a designated Growth Area, which is among the most desirable locations in Sussex County for new housing and the proposed multifamily use is permitted within this Future Land Use Designation. Furthermore, the site is located within a Level 2 Investment Area, where growth is anticipated by local, county, and State plans, and the project is therefore consistent with the 2020 Strategies for State Policies and Spending.

## Actions Taken to Mitigate Proposed Impacts of the Development

All mitigation measures, where required, have been discussed in their foregoing, respective section.

# APPENDIX F

## DRAINAGE ASSESSMENT REPORT

# DRAINAGE ASSESSMENT REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
February 2025

_____
Seal

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# APPENDICES

A. SITE PHOTOGRAPHS

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D. GEOTECHNICAL INVESTIGATION LETTER

E. FOREST STAND AERIAL IMAGERY

F. IPAC LETTER

G. WETLAND DELINEATION – COLLINS PROPERTY

H. WETLAND INVESTIGATION SUMMARY LETTER

## A. EXECUTIVE SUMMARY

Sussex County Code Section 115-193-F specifically states, “If a resource buffer abuts or contains features such as ephemeral, intermittent or perennial streams which are not part of an established tax ditch and which convey drainage from or through a site proposed for development, a drainage assessment report shall be prepared by a registered Delaware Professional Engineer.” The wetland resource buffer directly abuts the Derickson Canal Tax Ditch system. Therefore, it is our opinion that the Drainage Assessment Report is not required due to the resource buffer’s proximity to the tax ditch.

However, we are providing this Drainage Assessment Report on a voluntary basis for Sussex County’s use. This Drainage Assessment Report has been prepared in accordance with Sussex County Code Section 115-193-F and the county provided checklist.

## B. PROJECT NARRATIVE

### Introduction:

The proposed Glen Cove project will include forty-six (46) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 46 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by two (2) stormwater management areas (wet detention ponds).

### Existing Conditions:

The existing properties are located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The property is bound by existing single-family homes on the north, south, and east, and the Bishops Landing Community to the west. The project consists of approximately 12.32 acres and is primarily woodlands with some grassed areas. The existing woodlands are not mature, as referenced in the Forest Stand History section below. There are existing wetlands to the northwest and tax ditches located along the perimeter of the site. The tax ditches outfall west offsite to the Derrickson Ditch via offsite tax ditches.

### Field Investigations and Findings

Field investigations were performed by Watershed Eco, LLC. in September 2021 on the Glen Cove parcel. The site is surrounded by the Derrickson Canal Tax Ditch which appears to be ephemeral in nature. There are no other wetlands or drainage conveyance features within the subject property. An additional wetland investigation was conducted by Watershed Eco, LLC. on the adjacent Collins property to the west on January 22, 2024. This investigation identified an intermittent ditch and palustrine forested wetlands which drain off-site to the north.

No signs of stream bank erosion, debris, or any impediments to conveyance were observed throughout the surrounding tax ditches. In addition, no sand or gravel deposits were observed. As such, no remedial action is necessary regarding the structural integrity of the surrounding tax ditch system. State and federal permitting may be required for the ditch crossing for the connector

road to the west. See Section C. regarding documentation of the investigations.

## C. SITE INVESTIGATION AND DOCUMENTATION

### Photographs:

Photographs of the site are provided in Appendix A.

### Channel Cross-Sections:

Cross-sections of the surrounding tax ditch are provided in Appendix B.

## D. ENVIRONMENTAL CONDITIONS AND HABITAT ASSESSMENT REPORT

### Land Types:

Active Agricultural Fields, hedgerows, drainage ditches, and mixed deciduous/coniferous forest.

### Period of Investigation:

Glen Cove: Wetland Investigation-September 20, 2021

Collins Property: Wetland Investigation-January 22, 2024

### Soil Conditions:

According to the USDA Soil Survey, the majority of the subject property is underlain with well drained Rosedale loamy sand (RoA) with lesser areas of poorly drained Mullica-Berryland complex (MuA) and Klej loamy sand (KsA) in the western portion of the property. The perimeter ditches were likely excavated to facilitate drainage of the property.

Additional Geo-technical borings were conducted by Hardin Kight Associates, Inc. in 2021. Based on the soil boring logs, the site consists of loamy sand soils with seasonal high groundwater ranging from 4.7 to 6.2 feet below the existing surface. The geotechnical investigation report is provided in Appendix D.

### Forest Stand History:

The Glen Cove parcel is predominantly wooded with mixed deciduous/coniferous forest cover. Based on aerial imagery the western portion of the property was cleared around 2012 and now consists of sapling loblolly pine and sweetgum. The eastern portion of the property is dominated by (12-24"DBH) northern red oak, southern red oak, and white oak with red maple, sassafras, and American holly in the understory. Shrub/herbaceous species consisted of highbush blueberry, sweet pepperbush, lowbush blueberry, Virginia creeper, and common greenbrier. A small, wooded area was observed in the northern portion of the Collins property. This area was dominated by 12-18" DBH loblolly pine and sweetgum. The understory consisted of red maple and black gum. Common shrub species observed included lowbush blueberry, common greenbrier, sweet pepperbush, and loblolly pine saplings.

Based on historical aerial imagery, neither parcel is part of a larger contiguous forested area. The on-site forest would not qualify as Forest Interior Dwelling Bird Habitat and would not be classified as mature or old growth. Aerial imagery is provided in Appendix E.

## Wetland Identification:

As stated above, there is evidence of wetlands existing on the project site. Watershed Eco, LLC. identified and flagged a palustrine forested wetland on the Collins property during the January 2025 field investigation. The area of wetlands is approximately 0.20 acres. The wetland directly abuts an intermittent ditch and drains off-site to the north.

Per Sussex County Code, the wetland area will be protected by a future Resource Buffer. Access to the resource buffer and wetland area will be available at the end of Private Drive 1 for future maintenance as illustrated on the Preliminary Plans. A Resource Buffer Management Report has been created to establish the protocol for protection of the resource.

Please see Appendix G for the Wetland Delineation – Collins Property and Appendix H for the Wetland Investigation Summary Letter performed by Watershed Eco, LLC.

## Endangered Species:

A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property. A copy of the IPAC is provided in Appendix F.

## E. EXISTING CONDITIONS MAPPING

Please see Appendix C for Existing Conditions Mapping.

# APPENDIX A

## SITE PHOTOGRAPHS

GLEN COVE PROPERTY

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

Photo 3: Man-made drainage ditch along southern property boundary, facing east.

Photo 4: Man-made drainage ditch along southern property boundary, facing west.

Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.

Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.

Photo 10: Upland forest cover in the northeastern portion of the property.

OT COLLINS PROPERTY

PHOTO 1: View looking east at southern portion of the property bordering Burbage Road.

PHOTO 2: View looking west at mowed field area in the southern portion of the property.

PHOTO 3: View looking north across mowed field in the central portion of the property.

PHOTO 4: View looking southeast across mowed field from the northwestern portion of the property.

PHOTO 5: Forest cover in the northwestern portion of the property.

PHOTO 6: Forested wetland in the northeastern portion of the property looking west.

PHOTO 7: Drainage ditch along the eastern boundary of the property.

PHOTO 8: View looking west at drainage ditch along the northern boundary of the property.

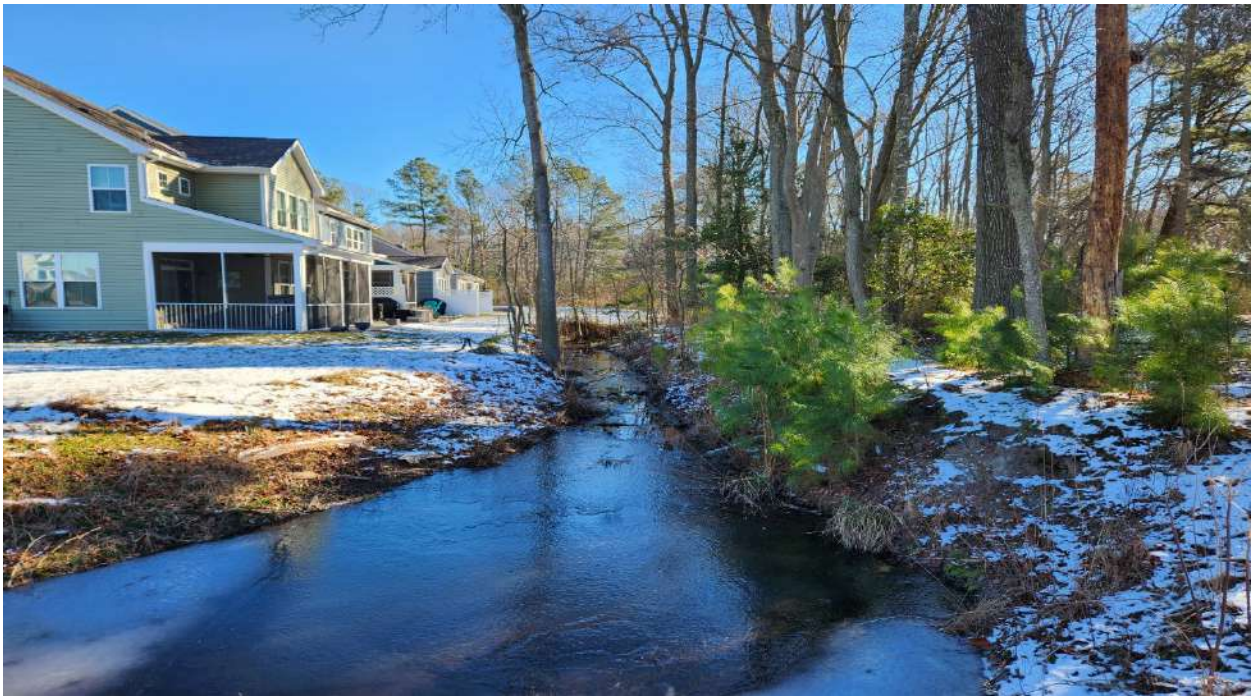

PHOTO 9: Residential properties north of the subject property, looking east.

PHOTO 10: View looking south across mowed field area bordering woodlands along the eastern property boundary.

# APPENDIX B

## DITCH CROSS SECTIONS

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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CIVIL ENGINEERING ASSOCIATES, LLC
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55 W. MAIN STREET
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PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# DITCH CROSS-SECTIONS
## PLAN VIEW
FOR
# GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

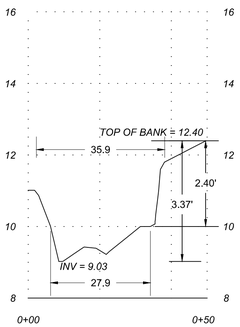
DATE: APRIL 30, 2024

DESIGNED BY:

APPROVED BY: RHS

FILE: P23101 - CONST DITCH

SHEET NO.: **CS-1**

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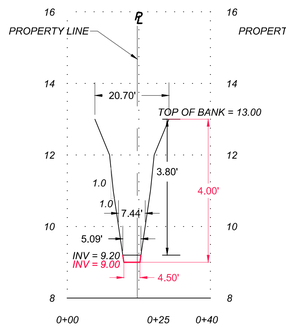


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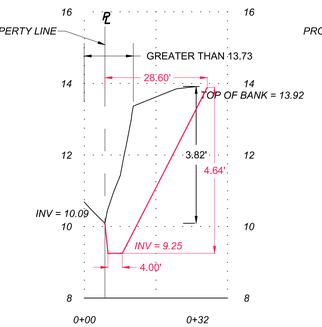


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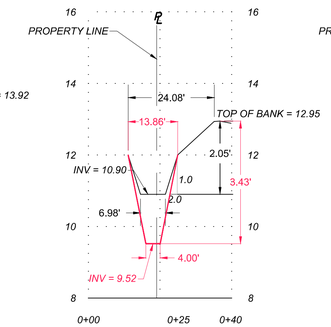


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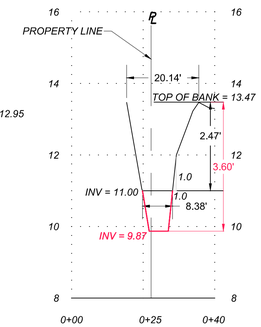


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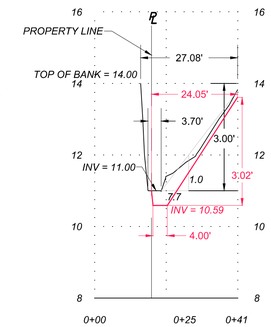


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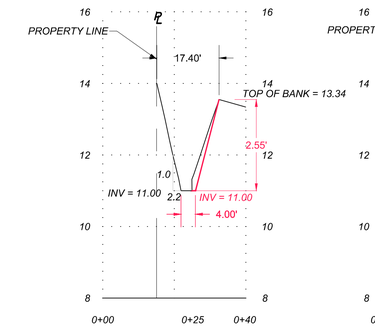


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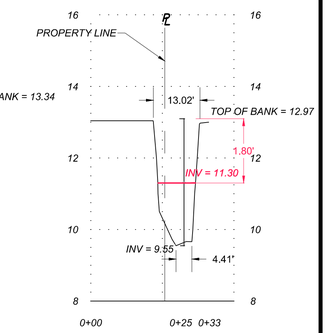


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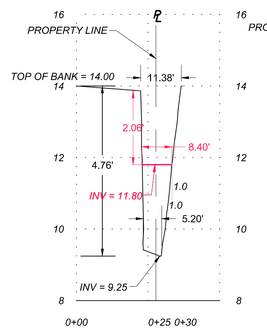


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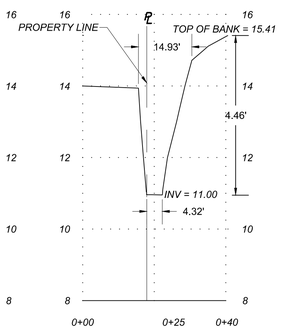


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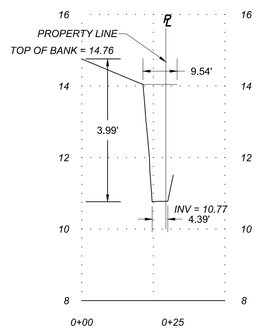


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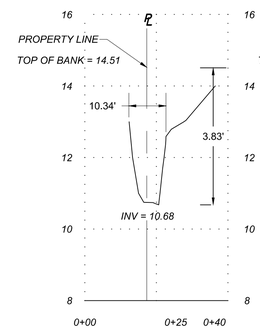


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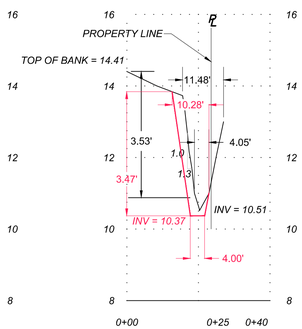


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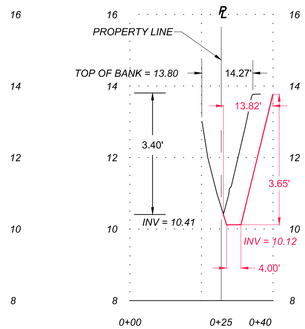


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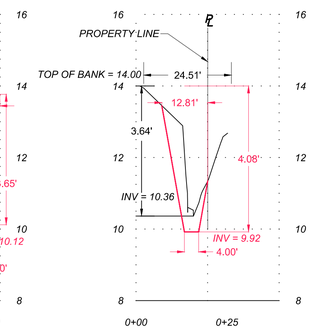


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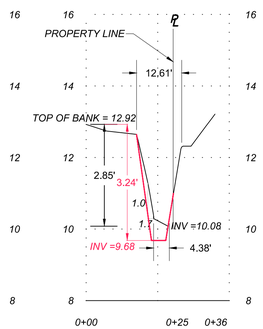


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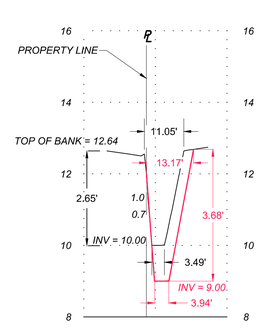
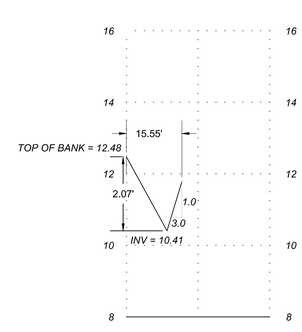



PROFILE
CROSS SECTION A17
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A19
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

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# DITCH CROSS-SECTIONS

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY:
APPROVED BY: RHS
FILE: CONST-DITCH
SHEET NO.: CS-2

# APPENDIX C

## EXISTING CONDITIONS MAPPING

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

# APPENDIX D

## GEOTECHNICAL INVESTIGATION LETTER

HARDIN
KIGHT
ASSOCIATES,
INC.

December 30, 2021 Our Job Number: 21855

**GULFSTREAM DEVELOPMENT, LLC**
**27 Atlantic Avenue**
**Ocean View, Delaware 19970**

Attention: Mr. Bob Harris

Reference: Glen Cove II
SWM Geotechnical Investigation
Sussex County – Millville, Delaware

Dear Mr. Harris:

As requested by Mr. Al Ruble, we have completed a limited subsurface investigation of the soil and groundwater conditions for the stormwater management (SWM) pond proposed for construction in the Glen II Community, planned for development in Millville, Delaware. This investigation was performed to determine the depth to estimated seasonal high groundwater (SHG) and analyze the characteristics of the underlying soils with respect to the design of the stormwater management pond. This investigation included drilling five (5) hand auger probes, and review of available geological and soil survey literature for the subject site. Our findings and analysis are presented herein.

For this investigation we were provided with an electronic copy of a site plan entitled *Soil Testing Locations for Glen Cove II*, prepared by Civil Engineering Associates (CEA), dated November 1, 2021. The site plan illustrates the layout of the proposed development and roadways, the location of the SWM Pond, and includes existing and proposed grades. The site plan was used in preparation of this report.

## SITE DESCRIPTION

The site is located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The site consists of approximately 10 acres, most of which is wooded and contains light underbrush. The property is bound by existing single-family homes on the north, south and east, and the Bishops Landing Community to the west. The SWM Pond is proposed in the northwest corner of the site.

From review of the ground surface elevations provided, topographically, the site is relatively flat in surface elevation, at approximately 13 feet above Mean Sea Level (MSL). The natural site surface drainage is generally from south to north. At the time of this investigation, the ground surface was dry and stable.

12515 Caterpillar Lane • Bishopville, MD 21813 • 410-352-5001 • FAX 410-352-3228 • www.hardin-kightassociates.com

## PROPOSED CONSTRUCITON

One SWM Pond is proposed. The pond is proposed as a wet pond, with a top of berm at El. 13 and a pond bottom at El. 6. The pond will receive water from 2 stormwater pipes, and includes an outfall, discharging into an existing drainage ditch located along the west property boundary. From review of the proposed grades shown on the previously referenced site plan, excavations of approximately 7 to 8 feet will be required for pond construction.

## INVESTIGATION

In order to evaluate the soil and groundwater conditions in the area of the pond, five (5) hand-auger probes were drilled. The auger probes were advanced within the proposed SWM ponds at locations established by survey, provided by CEA. The auger probes are labeled as Auger Probes T-1 through T-5. Ground surface elevations were provided by CEA at each staked location. The auger probes were drilled to depths ranging from 6.5 to 8 feet below the existing ground surface. The soil conditions encountered were visually identified in general accordance with the Unified Soil Classification System (USCS), and United States Department of Agriculture (USDA) classification system. The locations of the auger probes are shown on the attached Auger Probe Location Plan, labeled as Figure 1, which is an altered version of the previously referenced site plan prepared by CEA.

Additionally, we have reviewed the monthly depth to groundwater readings for Monitoring Well Qi31-03, taken from the *Delaware Geological Survey* website. The depth to groundwater was at the normal seasonal high in January 2021. The depth to groundwater at Well Qi31-01, located approximately 5 miles west of the site, was approximately 5 feet below the normal SHG in September 2021. The monthly well report is attached for your reference.

## GEOLOGY

Based on the *Geologic Map of the Bethany Beach and Assawoman Bay Quadrangles GM-18* (Ramsey and Tomlinson, 2012), the the geologic unit underlying the site at the surface is the Ironshire Formation.

The Ironshire Formation is described as pale yellow to light gray, fine to very coarse sand. Very coarse sand to fine gravel are a common constituent of the unit, especially near its base. Thin, light gray, silty clay beds occur but are not present at all localities. Based on the profile provided in the above referenced map, it unconformably overlies the Omar Formation. Where the Ironshire Formation overlies the Omar Formation, the boundary is not always clear, but is commonly marked by a coarse sand or pebbly sand at the base of the Ironshire Formation. The estimated thickness at the site location is about 20 feet thick.

The top of the Omar formation is described as a gray to pale yellow, fine to very fine, clean to slightly silty Sand, with rare very fine beds of silt. These silty sands are underlain by a gray to light greenish gray, silty clay to silty fine sand with scattered thin beds of oyster shells. In places, there is a 2- to 10-foot thick bed of medium to coarse, relatively clean sand

underlying the shelly, silty clay. Underlying the shelly, silty clay or the medium to coarse sand, where present, in the areas where the Omar is thickest, there is a 10- to 40-foot-thick layer of greenish-gray, compact, silty clay to clayey silt. Beneath this silty clay, if present, is a 3- to 5-foot-thick bed of very dark-gray to black, organic-rich, sandy silt to silty clay. The bottom, up to 5 feet of the unit, normally consists of 1 to 3 feet of gray to very dark-gray fine to coarse silty sand with scattered laminae, to thin beds of peat composed of sand to gravel-size plant fragments, overlying light to dark gray, coarse to very coarse, sand.

## SOIL SURVEY

The information in this section is from the *Web Soil Survey* which was accessed on December 29, 2021. Soil Survey information can be used for general planning, onsite investigation is needed to supplement this information. Soil Survey information is limited to the upper most 6 feet in any given location.

Based on the Sussex County, Delaware survey the soils units on site are:

- The Klej loamy sand, 0 to 2 percent slopes (KsA) has one major component, the Klej component which makes up 70 percent of the unit. The minor components in the Klej loamy sand are the: Galloway (10%), Berryland, drained (5%), Hammonton (5%), Hurlock, drained (5%), and Runclint (5%). This soil does not meet hydric criteria.

- The Mullica-Berryland complex, 0 to 2 percent slopes (MuA) has four major components: the Mullica, drained (26%), the Mullica, undrained (16%), the Berryland, drained (24%), and the Berryland, undrained (14%). The minor components are: Klej (10%), Askecksy, drained (5%), and Galloway (5%). This soil meets hydric criteria.

- Rosedale loamy sand, 0 to 2 percent slopes, (RoA). It has one major component, the Rosedale (75%). The minor components include: Evesboro (10%), Klej (5%), Hambrook (5%), and Galloway (5%). This soil does not meet hydric criteria.

The following descriptions, properties, and limitations are based on Sussex County, Delaware survey area data, Version 22, August 26, 2021, with aerial images photographed between November 21, 2018 and March 12, 2019. The major components (greater than 10%) are described below. The minor components are not addressed in this report.

The Klej component parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. The natural drainage class is described as somewhat poorly drained with water movement in the most restrictive layer being moderately high. It has an apparent water table that exists at 12 inches during February. This soil typically does not flood or pond. The normal upper limit of the water table from June through October is greater than 6.0 feet. It typically has a seasonal upper limit of water saturation between 0.8 to 1.7 feet from December to April. The pH is typically between 4.3 and 5.5, and the organic matter content in the surface horizon is about 0 percent.

The Mullica parent material consists of sandy and loamy fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content in the surface horizon is about 16 percent. The pH is typically between 4.0 and 6.5. The shrink-swell potential is low. The potential for frost action is low.

The drained component has rare ponding events throughout the year. It typically has a seasonal zone of water saturation from January through March between 0 and 8 inches. The undrained component has frequent ponding events for long periods during January through April, and occasionally during the remaining part of the year. It typically has a seasonal zone of water saturation from December through April, between 0 and 8 inches. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 66 percent.

The Berryland, parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content of the surface horizon is about 11 percent. The pH is typically between 4.3 and 6.5. The shrink-swell potential is low as is the potential for frost action.

The drained component has rare ponding events during November through May. It typically has a seasonal zone of water saturation between 0 and 8-inches during January, February, and March. The undrained component has frequent ponding events for long periods during January through April, and occasionally for the remaining part of the year. It typically has a seasonal zone of water saturation between 0 and 8 inches, from December through May. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 68 percent.

The Rosedale parent material consists of sandy eolian deposits over fluviomarine sediments. The undisturbed hydrologic soil group is A. The natural drainage class is described as well drained. Water movement in the most restrictive layer is moderately high. This unit is typically not flooded, nor does it pond. The upper limit of the water table is greater than 6 feet, and typically has a seasonal upper limit of water saturation between 3.3 to 6.0 feet during January, February, March, and April. The pH is typically between 4.3 and 6.5. Organic matter content in the surface horizon is about 1 percent.

The following limitations and restrictions described below may be mitigated by following the recommendations provided in this report and our recommendations during construction.

| Limitations for | Klej | Mullica | Berryland | Rosedale |
|---|---|---|---|---|
| Infiltration Systems | Severely Limited<br>Wetness<br>adsorptive capacity | Severely Limited<br>wetness<br>water movement | Severely Limited<br>wetness<br>water movement | Deep -Severely<br>Shallow – Somewhat<br>wetness<br>water movement<br>adsorptive capacity |
| Unlined Retention Systems | Somewhat Limited<br>water movement<br>wetness interfering with installation | Somewhat Limited<br>wetness interferes with installation<br>water movement | Somewhat Limited<br>water movement<br>wetness interferes with installation | Somewhat Limited<br>wetness interferes with installation<br>insufficient groundwater<br>water movement |
| Lined Retention Systems | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface,<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement<br>insufficient groundwater |
| Embankments | Very Limited<br>depth to saturated zone<br>piping<br>seepage | Very Limited<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Very Limited<br>piping<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Somewhat Limited<br>Seepage<br>depth to saturated zone |
| Aquafer Fed Excavated Ponds | Very Limited<br>Unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls<br>Depth to saturated zone |
| Pond Reservoir Areas | Very Limited<br>seepage | Very Limited<br>Seepage | Very Limited<br>seepage | Very Limited<br>seepage |
| Shallow Excavations | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls | Very Limited<br>depth to saturated zone<br>unstable excavation walls<br>Undrained areas are subject to ponding. | Very Limited<br>depth to saturated zone | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls |
| Shrink-swell Potential | Low | Low | Low | Low |
| Frost Action Potential | Low | Low | Low | Low |
| Corrosion Risk Uncoated Steel | High | High | High | Moderate |
| Corrosion Risk Concrete | High | High | High | High |

## FINDINGS

The findings at the auger probes are consistent with the geology and soil survey as described above. Approximately 3 to 20 inches of topsoil was present at the existing ground surface. Below the topsoil, the soil conditions consist of sand with varying amounts of silt. The soils generally consist of material visually classified as predominately Poorly-graded Sand with Trace Silt (USCS SP/SM; USDA Loamy Sand), Poorly-graded Sand with Silt (USCS SM; USDA Sandy Loam), Silt (USCS ML; USDA Silt Loam), and Poorly-graded Sand (USCS SP;

USDA Sand). Detailed descriptions of the soil conditions encountered can be found on the attached auger probe logs.

At the time of drilling the probes, water was encountered at a depth ranging from approximately 5 to 6 feet below the existing ground surface. Subsequent groundwater readings were taken after 7 days, with groundwater recorded at depths of 4.7 to 6.2 feet below the existing site surface, corresponding to elevations ranging from 7.5 to 8.4 feet above MSL.

**ANALYSIS / DISCUSSION**

Based on our findings, the seasonal high groundwater (SHG) is estimated to be approximately 2.7 to 4.5 feet below the existing site surface, corresponding to approximately elevation 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Our estimate of the SHG at the auger probe locations are based on the field measurements of the depth to groundwater, soil coloring and mottling, and should be considered approximate. The results of the groundwater readings and Hardin-Kight Associates professional opinion of the estimated SHG depth are summarized as follows:

| Auger Probe Number | Existing Surface Elevation (MSL) | Depth To Water Below Surface At Completion (Ft.) | Depth To Water Below Surface After 7 Days (Ft. - MSL) | Estimated Depth Below Surface to SHG (Ft. - MSL) | Estimated Depth Below Surface To Normal Water (Ft. – MSL) |
|---|---|---|---|---|---|
| T-1 | 13.32 | 6.25 | 5.71 – 7.61 | 3.3 – 10.0 | 4.0 – 9.3 |
| T-2 | 12.59 | 5.00 | 4.75 – 7.84 | 3.0 – 9.6 | 3.5 – 9.1 |
| T-3 | 12.76 | 5.50 | 5.26 – 7.50 | 2.7 – 10.0 | 3.5 – 9.3 |
| T-4 | 12.85 | 5.75 | 5.30 – 7.55 | 3.0 – 9.8 | 4.5 – 8.9 |
| T-5 | 14.64 | 5.25 | 6.19 – 8.45 | 4.5 – 10.1 | 5.0 – 9.6 |

Considering that the normal SHG is estimated to be within a few feet of the existing site surface, wet pond construction is feasible. Based on our findings, we do not anticipate that an impervious liner will be required to maintain water within a few feet of the existing surface. Although, seasonal groundwater variations of approximately 2 feet should be anticipated between the traditional wet and dry seasons.

From our analysis, and assuming wet pond construction, the groundwater levels found on this site will likely be above the pond bottom during construction. The contractor should be prepared to control groundwater during pond excavation. Cut subgrades below the groundwater will be susceptible to instability and softening. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

**PRELIMINARY RECOMMENDATIONS**

In consideration of the above data, we have prepared the following preliminary recommendations for your review and consideration. These recommendations are considered preliminary, pending our review of the final grading plans and construction drawings. Once the grading plans and construction drawings are finalized, our office should be contacted for additional review and comment.

1. We recommend that wet pond storage practices be used for stormwater collection on this site.

2. We recommend that the SWM ponds be designed and constructed in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

3. We recommend that both permanent fill and cut slopes be constructed on a maximum gradient of 3:1 (horizontal to vertical). Flatter slopes are suggested where possible to aid in the establishment of vegetative cover, reduce the potential for erosion, and facilitate maintenance.

4. We recommend that the contractor be prepared to control groundwater during pond basin excavation.

5. We recommend that the SWM pond excavation be monitored by Hardin-Kight Associates, Inc. (HKA) for slope seepage and stability. If slope seepage resulting in slope instability is observed, supplemental stabilization practices (ie; underdrains, drainage blankets, and rip-rap) may be required. HKA will provide recommendations and details during construction, as needed.

6. We recommend that the material proposed for use backfill placed around stormwater inflow and outfall pipes, meet the USC classification of SP, SM SP/SM, SC, CL, CL/ML or CH, be free of deleterious materials, and be approved by Hardin-Kight Associates, Inc. (HKA).

7. We recommend that the pipe trench backfill be placed in uniform 8-inch thick layers and be compacted to a minimum of 95% of the maximum dry density as determined in accordance with the standard moisture density relationship test (ASTM D-698/AASHTO T99).

8. We recommend that each layer of trench backfill, be tested and approved prior to placement of the succeeding layer. We recommend that fill which fails to meet the minimum compaction requirements be compacted and reworked, until satisfactory compaction is obtained.

9. We recommend that the construction of the SWM Ponds be monitored by HKA.

## CONCLUSIONS

Based on our findings, the SHG at the auger probe locations is estimated to be at an elevation of approximately 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Groundwater will likely be encountered above the pond bottom during construction. The contractor should be prepared to control groundwater during pond basin excavation. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378,* latest editions.

## LIMITATIONS

This preliminary report was prepared in accordance with generally accepted practice for geotechnical engineering in this area. It is intended for the use of the client for the specific site, as shown on the Auger Probe Location Plan.

The soil and water conditions discussed herein represent the conditions encountered at the locations of the exploratory auger probes as shown on the Auger Probe Location Plan. Variations in the soils and groundwater between the auger probe locations, and below the depths explored, should be anticipated.

A copy of the auger probe logs and location plan are enclosed for your reference. If you have any questions concerning this report, or if we can be of any further assistance at this time, please feel free to contact us.

Very truly yours,

**HARDIN-KIGHT ASSOCIATES, INC**

Paul M. Till

Justin A. Frizzell, P.E.

JUSTIN AMASA FRIZZELL
LICENSE
No. 16715
DELAWARE
PROFESSIONAL ENGINEER

Cc: Al Ruble – Awruble@aol.com
Ron Sutton - CEA

# APPENDIX E

## FOREST STAND AERIAL IMAGERY

1937 Aerial Photograph.

1954 Aerial Photograph.

1968 Aerial Photograph.

1992 Aerial Photograph.

1997 Aerial Photograph.

2002 Aerial Photograph.

Glen Cove

Sussex County, DE

2012 Aerial Photograph

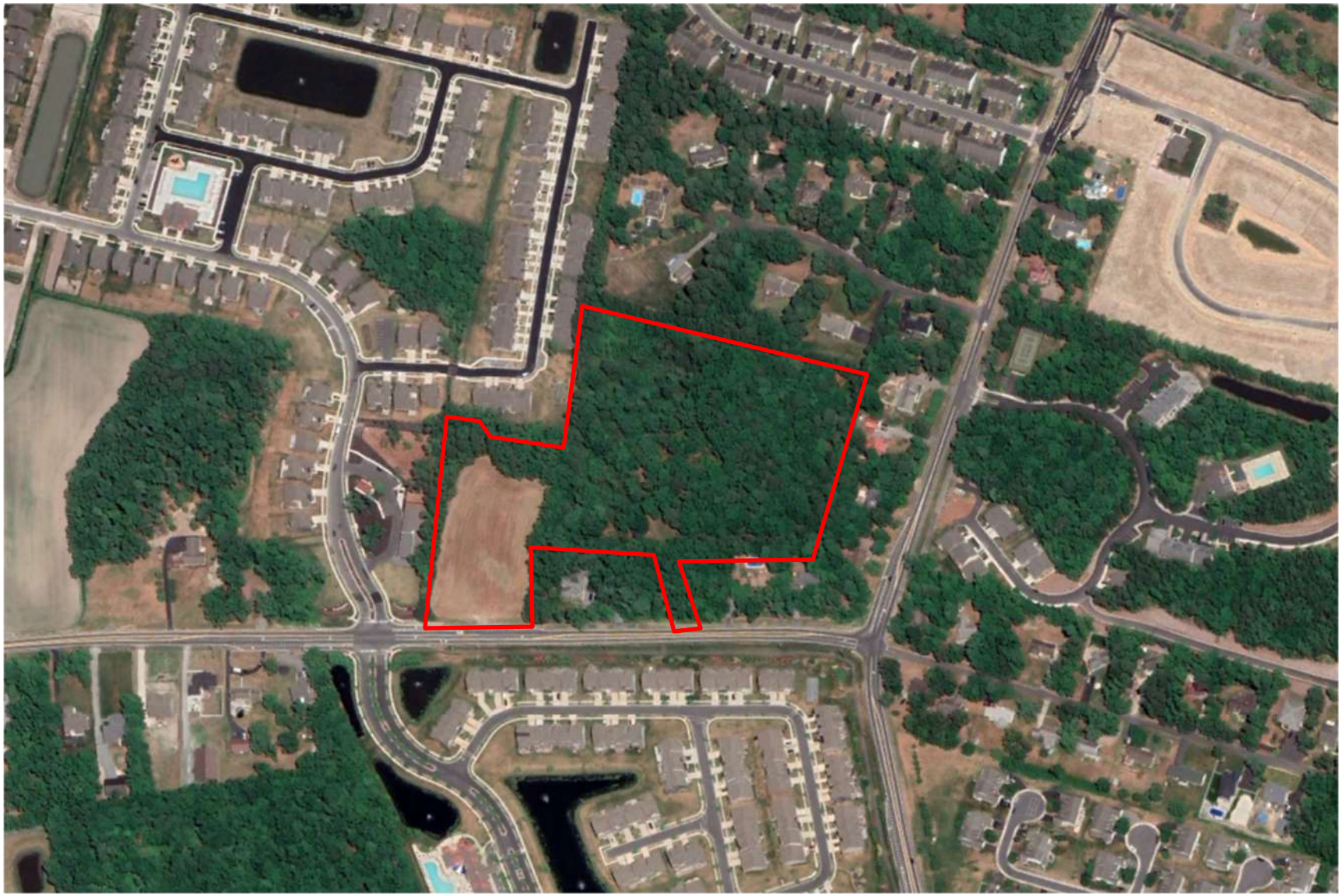
Glen Cove

Sussex County, DE

2017 Aerial Photograph

Glen Cove

Sussex County, DE



2021 Aerial Photograph

Glen Cove

Sussex County, DE

2024 Aerial Photograph

# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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Executive Summary ..... 1

Contents ..... 2

Definition of Jurisdictional Waters and Wetlands ..... 3

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

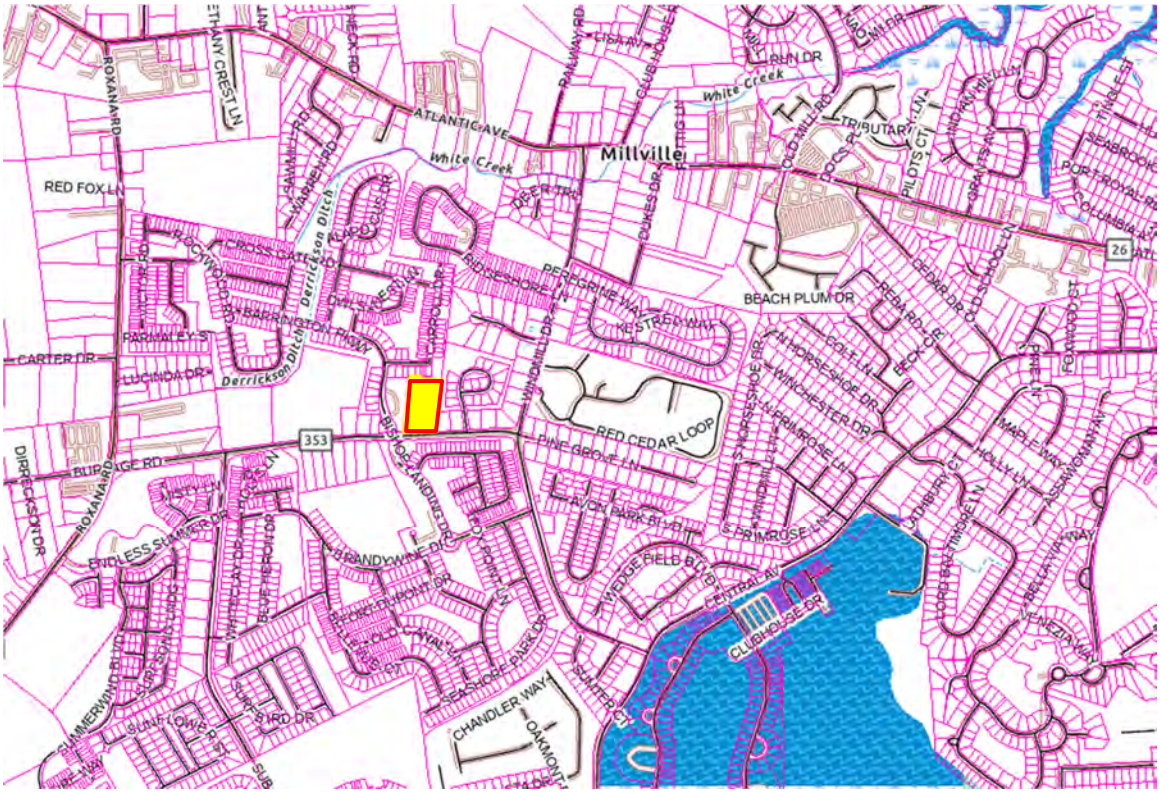



Figure 1: Location Map

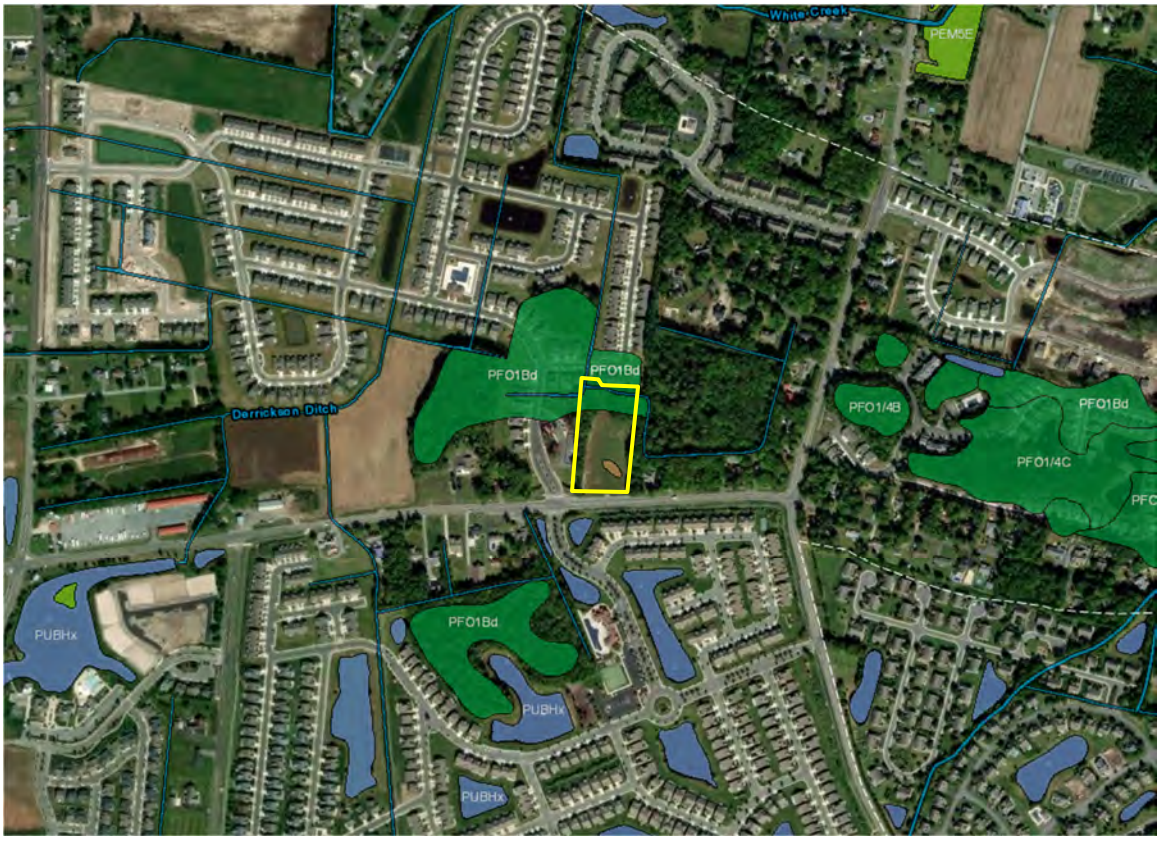



Figure 2: National Wetland Inventory Map.

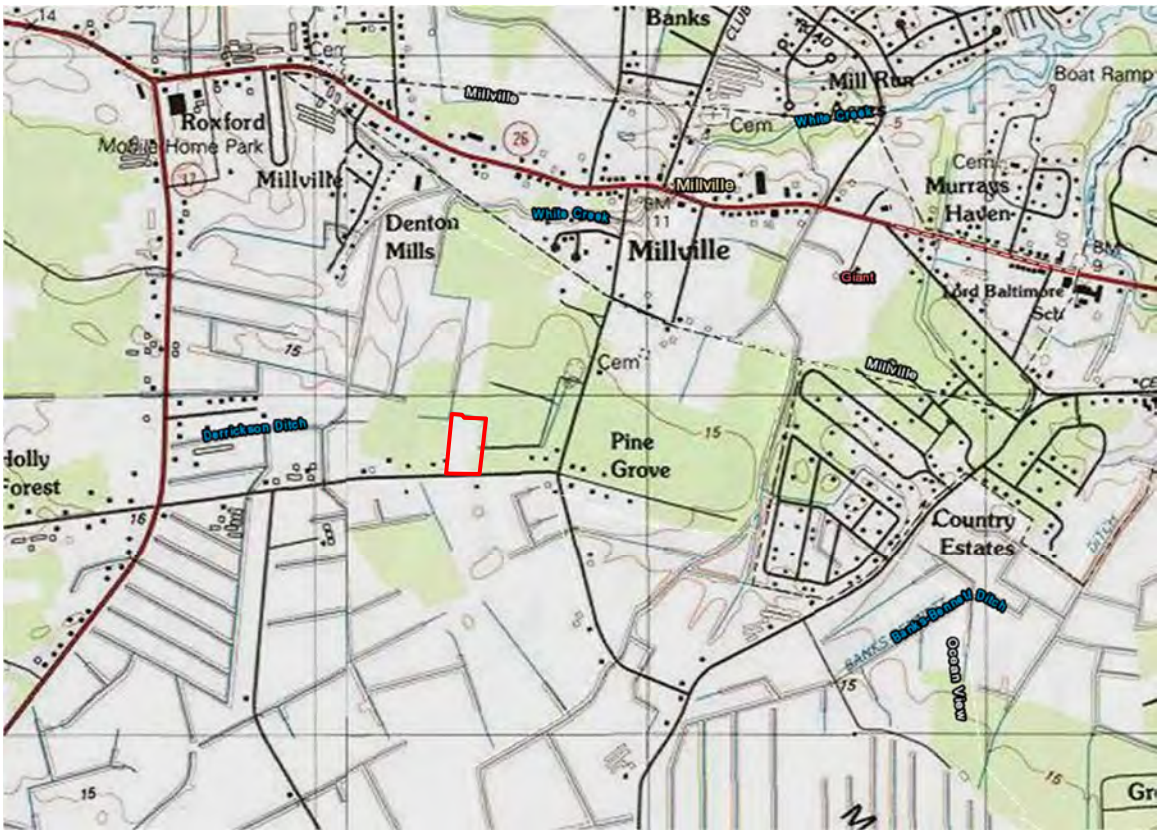



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

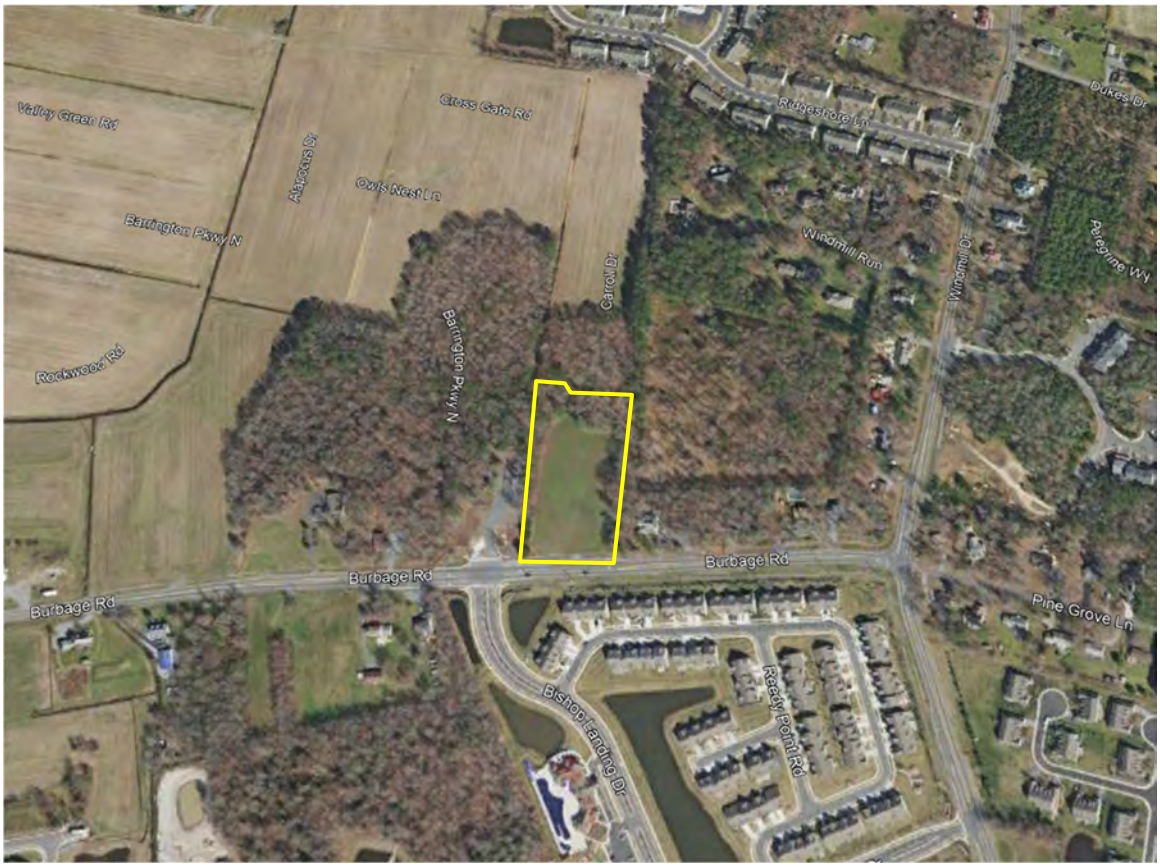



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

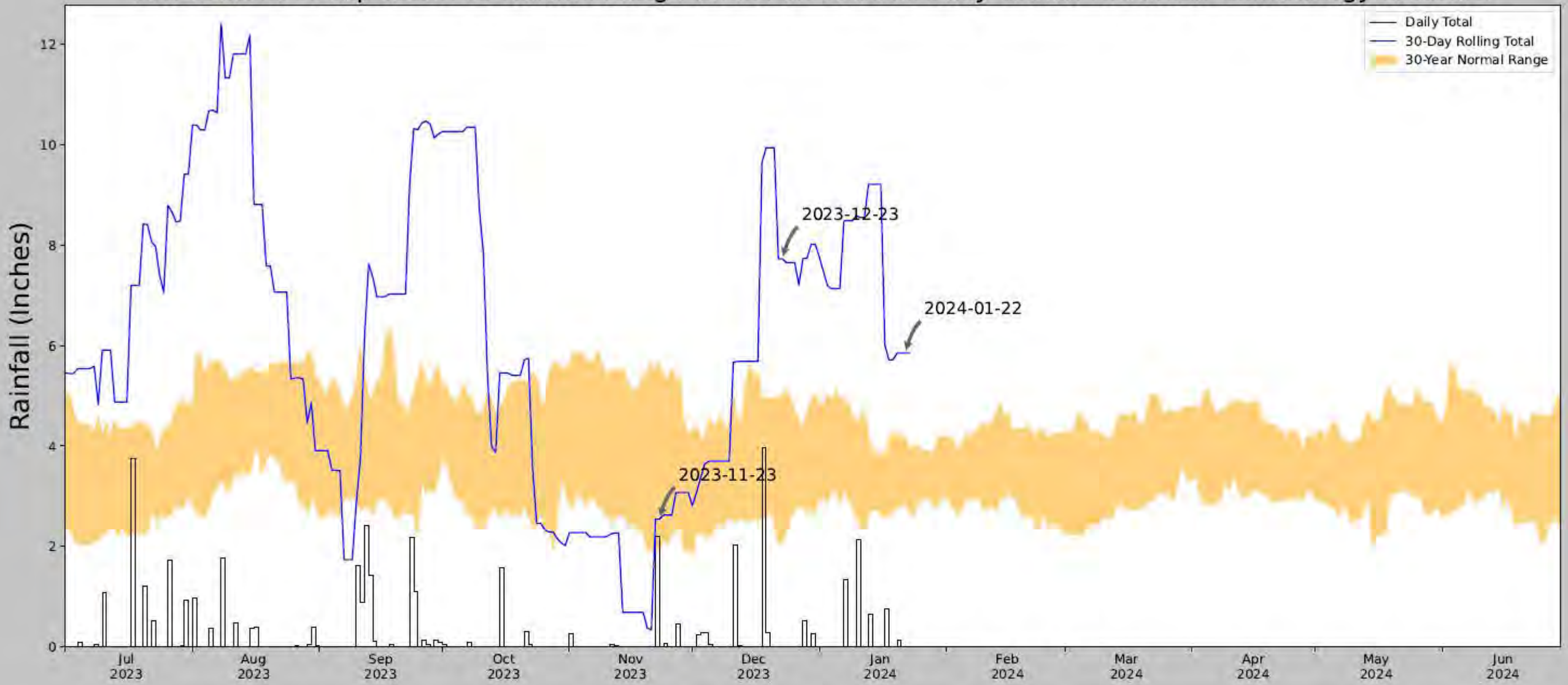
View looking west at intermittent ditch at the northwestern boundary of the property.

Intermittent ditch draining northerly, off-site.

# Appendices

Collins Property
Wetland Delineation Map
Legend
Flag ID#
Property Boundary
Waters
Wetlands
Barrington Pkwy N
Barrington Pkwy N
Barrington Pkwy N
Burbage Rd
Burbage Rd
Burbage Rd
Burbage Rd
Google Earth
Image © 2024 Airbus
N
200 ft

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ___ No ✓ |
| Hydric Soil Present? | Yes ___ | No ✓ | |
| Wetland Hydrology Present? | Yes ___ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ___ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

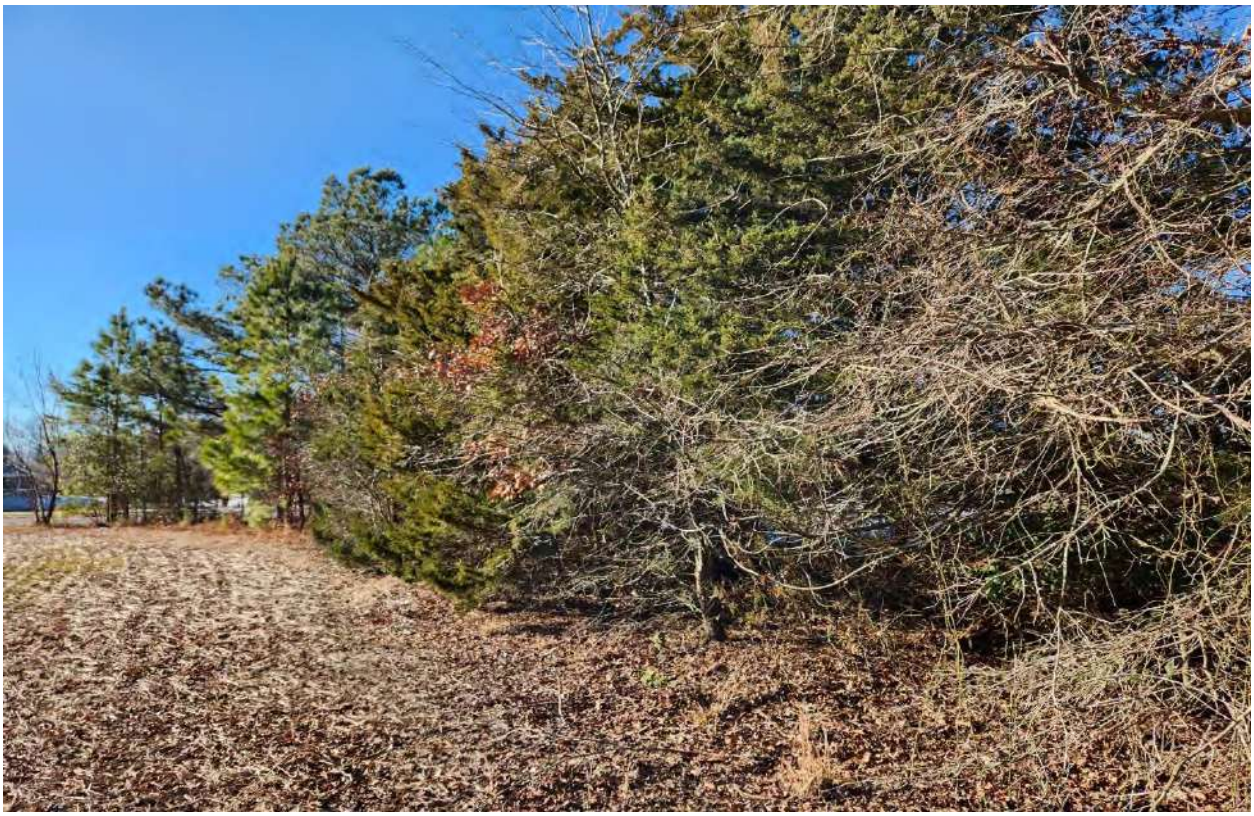
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

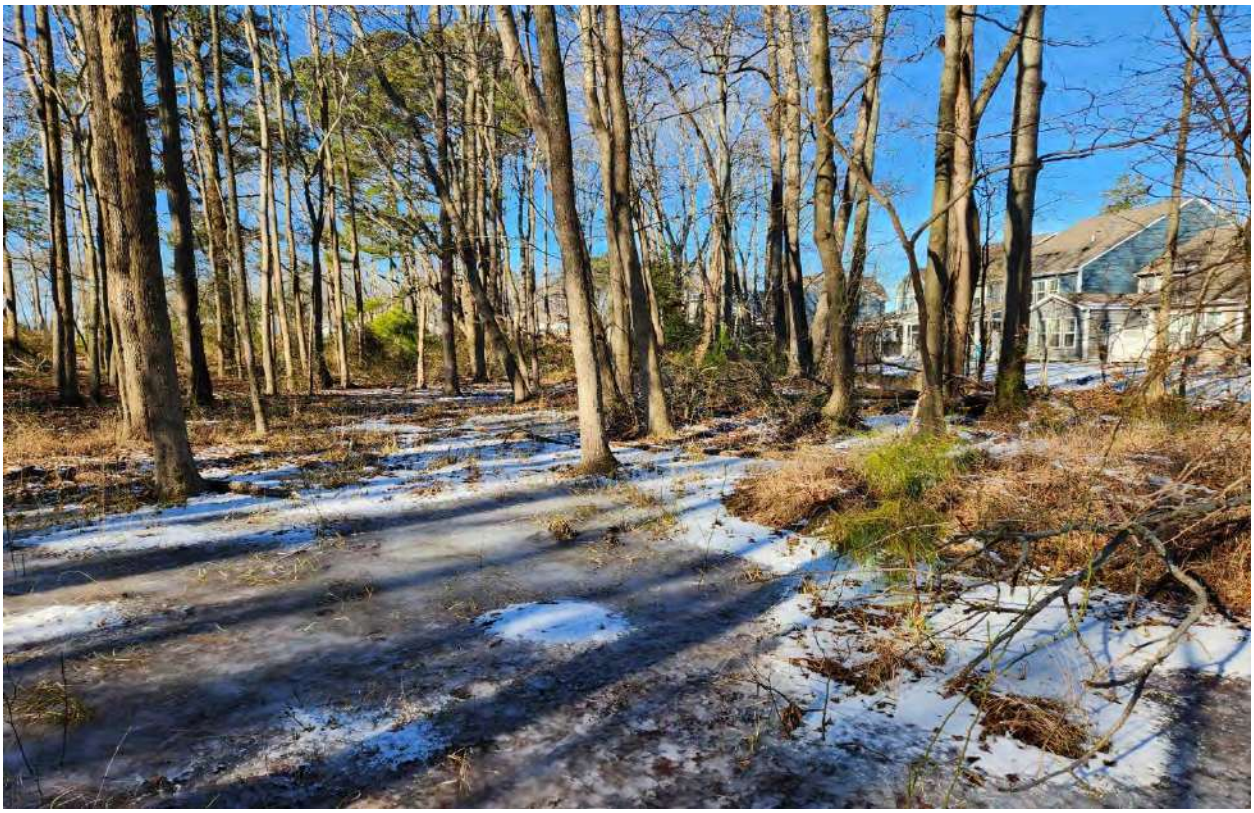
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

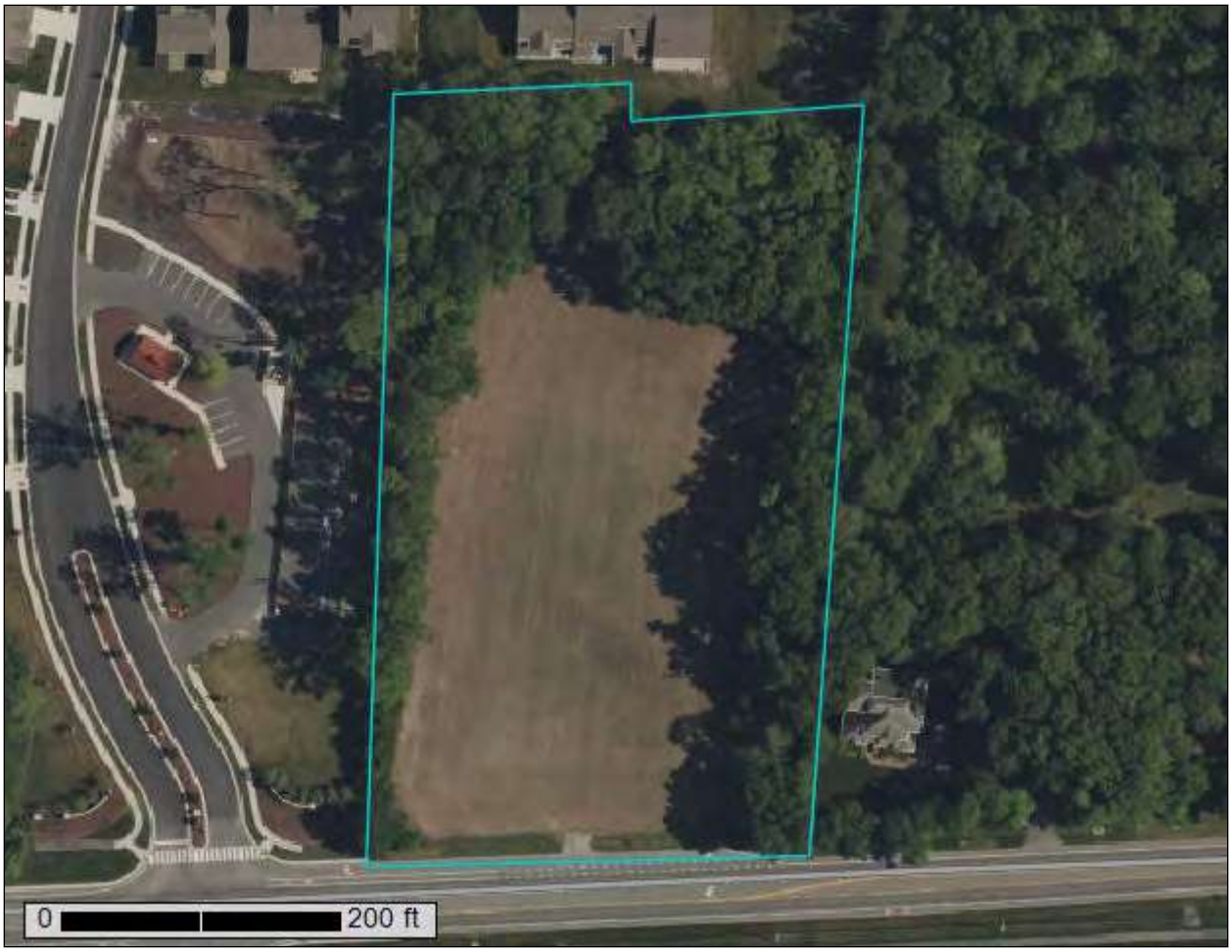
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:993 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

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# APPENDIX H

## WETLAND INVESTIGATION SUMMARY LETTER

*www.WatershedEco.com*
*Creating Value*

September 23, 2021

Gulfstream Glen Cove, LLC.
27 Atlantic Avenue
Ocean View, DE 19970

Attention: Mr. Robert Harris

Subject: Wetland Investigation Summary Letter
Glen Cove
36199 Burbage Road, Ocean View, DE 19970
Tax Parcel: 134-12.00-374.01

Dear Bob:

Watershed Eco, LLC. investigated the above referenced property on September 20, 2021 for the purpose of conducting a wetland delineation within the 3.88 acres subject property. The wetland delineation followed the criteria in the 1987 Corps Delineation Manual (Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Additionally, I have reviewed the National Wetland Inventory Map, National Hydrographic Dataset, U.S. Geological Survey mapping, and USDA Soil Survey mapping.

The field investigation and review of mapping confirmed that the site is entirely wooded with a man-made ditch excavated around the perimeter of the property as depicted on the National Hydrography Dataset, NWI and USGS maps (Figures 2-4). This ditch network drains westerly off-site then north to White Creek, a tributary of Indian River Bay. No wetland features were observed within the boundaries of the subject property.

*302-464-0831*
*Jim@WatershedEco.com*

*www.WatershedEco.com*
*Creating Value*

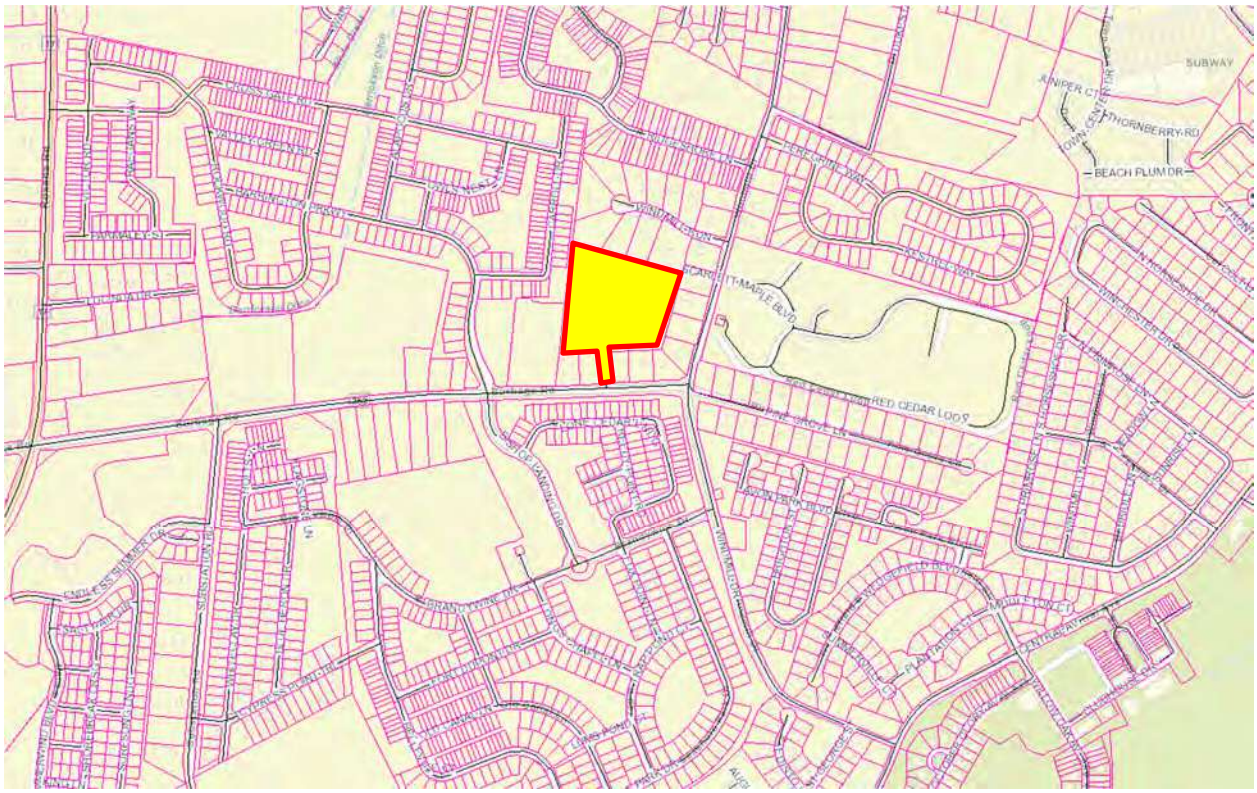



**Figure 1: Location Map.**

**Figure 2: National Hydrography Dataset Map.**

*302-464-0831*
*Jim@WatershedEco.com*

The National Wetland Inventory Map depicts a blue-line drainage feature along the northern, eastern, southern and southwestern property boundaries. This ditch extends off-site to the west, then drains north to White Creek.

Figure 3: NWI Map

The USGS topo map depicts a similar ditch network to the NWI and NHD map.

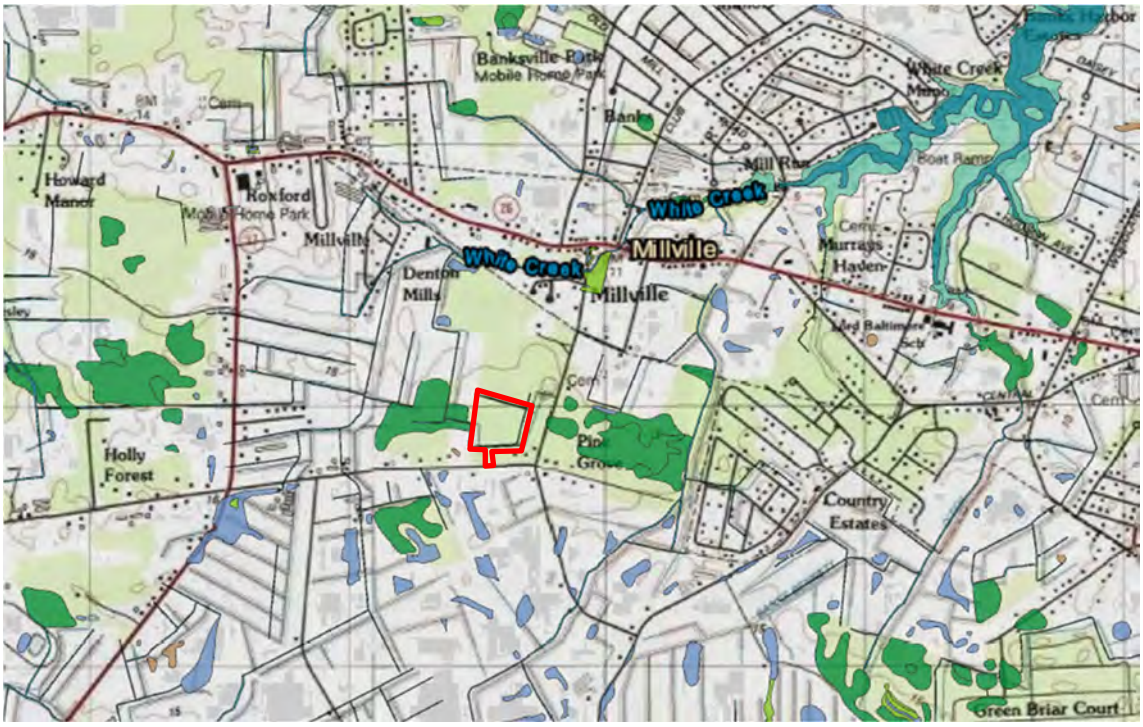



Figure 4: Topo Map

The current USDA Soil Survey Mapping (Figure 5) depicts the majority of the site is underlain with well-drained Rosedale loamy sand (RoA). Areas of very poorly-drained Mullica-Berryland complex (MuA) are identified in the northwestern and southern portions of the property and a small area of Klej loamy sand in the southwest.

**Figure 5: Soil Map**

Figure 6: Aerial Photograph

The subject property was dominated by a mixture of upland and facultative tree species consisting of northern red oak, southern red oak, white oak, and lobolly pine. Understory species observed included sweetgum, red maple, sassafras, and American holly. Common shrub-herbaceous species included sweet pepperbush, American holly, highbush blueberry, lowbush blueberry, and Virginia Creeper.

No visible indicators of standing water or saturated soil conditions were observed within the majority of the subject property. Standing water was limited to the man-made ditch in the south-central portion of the property.

The man-made drainage ditches observed within the property were constructed in uplands and no available mapping indicates these features were ever associated with a tributary stream. In addition, these ditches appear to be ephemeral in nature. No base flow of water was observed within any of the ditches at the time of the site investigation. Standing water was observed within the ditch in the south-central portion of the property. According to the U.S. Army Corps of Engineers Antecedent Precipitation Tool data, normal hydrological conditions were present at the time of the site investigation. Based on observations during the field investigation it

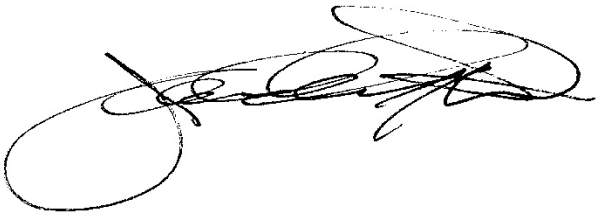
appears that the drainage ditches have silted in over time and no longer provide positive drainage off-site.

In conclusion and based on all of the evidence above and attached, Watershed Eco, LLC. has determined the no areas meeting the three wetland criteria were located within the subject property boundaries. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule which stated that ephemeral and man-made drainage features were not federally jurisdictional. At the present time there is no clear guidance from the Corps on ephemeral drainage features and the Corps is currently not issuing approved jurisdictional determinations. The U.S. Army Corps of Engineers Dover Field Office should be consulted prior to any impacts to the man-made ditches to avoid potential violations.

It is the professional opinion of Watershed Eco, LLC. that the man-made drainage ditches around the perimeter of the property are ephemeral in nature and would not be regulated by Delaware Department of Natural Resources and Environmental Control as Subaqueous Lands.

If you have any questions or concerns, please feel free to give me a call.

Sincerely,



James C. McCulley IV, PWS (#000471)
Environmental Scientist

## Site Photographs:

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

**Photo 3: Man-made drainage ditch along southern property boundary, facing east.**

**Photo 4: Man-made drainage ditch along southern property boundary, facing west.**

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

**Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.**

**Photo 10: Upland forest cover in the northeastern portion of the property.**

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-NWI

August 19, 2021

**Wetlands**

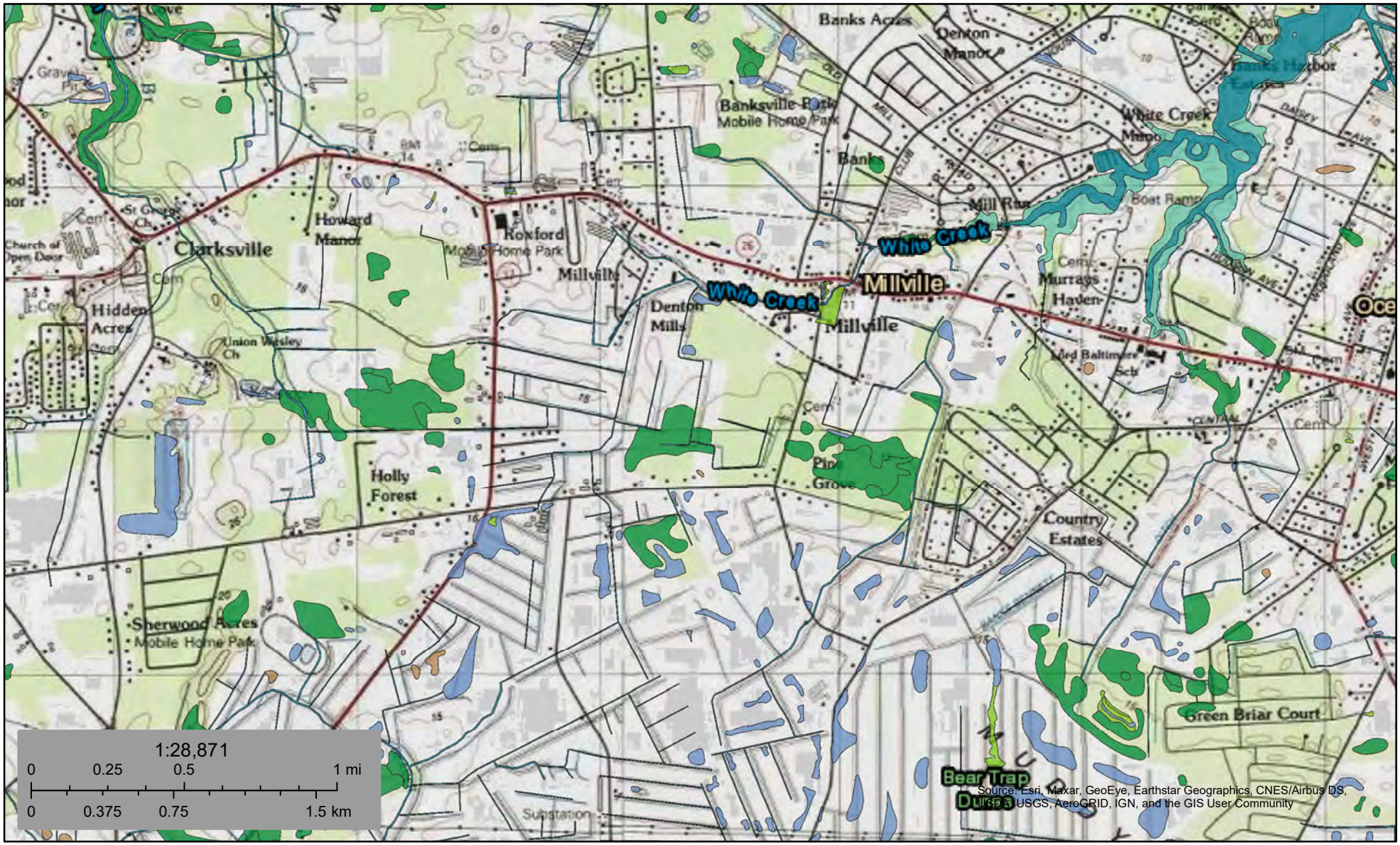
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-USGS




August 19, 2021

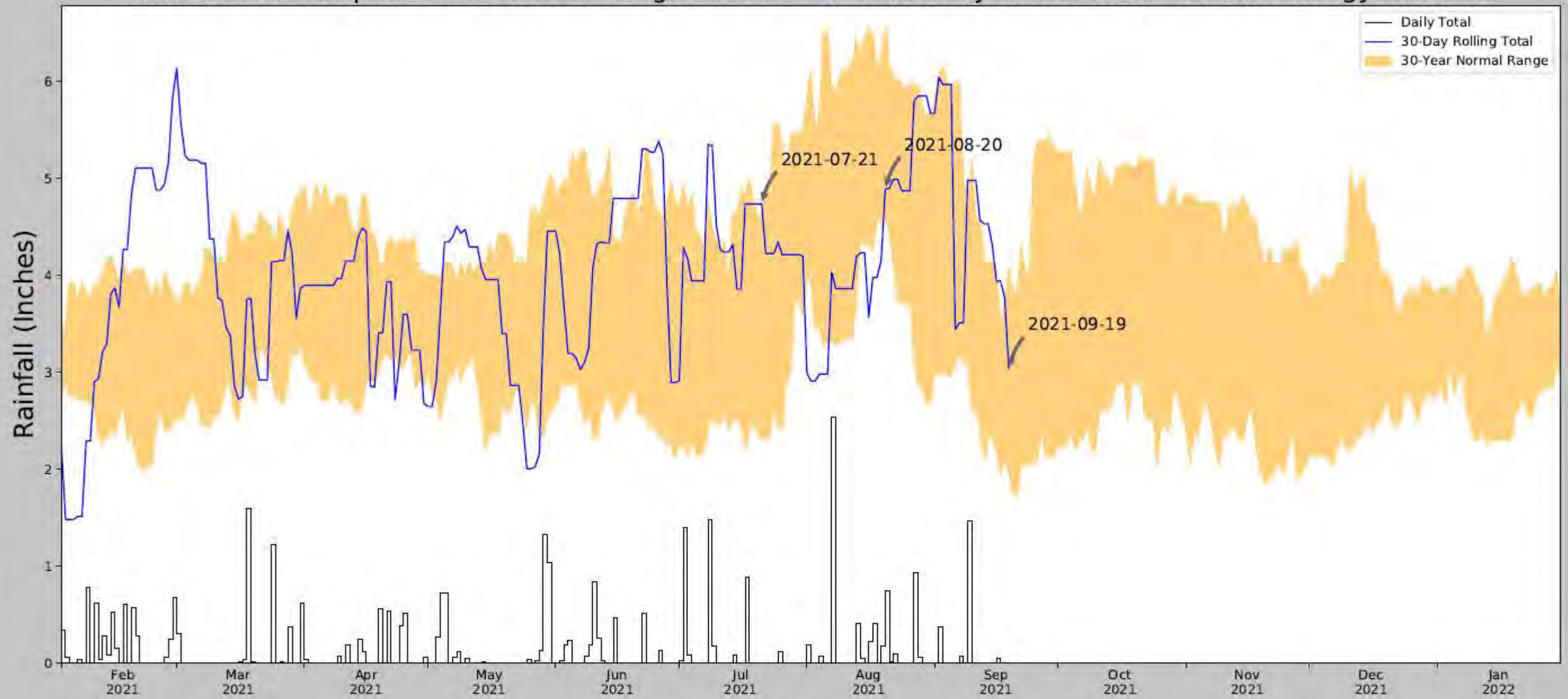
**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.166922, -75.351506 |
| Observation Date | 2021-09-19 |
| Elevation (ft) | 21.42 |
| Drought Index (PDSI) | Mild wetness (2021-08) |
| WebWIMP $H_2O$ Balance | Dry Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2021-09-19 | 1.959843 | 4.075591 | 3.031496 | Normal | 2 | 3 | 6 |
| 2021-08-20 | 4.583071 | 6.590945 | 4.889764 | Normal | 2 | 2 | 4 |
| 2021-07-21 | 2.323622 | 4.638189 | 4.740158 | Wet | 3 | 1 | 3 |
| Result | | | | | | | Normal Conditions - 13 |

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days (Normal) | Days (Antecedent) |
|---|---|---|---|---|---|---|---|
| SALISBURY WICOMICO RGNL AP | 38.3406, -75.5103 | 47.9 | 14.773 | 26.48 | 7.039 | 11350 | 83 |
| SNOW HILL 0.4 S | 38.167, -75.3921 | 20.997 | 2.205 | 0.423 | 0.993 | 0 | 7 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 4.671 | 8.436 | 2.141 | 3 | 0 |

# Glen Cove

Datapoint Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.542413 Long: -75.119833 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Young forested upland in the northwestern portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | yes | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 20 | yes | FAC |
| 2. *Liquidambar styraciflua* | 80 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Phytolacca americana* | 5 | yes | FACU |
| 2. *Parthenocissus quinquefolia* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 4-12 | 10YR 5/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 3/2 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Young forest at Datapoint UPL-1.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541774 Long: -75.119214 Datum: NAD 83

Soil Map Unit Name: Rosedale loamy sand (RoA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the central portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus rubra* | 30 | yes | FACU |
| 2. *Quercus falcata* | 20 | yes | FACU |
| 3. *Quercus alba* | 20 | yes | FACU |
| 4. *Sassafras albidum* | 20 | yes | FACU |
| 5. *Acer rubrum* | 10 | no | FAC |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 5 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Clethra alnifolia* | 10 | yes | FACW |
| 2. *Vaccinium corymbosum* | 5 | no | FACW |
| 3. *Vaccinium angustifolia* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-12 | 10YR 4/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 4/6 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at UPL-2 in the central portion of the property.

Non-hydric soils at UPL-2.

United States Department of Agriculture

NRCS

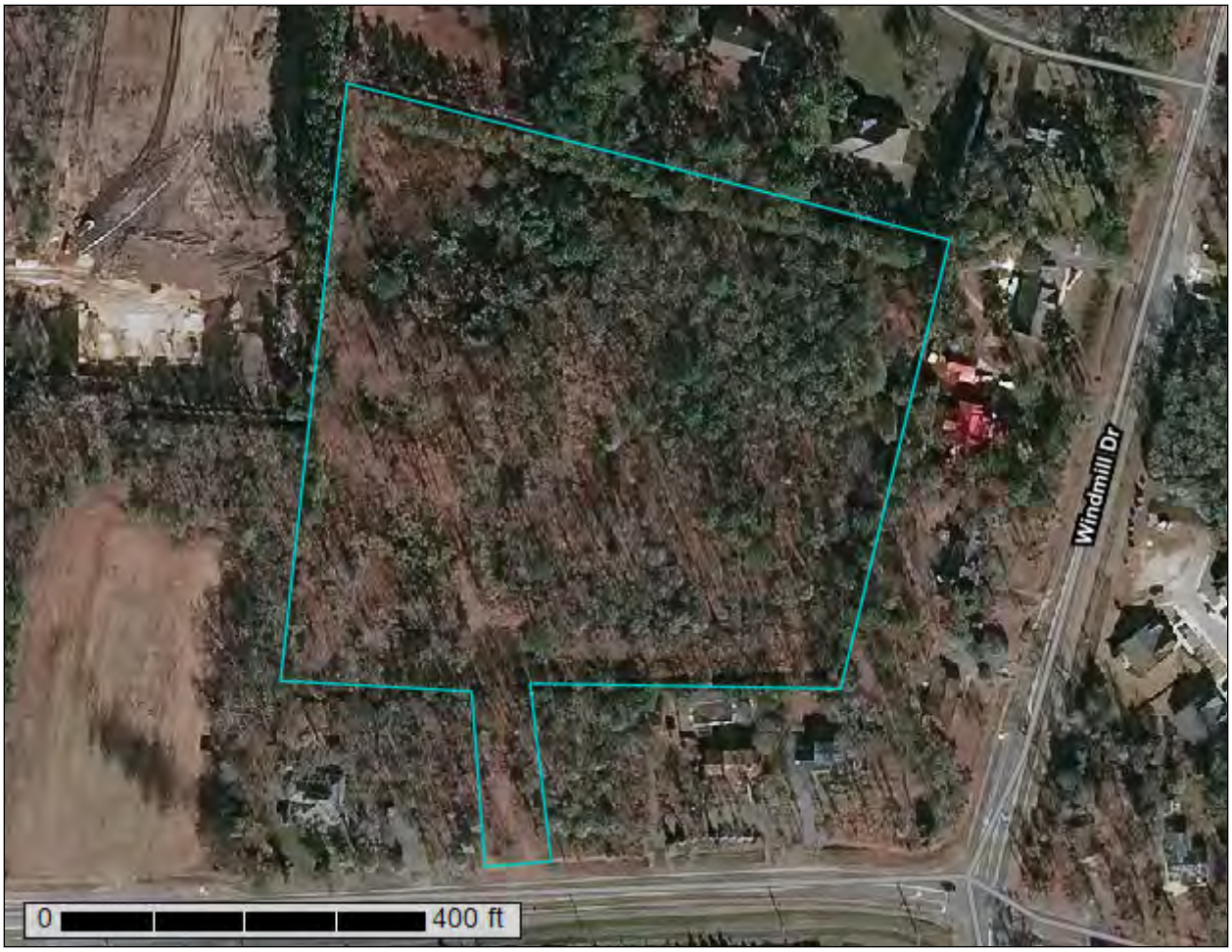
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Glen Cove 2




August 19, 2021

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Mar 12, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 0.2 | 1.9% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 2.5 | 28.0% |
| RoA | Rosedale loamy sand, 0 to 2 percent slopes | 6.3 | 70.1% |
| **Totals for Area of Interest** | | **8.9** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Flats, depressions, drainageways
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, flats, fluviomarine terraces, dunes
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* Yes

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

### Map Unit Composition
*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mullica, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear

#### Typical profile

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Berryland, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare

*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Drainageways, swales, flats, depressions
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

**Setting**

*Landform:* Flats, depressions, drainageways, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Minor Components

**Klej**

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Askecksy, drained**

*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Hydric soil rating:* Yes

## RoA—Rosedale loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qtjx
*Elevation:* 0 to 120 feet

*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rosedale**

**Setting**

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

**Typical profile**

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2s
*Land capability classification (nonirrigated):* 2s
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

**Minor Components**

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Fluviomarine terraces, flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

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# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

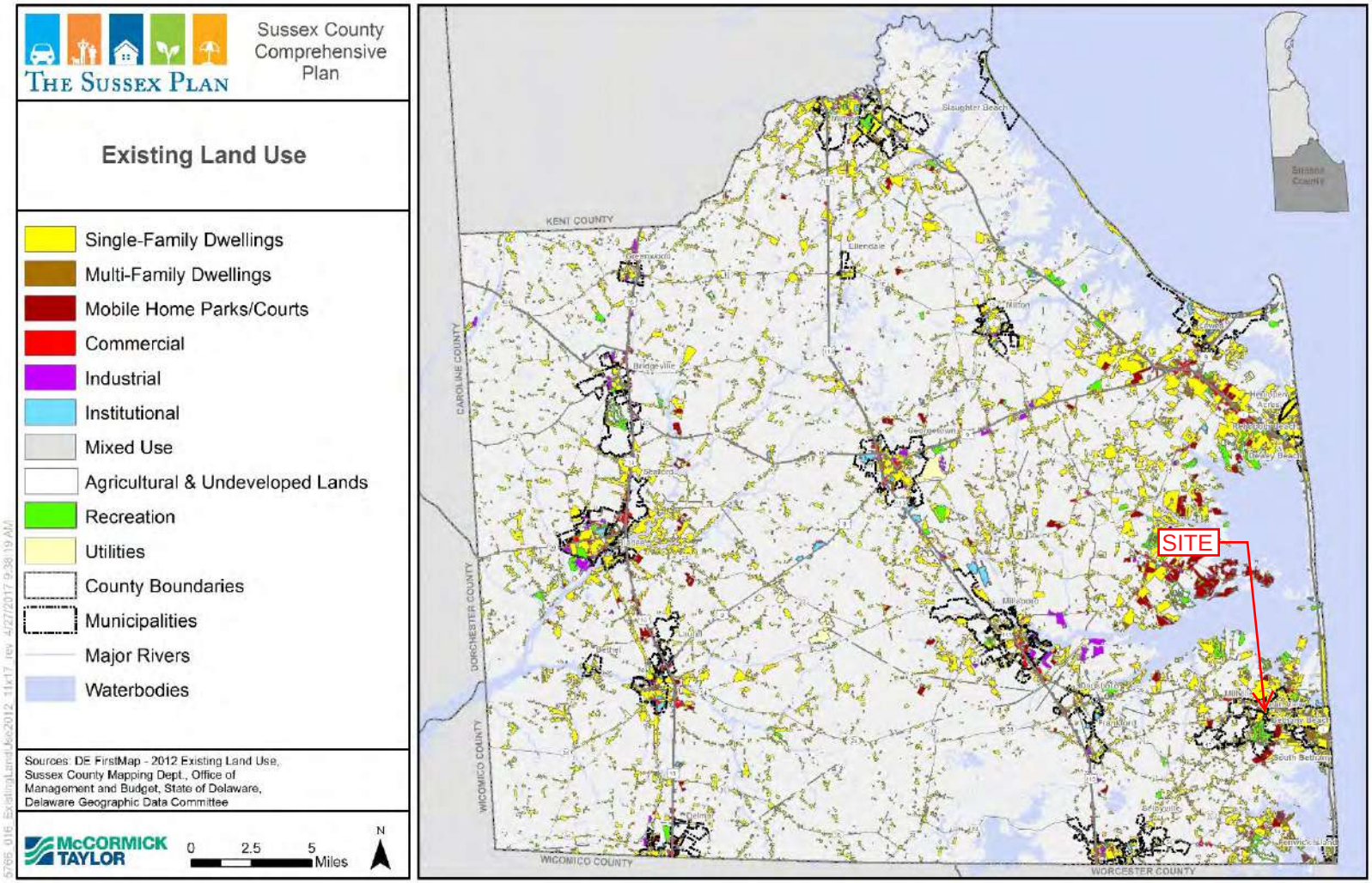
# IPAC USER CONTACT INFORMATION

Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## ZONING & COMPREHENSIVE PLAN CONTEXT & MAPPING

**Figure 4.2-1 Existing Land Use**



THE SUSSEX PLAN

**Figure 4.5-1 Sussex County 2045 Future Land Use**

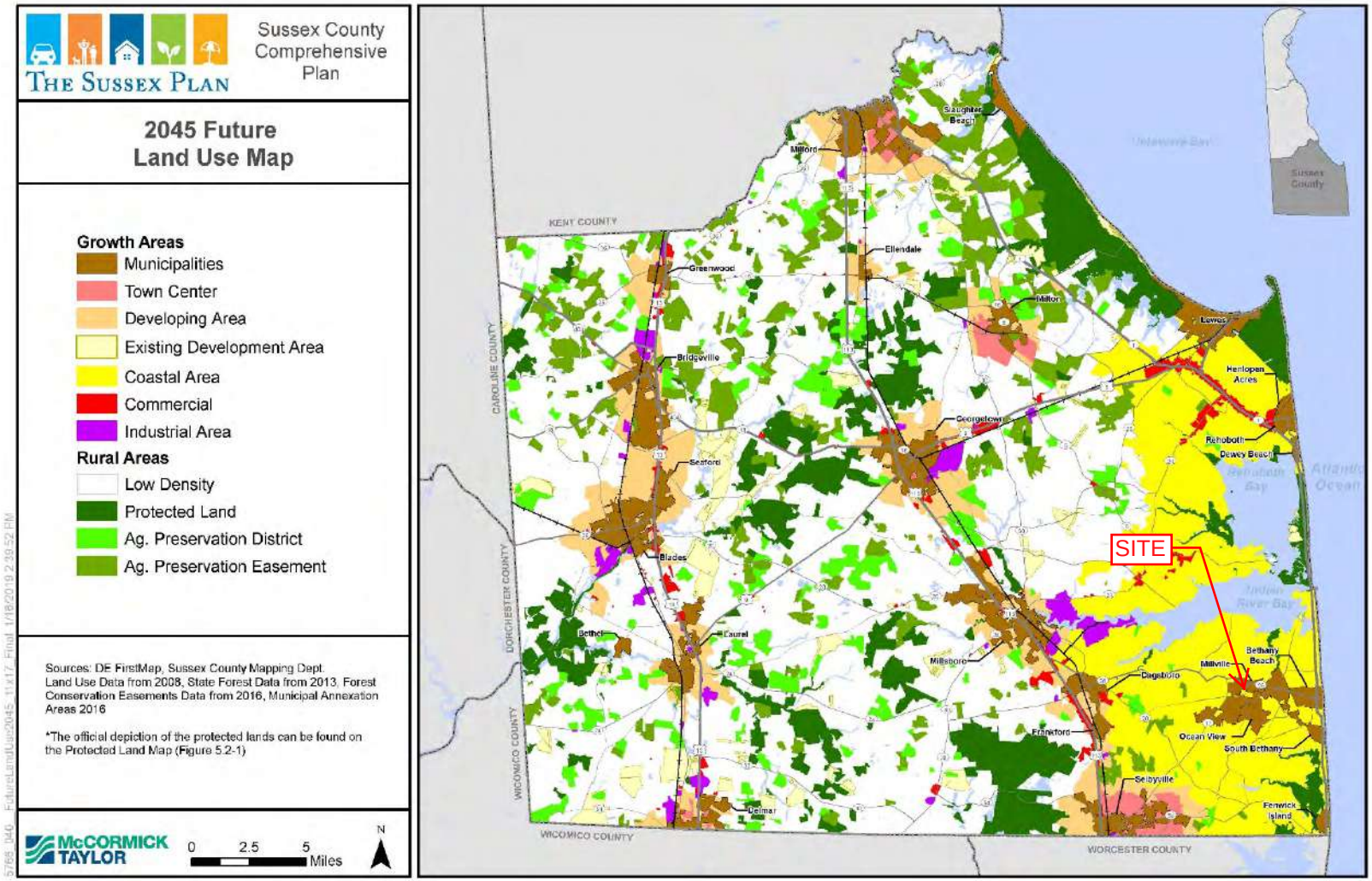
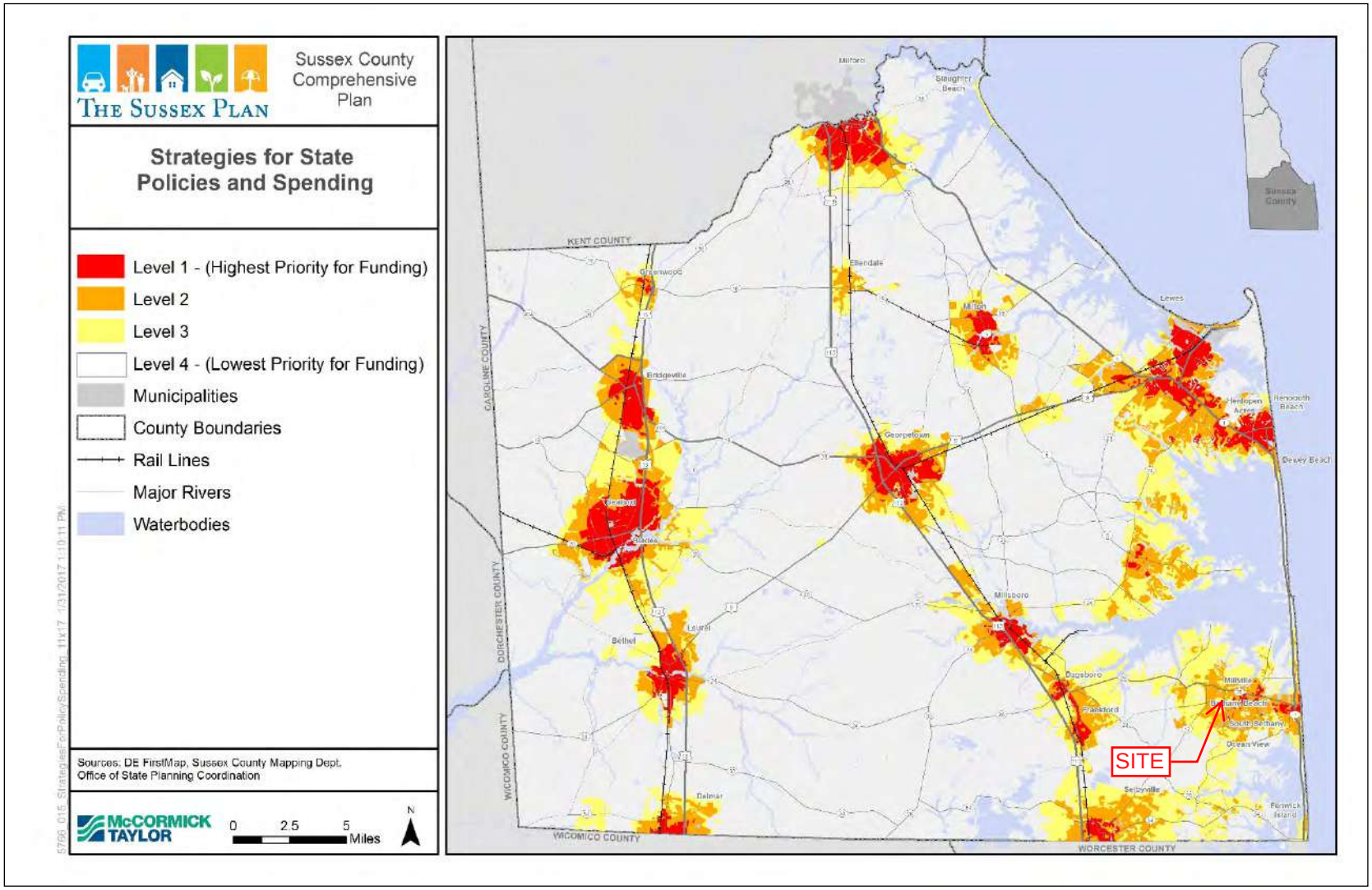
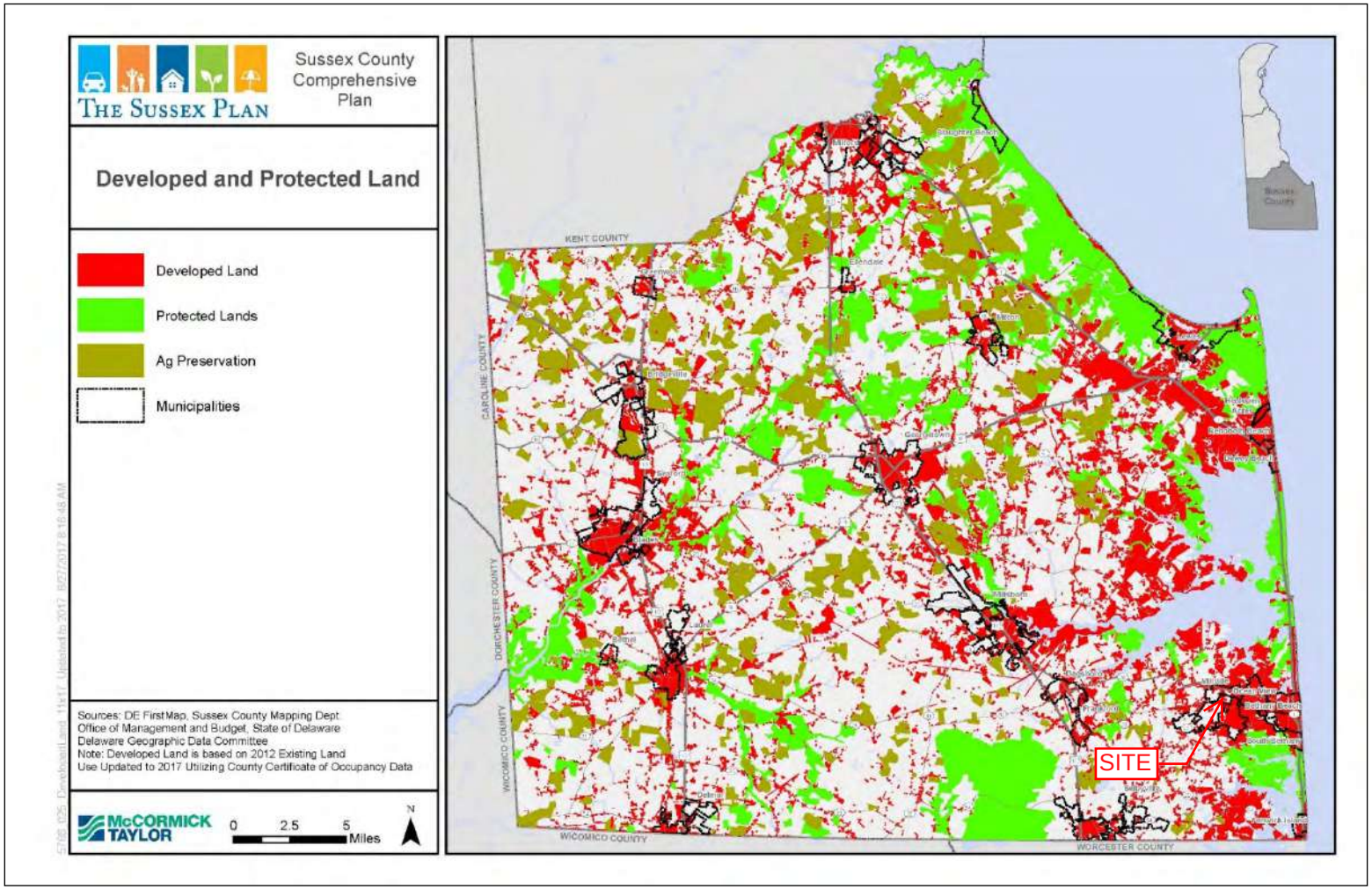


**Figure 4.4-1 Strategies for State Policies and Spending**



THE SUSSEX PLAN

**Figure 4.2-2 Developed and Protected Land** *




* Parcels enrolled in the State's Agricultural Lands Preservation Program change frequently and that the Delaware Department of Agriculture can be contacted for latest update.

# Sussex County Comprehensive Plan

## COUNTY WATER SERVICE AREAS

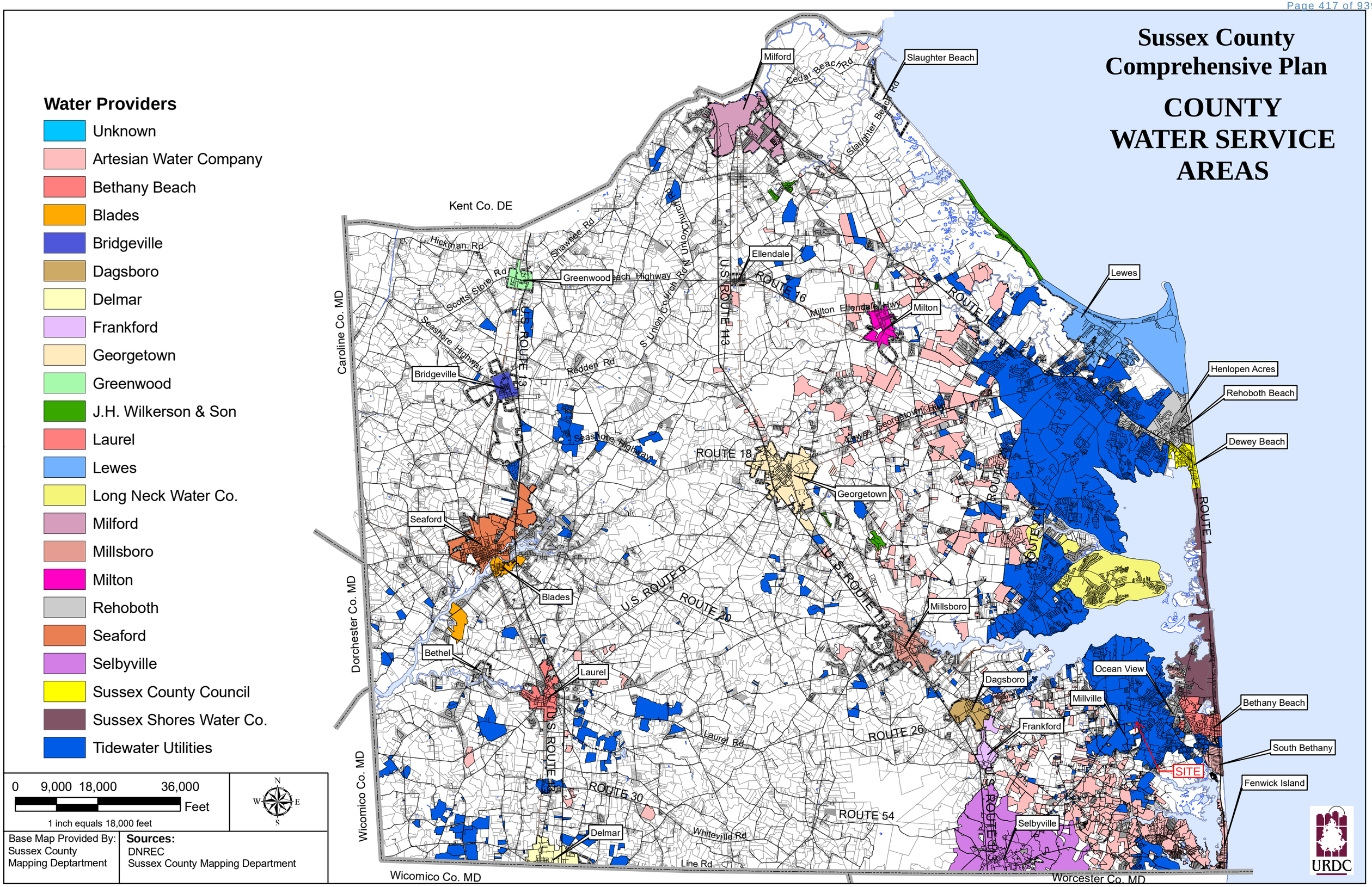
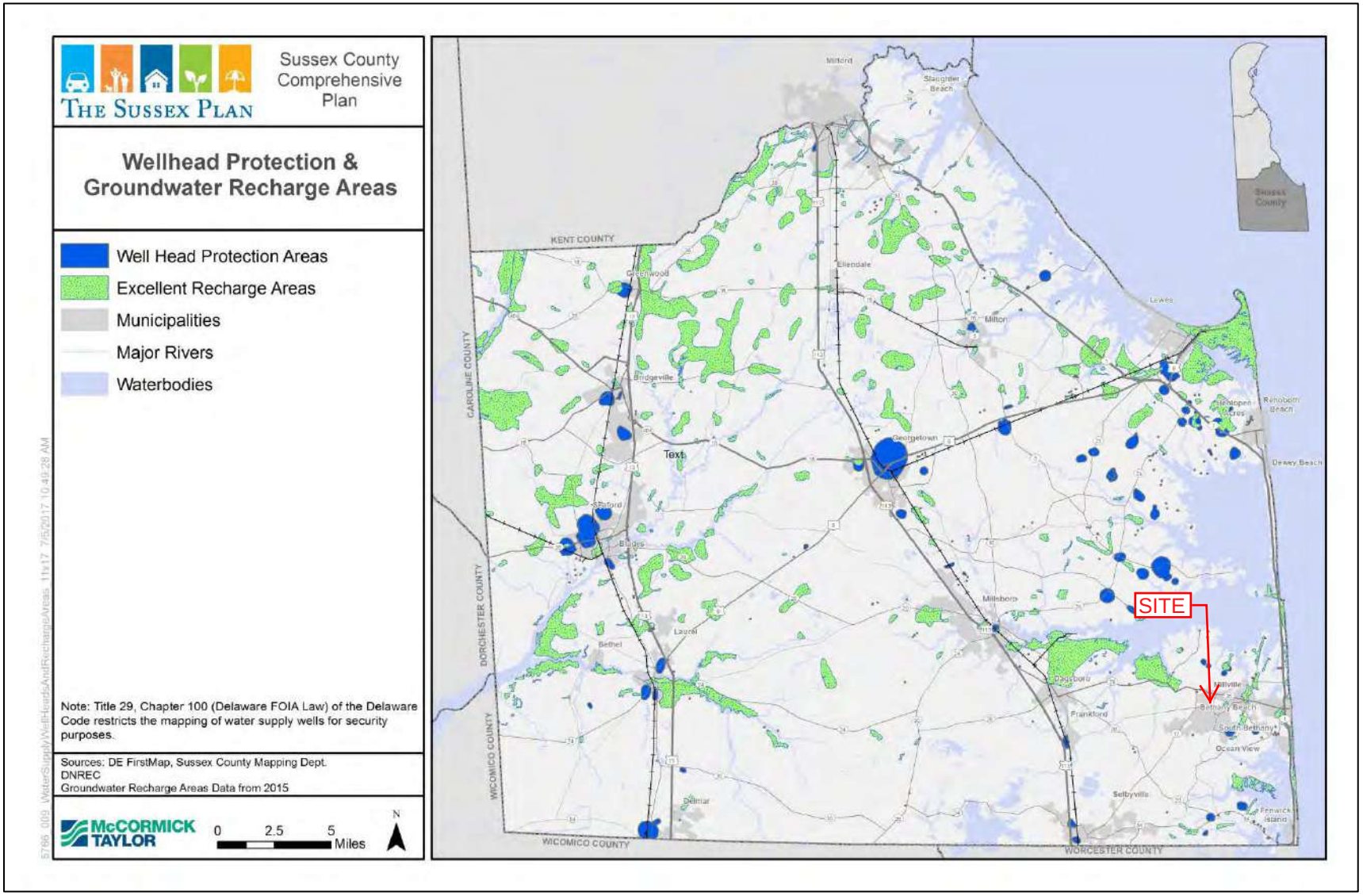


Figure 7.2-2 Wellhead Protection & Excellent Recharge Areas



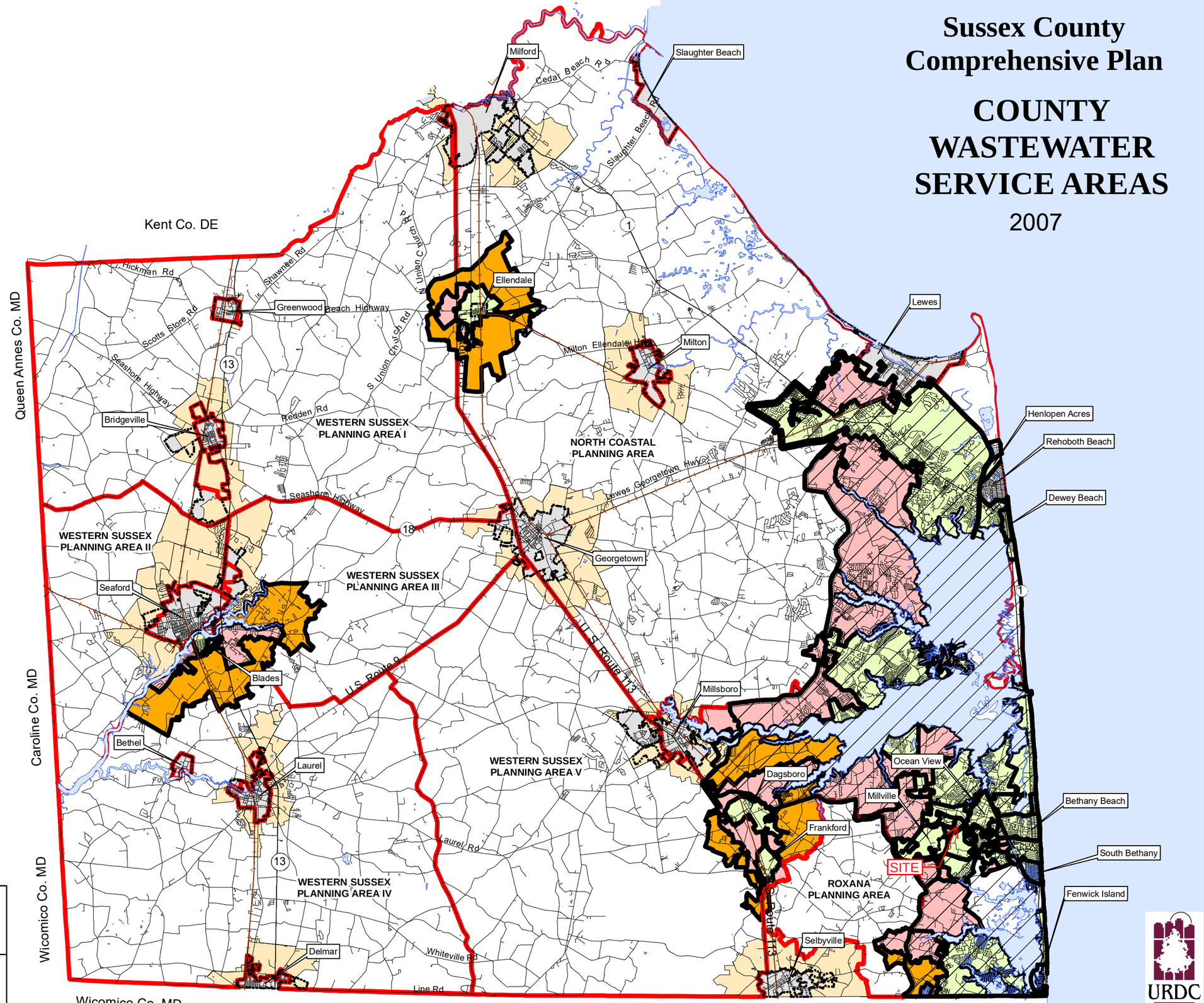
# Sussex County Comprehensive Plan

# COUNTY WASTEWATER SERVICE AREAS

2007

- Environmentally Sensitive Development Area (ESDA)
- Roads
- Boundaries of Sewer Planning Areas
- Existing County Sewer Districts
- Primary County Service Areas
- Secondary County Service Areas
- Unclassified Service Areas
- Town/City Potential Annexation Areas (intended to be eventually served by Town/City in most cases.)
- Municipal Boundaries

Please see text for planning area and service area definitions.




0 9,000 18,000 36,000 Feet

1 inch equals 18,000 feet

N W E S

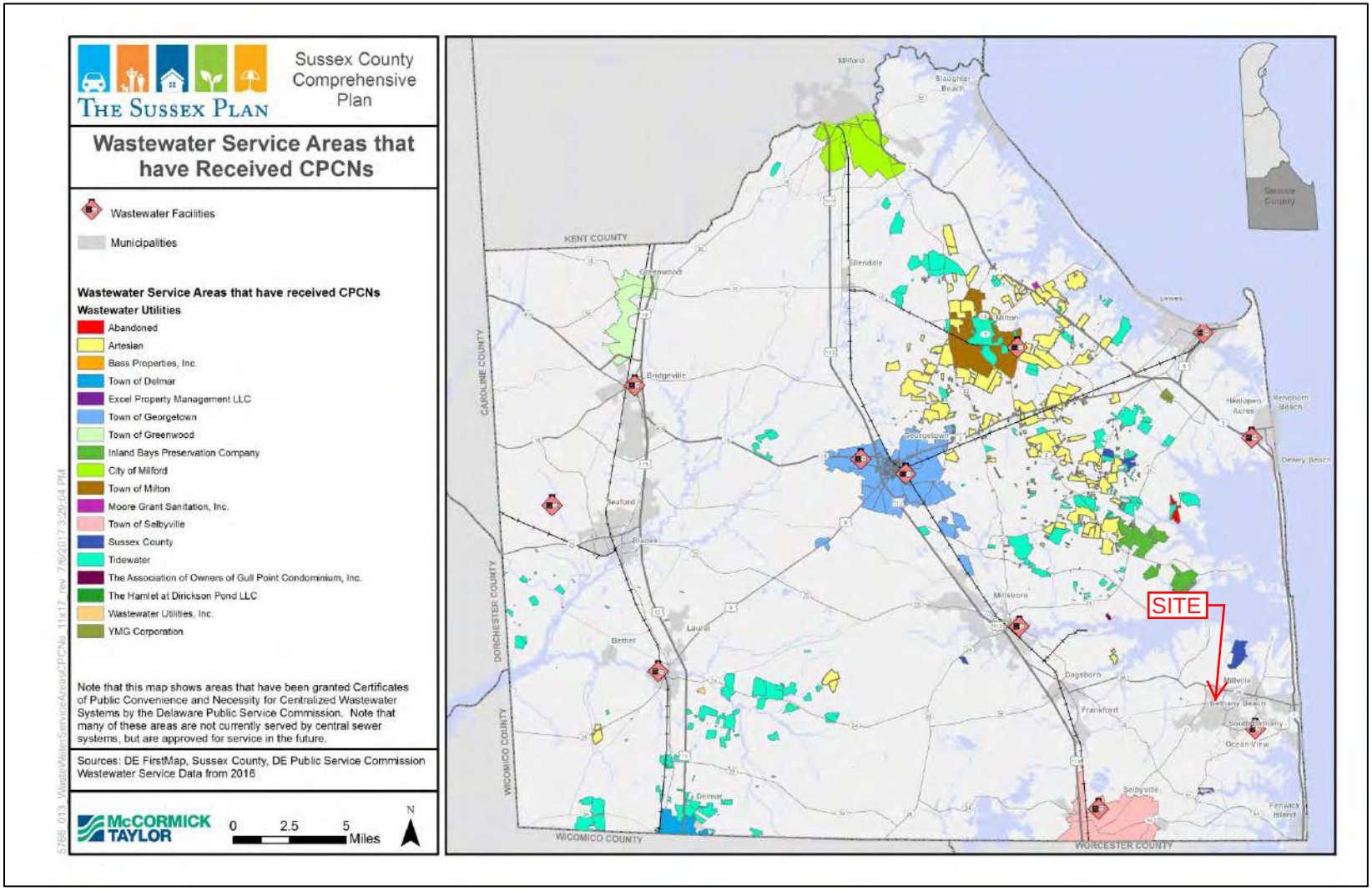
Base Map Provided By: Sussex County Mapping Deptartment

**Sources:** Sussex County Engineering Department

URDC

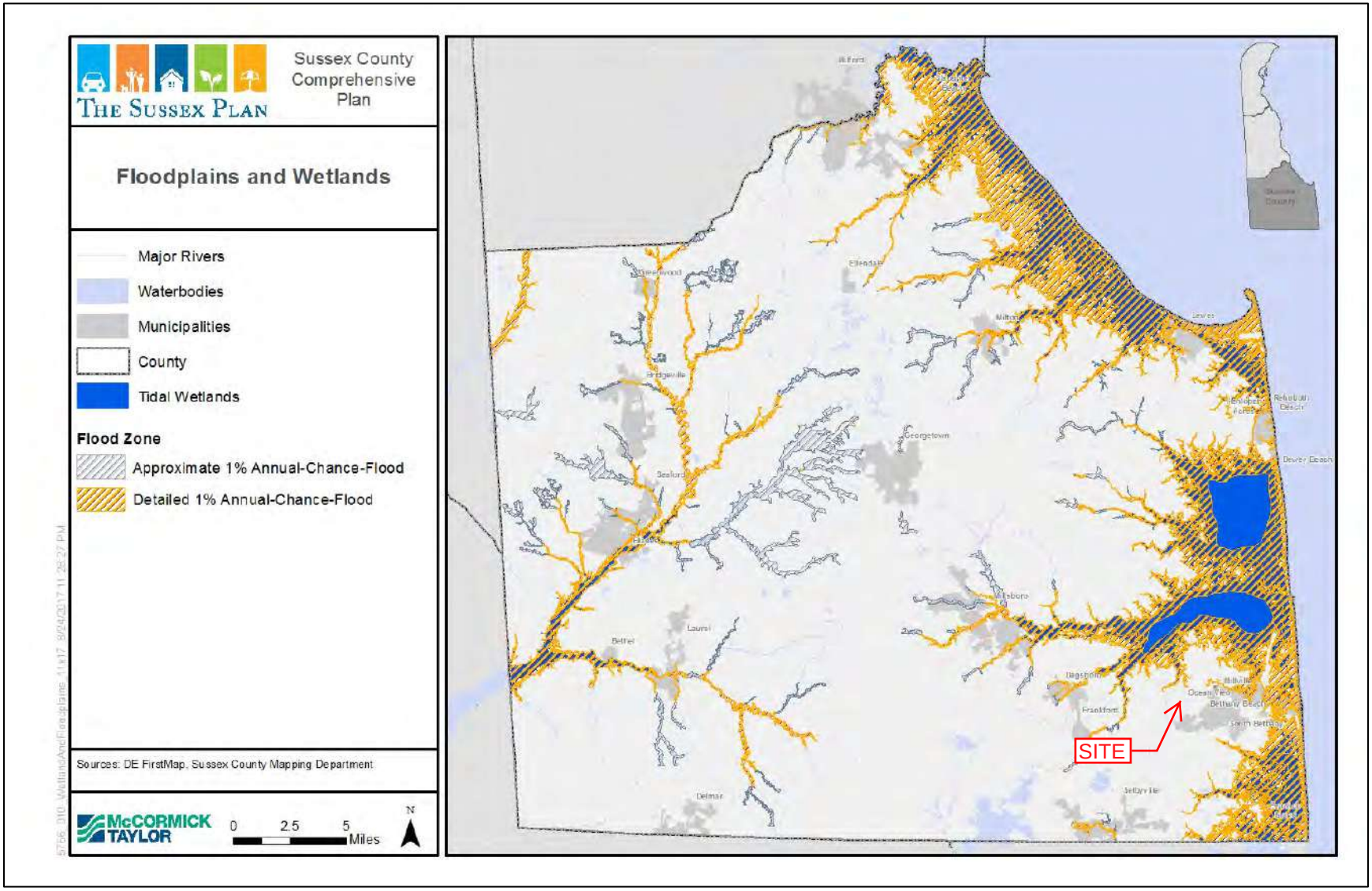
THE SUSSEX PLAN

Figure 7.3-1 Wastewater Service Areas that have Received Certificates of Public Convenience and Necessity



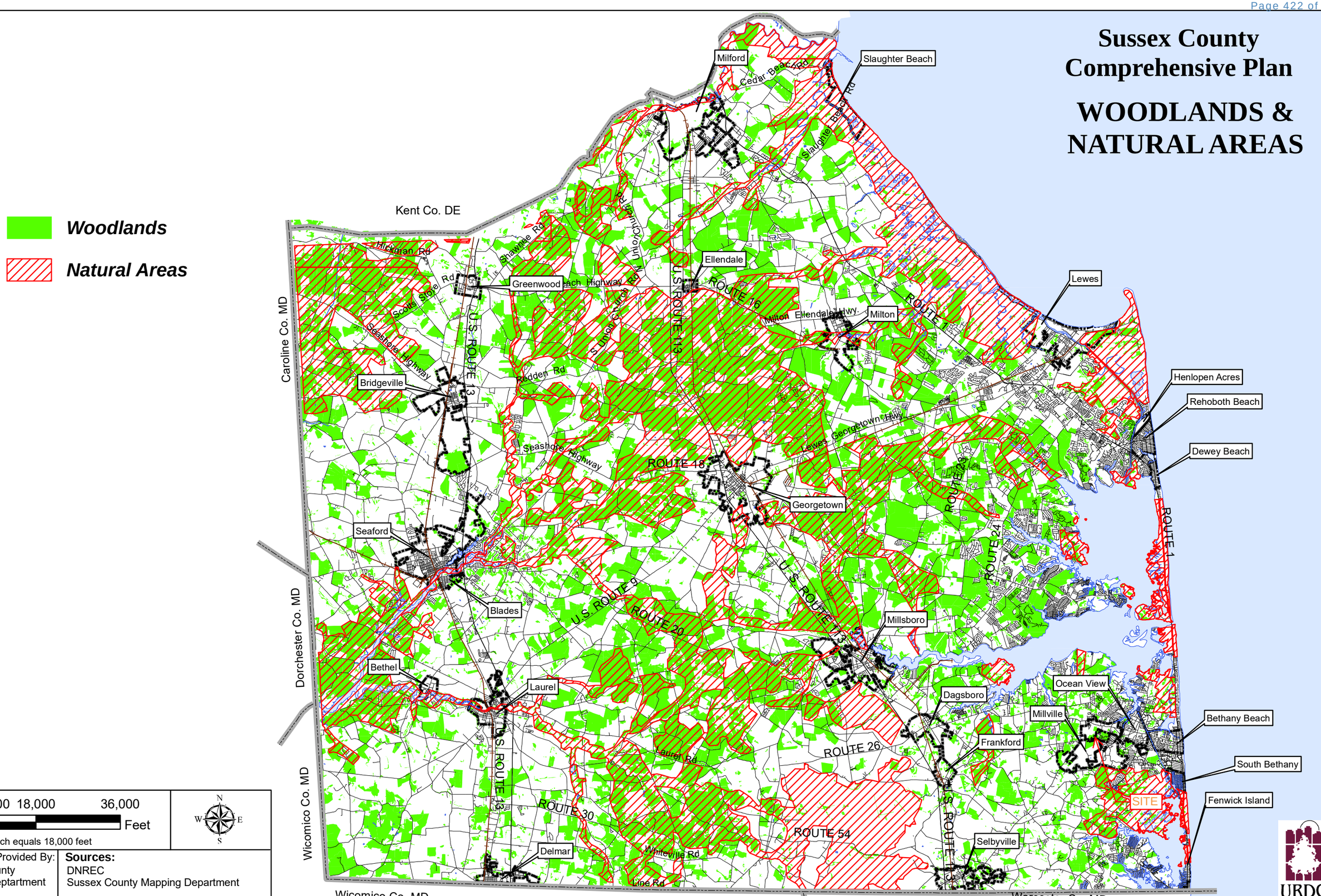
THE SUSSEX PLAN

Figure 5.2-4 Wetlands and Floodplains



# Sussex County Comprehensive Plan

## WOODLANDS & NATURAL AREAS



# APPENDIX H

## DELAWARE PLUS COMMENTS AND RESPONSES

**CIVIL ENGINEERING ASSOCIATES**
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 W. Main Street
Middletown, DE 19709

cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

October 9, 2024

Mr. David L. Edgell, AICP
Director
Office of State Planning Coordination
112 William Penn Street
Dover, DE 19901

**RE: PLUS Review Responses: 2024-08-02**
**Glen Cove 2**
**Sussex County, Delaware**

Dear Mr. Edgell:

This letter will serve as our response to the comments provided to us regarding the above-mentioned subdivision on September 17, 2024. In response to the review comments within the PLUS report that follows, ***we offer our answers highlighted in color.***

## Strategies for State Policies and Spending

This project is located in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. This site is also located in the Coastal Area of Sussex County.

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this **rezoning and site plan** provided it meets the relevant codes and ordinances of the Sussex County.

With that said, this parcel is adjacent to the Town of Millville and within their planned growth area. The developer should consider annexing or at least working with the town to ensure the planned development meets the desires of their comp plan.

***Acknowledged.***

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis and based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF). This project is located in an area anticipated to be in the future Roxana Transportation Improvement District (TID). This TID will not be operational for at least a year. If your development timeline allows participation in the TID may be an option in place of the AWSF.

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across any property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation.**"

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Department of Transportation (DelDOT).***

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Tax Ditches**
Prong 2 of the Derrickson Tax Ditch lies along several of the property boundaries and bisects the western and eastern parcels. Derrickson Canal Sub 2 Prong 2 runs along the property boundary in the northeast. Tax ditches are man-made channels created to move normal water flow off agricultural lands. These channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during maintenance. Tax ditch ROWs vary by channel size and location. Prong 2 and Sub 2 Prong 2 of the Derrickson Tax Ditch have a 20-foot to Top of Bank (TOB) ROW extending into the project boundary.

- The previous Court Order Change stipulates that a l5-foot by 285-foot Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.

- If the site and/or stormwater management features are designed to discharge into Prong 2 of the Derrickson Tax Ditch, design must consider existing conditions versus design specifications. Please consult with the DNREC Drainage Program for As-Built design information if necessary.

- Proposed structures or construction lies within the existing tax ditch ROW. Contact the DNREC Drainage Program to discuss the on-site tax ditch ROWs prior to the project application meeting with the appropriate plan review agency for construction stormwater management.

- The site plan appears to show a road crossing the tax ditch between Lots 16 and 17. The applicant must consult with the DNREC Tax Ditch Program on the elevation of the crossing. To reduce or change existing tax ditch ROWs, a Court Order Change must be submitted by the DNREC Drainage Program. The associated Land Development Project Review Request form is attached, as well as the aerial drainage map.

- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROWs.

- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channel should be cleared or excavated prior to the construction of the project if needed.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Stormwater Management**

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Wetlands and Waterways**

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the western portion of the site, as well as riverine wetlands associated with the canal that runs around the periphery of the site. The application indicates that wetlands have been delineated. According to the application, the U.S. Army Corps of Engineers sign-off is completed. The application states that the project does not propose direct impacts to the wetlands.

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.

- If road crossings are proposed in drainage features functioning as intermittent or perennial features, state permits from the DNREC Wetlands and Waterways Section may be required for disturbance proposed in state jurisdictional wetlands and waterways. To apply for a permit online, please visit their website at https://dnrec.delaware.gov/water/wetlands-subaqueous/permits/.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Wastewater Disposal Systems – Large Systems**

- For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Electric Vehicle Charging**

Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or
2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.
Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

***Acknowledged***

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Proposed Project Parcel Flood Concern**

- This parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within two Sussex County Evacuation Zones B (red) and D (yellow).

**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Emergency Management Agency.***

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There are no known archaeological sites or known National Register-listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance. Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

- If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the State Historic Preservation Office (SHPO).***

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Clubhouse)
- Where a water distribution system is proposed for single-family dwellings, it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)
- One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq. ft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Burbage Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn-around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.
- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware State Fire Marshall's Office.***

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.
- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Department of Transportation (DelDOT).***

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Forest**
The preliminary plan proposes the elimination of approximately 9 of 12 acres forest on the site. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

- Removing forested areas for development should be avoided to the greatest extent possible.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st. Likewise, avoid mowing open space areas and grass filter strips during the same timeframe, as various species of birds utilize these areas for nesting sites.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Forested Wetlands and Vegetated Buffer Zones**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of freshwater forested wetlands on the western portion of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb wetlands. Wetlands are a critical part of our natural environment. They reduce the impacts of flooding, improve water quality, and sequester carbon dioxide from the atmosphere. Wetlands also provide habitat for plants and animals that are uniquely adapted to saturated conditions.

- Maintain an upland buffer of at least 100 feet along all wetlands, except tax ditches, including those containing existing forest or natural vegetative cover.

- Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Maintain vegetated buffer zones as either meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Grass cutting for vegetated buffer zones if maintained as meadow should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Tax Ditches**

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.

Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Water Quality**
This site lies within the Indian River Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable.
- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.
- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939.
https://dnrec.alpha.delaware.gov/watershed-stewardship/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.

- Offer the option to install solar or geothermal systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities such as the proposed pool house, consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st

to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 23, though, with development, this will undoubtedly change. The 5 adjacent blocks aggregated bring the area to a total population of 404.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the

Expected Annual Loss
× Social Vulnerability
÷ Community Resilience
= Risk Index

Community Resilience.

- According to FEMA's National Risk Index, the parcel is considered relatively low for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-

enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated at relatively moderate whereas its social vulnerability is rated as very low.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Emergency Management Agency.***

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes electricity as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

***Acknowledged***

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

Preliminary meetings with Fire Protection Specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware State Fire Marshall's Office.***

If you have any questions or require any additional information, please do not hesitate to contact me at (302) 547-2444.

Sincerely,
**Civil Engineering Associates, LLC**

Ronald H. Sutton Jr.

Ronald H. Sutton Jr.
Principal

# APPENDIX I

## DELDOT SERVICE LEVEL EVALUATION REQUEST FORM/DELDOT RESPONSE

**PLANNING & ZONING**
Jamie Whitehouse, AICP ,MRTPI
Director
(302) 855-7878 T
(302) 854-5079 F

**Sussex County**
DELAWARE
sussexcountyde.gov

# Service Level Evaluation Request Form

This form **shall** be submitted to the Planning and Zoning Office and a response **shall** be received back from DelDOT prior to the applicant being able to submit an application to the Planning and Zoning Office.

Date: 8/5/24

**Site Information:**

Site Address/Location: northwest of Burbage Road + Windmill Drive intersection

Tax Parcel Number: 134-12.00-374.01, 134-12.00-3445.00-3460.00, + 134-12.00-375.00

Current Zoning: AR-1

Land Use Classification: Residential / Agriculture

Acreage: 12.32 AC

Subdivision: ☐

Conditional Use: ☒

Change of Zone: ☒ Proposed Zoning: MR

Proposed Use(s):

50 Condominiums - Residential

Square footage of any proposed buildings or number of units: 50 units

**Applicant Information:**

Applicant's Name: Foxlane Homes Delaware (John Murray)

Applicant's Address: 32191 Nassau Road, #2

City: Lewes State: DE Zip Code: 19958

Applicant's Phone Number: 302-344-1055

Applicant's e-mail address: jmurray@foxlanehomes.com

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

August 19, 2024

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray** (Burbage Road, Millville, DE 19967) proposed land use application, which we received on August 6, 2024. This application is for an approximate 12.32-acre assemblage of parcels (Tax Parcel: 134-12.00-374.01, 134-12.00-3445.00 Thru 3460.00, and 375. 00). All Parcels are located on the north side of Burbage Road (Sussex County Road 353) and approximately 460 feet west of the intersection of Windmill Drive (Sussex County Road 352) and Burbage Road. The parcels are currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a Conditional Use approval to place 50-Condos units, on the parcels.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road where the subject land is located, which is from Windmill Drive to Substation Road (Sussex County Road 366), is 3,224 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 50), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at annamaria.furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:bfm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Engineer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Engineer, Development Coordination
José Quixtan, Sussex County Subdivision Engineer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination

# APPENDIX J

## DELDOT AREA WIDE STUDY FEE MEMO

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

# MEMORANDUM

**TO:** John Pietrobono, Acting Sussex County Review Coordinator

**FROM:** Sireen Muhtaseb, TIS Group Manager

**DATE:** November 4, 2024
**Revised December 13, 2024**

**SUBJECT:** **Glen Cove**
**(Protocol Tax Parcel # 134-12.00-374.01)**
**Area Wide Study Fee (AWSF) and Off-site Improvements**

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**Note Concerning Revision**: This document has been updated to revise the proposed trip generation of the development due to a reduction in the number of dwelling units of the proposed site. Specifically, the revision updates the number of single-family detached houses from 50 dwelling units to 49 dwelling units. As such, the trip generation and the Area Wide Study Fee has been updated to reflect this change. This document replaces our previous AWSF memorandum dated November 4, 2024, a copy of which is enclosed herein.

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 49 dwelling units of single-family detached houses. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 523 average vehicle daily trips (ADT) and 51 vehicle trips during the

p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be □5,230.

2. The developer shall improve the State-maintained Roads on which they front (Burbage Road, Sussex Road 353), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

SAM: km
Enclosure
cc: John Murray, Foxlane Homes Delaware
Scott Roberts, Civil Engineering Associates, LLC
Jamie Whitehouse, Sussex County Planning □ Zoning
Lauren DeVore, Sussex County Planning □ Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming □ Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tijah Jones, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

# APPENDIX K

## DELDOT ENTRANCE CORRESPONDENCE

## Scott Roberts

**From:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Sent:** Friday, November 15, 2024 6:30 AM
**To:** John Murray
**Cc:** Mackenzie Peet
**Subject:** Re: Glen Cove Entrance Location

Good morning John,

The DCM regulations described below will suffice.

John

---

**From:** John Murray <jmurray@foxlanehomes.com>
**Sent:** Thursday, November 14, 2024 4:21 PM
**To:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** RE: Glen Cove Entrance Location

John,

Thank you for the detailed response. Would it be acceptable to state that, in this instance, a design deviation would likely not be approved by DelDOT to have the entrance at that location for the reasons stated?

Thank you,
John

John Murray
Land Development Manager
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055 (cell)
www.foxlanehomes.com

---

**From:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Sent:** Thursday, November 14, 2024 3:27 PM
**To:** John Murray <jmurray@foxlanehomes.com>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** Re: Glen Cove Entrance Location

John,

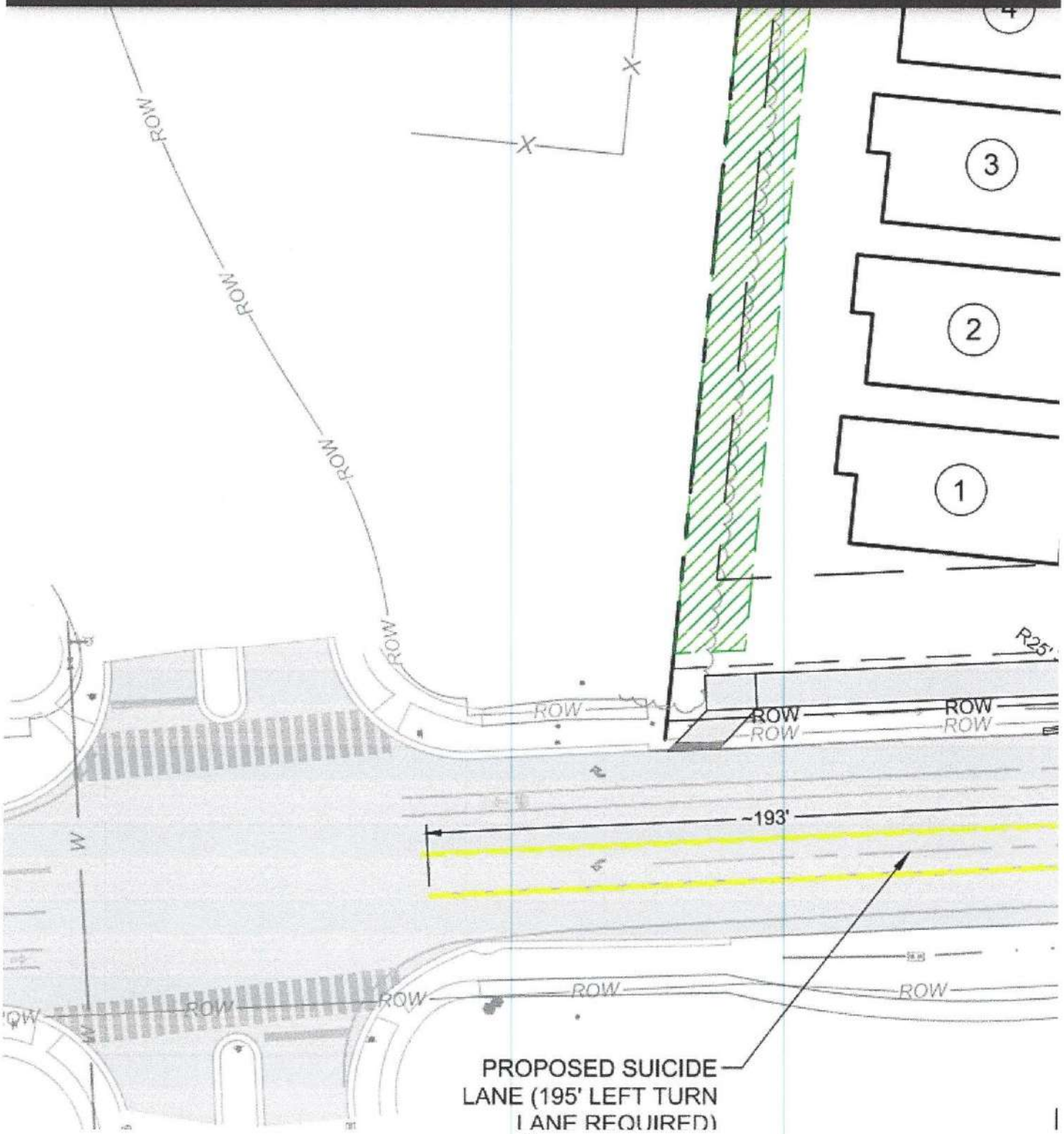
As was discussed during the 11/06/24 presubmittal meeting, the location of the proposed entrance that was shown on the plan presented at the meeting is not acceptable, as it violates both DCM 1.6.1; entrance location in a deceleration lane, which, in this case, is the existing right turn lane for the adjacent site and DCM Fig. 1.5.1, access spacing, as the proposed location is less than 250', required for a major collector.

The screen shot below is the plan that was presented at the presubmittal meeting.

Home | Development | Planning & D | Planning & D

pdcaprod.blob.core.windows.net/pdca-files/3453/2024101610

C-1



John Pietrobono

Delaware Department of Transportation
Division of Planning
Development Coordination Section
Acting Sussex County Review Coordinator

---

**From:** John Murray <jmurray@foxlanehomes.com>
**Sent:** Thursday, November 14, 2024 2:18 PM
**To:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** Glen Cove Entrance Location

Good afternoon John,

When we had our pre-submittal meeting last week for the Glen Cove project, you made mention on multiple occasions that the development entrance would not be permitted where it was originally proposed. This was due to the proposed location being within the limits of the right-turn deceleration lane for the Bishop's Landing community, which would be in conflict with the DCM. We will be working with our design engineer to relocate the proposed entrance but, when we have our public hearing before the Sussex County Planning Commission, we expect members of the commission to have questions about why the entrance is not located where more frontage to Burbage Road is available. While we can explain the reasoning to the Planning Commission, we expect them to include in any motion for preliminary approval that the entrance be relocated to the location where more frontage is available. We have experienced this very same situation on other projects.

In order to prevent a conflict between the County and DelDOT, we were hoping that you could provide a statement in writing for us that DelDOT would not support an emergency/alternate access for this project. We would then be able to put that statement into the project record so that the Planning Commission understand, officially, why the entrance is located where it is. If you or someone else at DelDOT could help us with this, it would be greatly appreciated!

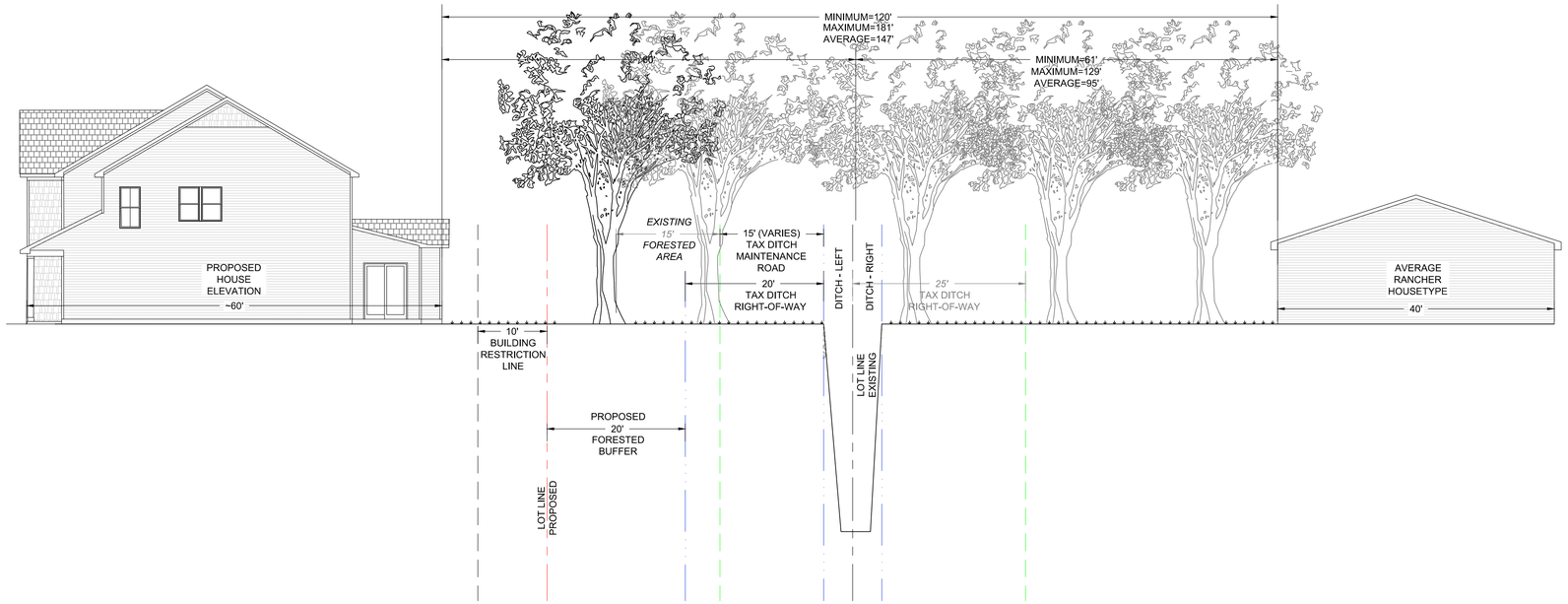
Thank you for your consideration and feel free to contact me at your earliest convenience if you have any questions.

Thank you,
John

John Murray
Land Development Manager
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055 (cell)
www.foxlanehomes.com

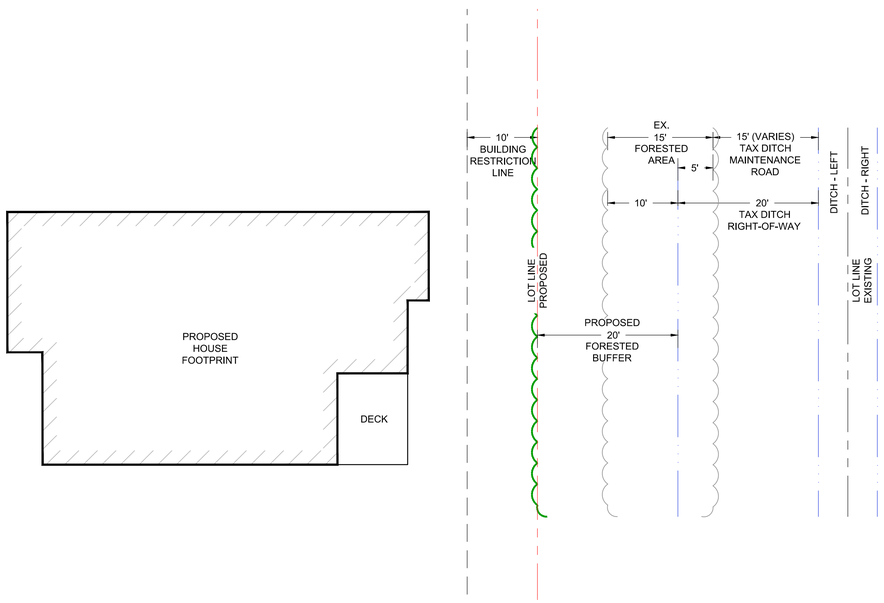
# APPENDIX L

## TAX DITCH BUFFER EXHIBIT




**CROSS SECTION: TAX DITCH & BUFFER**

SCALE: 1" = 10'




**PLAN: TAX DITCH & BUFFER**

SCALE: 1" = 10'

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# TAX DITCH & BUFFER EXHIBIT

FOR

## GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: JANUARY 14, 2025

DESIGNED BY:

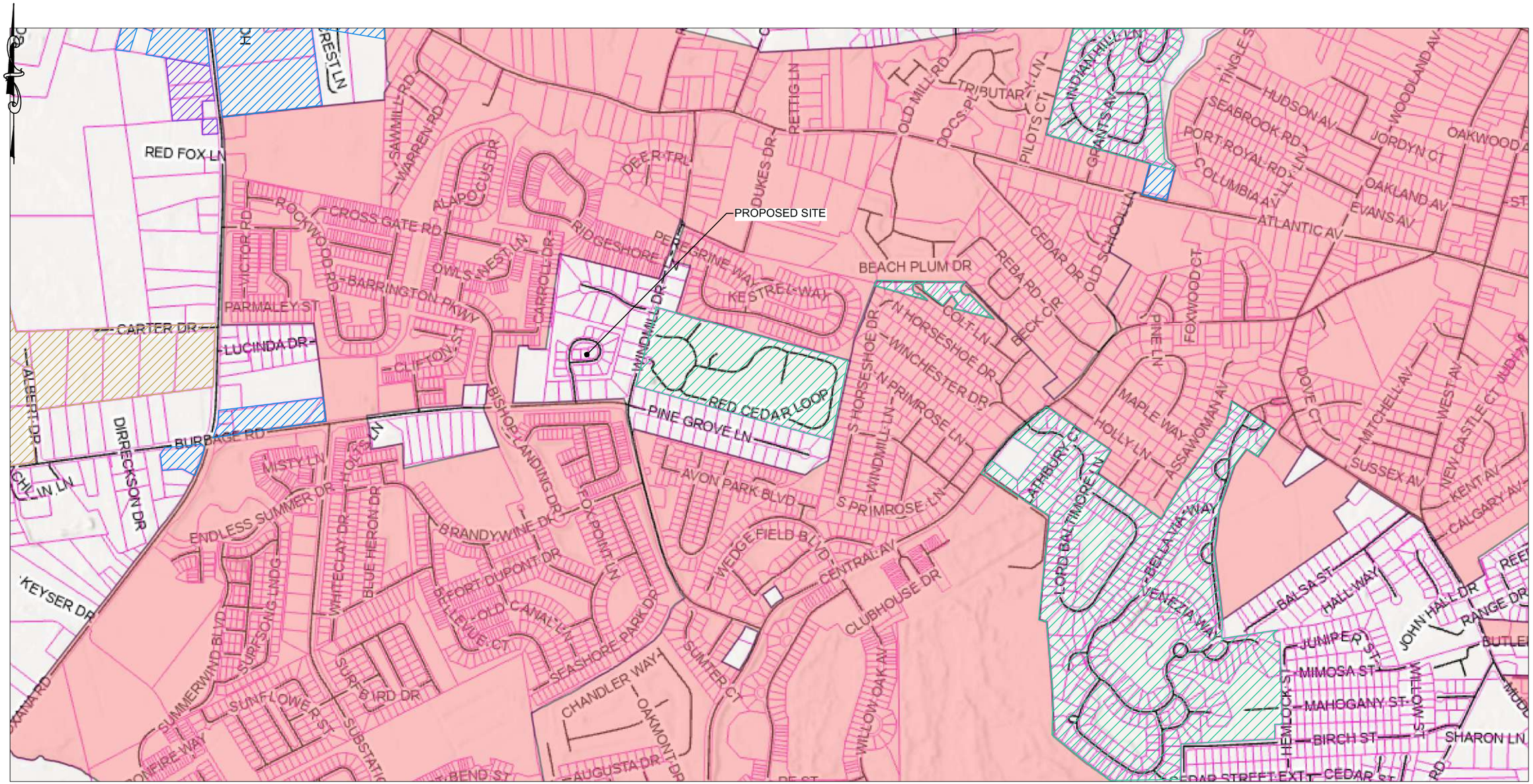
APPROVED BY: RHS

FILE: P23101-TD EXHIBIT

SHEET NO.: **TD-1**

# APPENDIX M

## MAP OF SURROUNDING COMMUNITIES




| | |
|---|---|
| MR ZONING | AR-2 ZONING |
| C1 ZONING | AR-1 ZONING |
| CR-1 ZONING | MBTS BOUNDARY |

# GLEN COVE 2
# SURROUNDING USE MAP

SUSSEX COUNTY, DELAWARE
BALTIMORE HUNDRED

DATE: 1/17/25

CIVIL ENGINEERING ASSOCIATES, LLC
● ENGINEERING ● SURVEYING ● CONSTRUCTION SERVICES
55 WEST MAIN STREET
MIDDLETOWN, DE 19709
(302) 376-8833
FAX (302) 376-8834
CEA-DE.COM

# APPENDIX N

## SUSSEX COUNTY SSCE COMPLETED FORM

CIVIL ENGINEERING ASSOCIATES
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 West Main Street
Middletown, DE 19709

cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

# GLEN COVE
# SEWER SERVICE CONCEPT EVALUATION
# SUSSEX COUNTY, DELAWARE

**Engineer:**
Civil Engineering Associates
55 W. Main Street
Middletown, De 19709
Scott Roberts
302-584-6632

**Developer:**
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055

**Project Name:**
Glen Cove 2

**Tax Maps:**
134-12.00-374.01, 134-12.00-3445.00 through 3460.00; 134-12.00-375.00

**Proposed EDUs:**
49 Single Family Units = 49 EDUs (1.0 EDU/SF Unit)

**Current Zoning:**
AR-1

**Proposed Zoning:**
MR

**Acreage:**
~12.32 Acres

# GLEN COVE

## DESIGN SUMMARY & SUPPLEMENTAL DATA

### CONDITIONAL USE & REZONING APPLICATIONS CU-2462 & C/Z-2017

### PROPOSED MR-1 – SINGLE FAMILY CONDOMINIUMS

**BALTIMORE HUNDRED**
**SUSSEX COUNTY, DELAWARE**

FOR:

FOXLANE HOMES

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

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F. DRAINAGE ASSESSMENT REPORT

G. ZONING & COMPREHENSIVE PLAN CONTEXT & MAPPING

H. DELAWARE PLUS COMMENTS AND RESPONSES

I. DELDOT SERVICE LEVEL EVALUATION REQUEST FORM/DELDOT RESPONSE

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K. DELDOT ENTRANCE CORRESPONDENCE

L. TAX DITCH BUFFER EXHIBIT

M. MAP OF SURROUNDING COMMUNITIES

N. SUSSEX COUNTY SSCE COMPLETED FORM

# APPENDIX A

## CONDITIONAL USE APPLICATION FORMS

File #: _____

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✓

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**

Change of zoning from AR-1 to MR-1

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302)732-9366
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

✓ **Completed Application**

✓ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7-17-24

***Signature of Owner***

_____ Date: 7-17-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

File #: _____

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

**Type of Application: (please check applicable)**
Conditional Use ✓
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

Burbage Road & Windmill Road Ocean View, DE

**Type of Conditional Use Requested:**
SINGLE-FAMILY CONDOMINIUMS

**Tax Map #:** 1-34-12.00-374.01, 374.02, 3445.00 - 3460.00, 375.00 **Size of Parcel(s):** 12.32 Ac

**Current Zoning:** AR-1 **Proposed Zoning:** MR-1 **Size of Building:** N/A

**Land Use Classification:** Coastal Area

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

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Applicant Name: Gulfstream Glen Cove, LLC
Applicant Address: 27 Atlantic Ave
City: Ocean View State: DE ZipCode: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Owner Information**

Owner Name: Gulfstream Glen Cove, LLC OT Collins Family Limited Partnership (302) 732-9364
Owner Address: 27 Atlantic Ave 30782 Cedar Neck Road
City: Ocean View State: DE Zip Code: 19970
Phone #: (302) 539-6178 E-mail: RJH@gulfstream.net

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: Civil Engineering Associates
Agent/Attorney/Engineer Address: 55 W Main Street
City: Middletown State: DE Zip Code: 19709
Phone #: (302) 547-2444 E-mail: ron@cea-de.com

# Check List for Sussex County Planning & Zoning Applications

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- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

✓ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

_____ Date: 7/17/24

***Signature of Owner***

_____ Date: 7-12-24

*For office use only:*

Date Submitted: _____ Fee: $500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

# APPENDIX B

## PROPERTY SURVEY AND DEED

13641 #02482 2125

Tax Parcel 1-34-12.00-4.00
1-34-11.00-176.00
1-34-12.00-1.00
1-34-12.00-375.00
1-34-13.00-68.00
RETURN TO GRANTEE
Prepared by: David N. Baker, Esq., P.A.
P O Box 551, 109 S. Race St.
Georgetown, Delaware 19947

NO TITLE OR LIEN SEARCH
PERFORMED - NOT RECORDED

# This Deed, made this 5th day of May

in the year of our Lord Two Thousand.

BETWEEN OMEDA T. COLLINS, TRUSTEE OF THE OMEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, of Rt. 2, Box 23, Clarksville, Delaware 19970, party the first part,

-and-

O. T. COLLINS FAMILY LIMITED PARTNERSHIP, a limited partnership organized and existing under the laws of the State of Delaware, with offices at Rt. 2, Box 23, Clarksville, Delaware 19970, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of One Dollar ($1.00) and other valuable consideration, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, its Successors and Assigns,

Parcel No. 1: 1-34 12.00 4.00

Tract No. 1:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in

Consideration : 0 0.00 Exempt Code: A

| County | State | Total |
|---|---|---|
| 0.00 | 0.00 | 0.00 |
| Grantor | Date: 05/05/2000 | |

Baltimore Hundred, Sussex County, Delaware, lying on the north side of the State Highway leading from Clarksville to Bethany Beach adjoining lands now or formerly of Charles Aydelotte, Manaen Robinson and Roland West, bounded and described as follows, to wit:

BEGINNING at a fence post at the edge of the aforesaid highway; thence running with the same 88-3/4° West 4.12 chains to the center of the outlet road; thence with same North 4-1/4° East 14.50 chains to a post; thence South 85-3/4° East 4.61 chains to a stake in line of a row of cedars; thence with same South 6° West 12 chains to a post; thence South 17-3/4° West 1.64 chains; thence South 7-1/2° West 65 links or 52 feet home to the place of beginning, containing six acres and 97 square perches more or less.

Tract No. 2:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in Baltimore Hundred, Sussex County and State of Delaware and being on the North side of Stone Road leading from Millville to Clarksville, bounded and described as follows, to wit:

BEGINNING at an iron bolt, driven at right of way of said stone road, and corner of lands formerly owned by Edward Hammonds thence running with said lines N. 8-1/2° East 52 feet, N. 17-3/4° E. 108-1/4 feet to a stake in line with row of cedars, thence N. 6° 55' E. 792 feet N. 85° W. 303-3/5 ft. to center of an outlet road thence down said Road N. 5° 10' E. 365 feet to lands now or formerly of Manehn Robinson thence with same down center of Ditch S. 80-3/4° E. 557 feet to land formerly owned by Frank Howard, thence with said Howard line S. 2-3/4° E. 1268 feet to the aforesaid stone road right of way, thence with said right of way 339 feet home to the place of beginning, containing 10-1/2 acres more or less.

Parcel No. 2: 1-34 11.00 176.00

ALL that certain piece, parcel or tract of land lying and being situate in Baltimore Hundred, Sussex County, and State of Delaware, joining lands now or formerly of Smith Murray, Manaen Robinson, Loving Aydelotte and Elmer Murray, bounded and described as follows to wit:

BEGINNING at stone in middle of county road leading from Millville to Clarksville running N. 7 1/2 degrees E. 17.08 chs. to stake; thence S. 85 E. 7.47 chains to cedar stake; thence S. 8 degrees W. 10.14 chs. to stake and lands now or formerly of Elmer Murray; thence with same S.82 degrees E. 3.28 chains to cedar

post and Graveyard lot; thence with said lot S. 5 degrees E. 1.00 ch. to small pine; thence S 88 1/2 W. 1.61 chs. to stake corner of said graveyard; thence S. 4 degrees W. 1.54 chs. to stake; thence S. 84-5/8 degrees E. 1.39 chs. to outlet road; thence with same S. 7-2/5 degrees W. 9.20 chs. to middle of aforesaid county road; thence down same N. 46 1/2 degrees W. 5.03 chs. to stone, home place of beginning, containing ten acres and one hundred and twenty square perches be the same more or less, said outlet road to graveyard is ten feet wide.

WITH THE EXCEPTION of 2.47 acres of land which was conveyed by Herbert Williams and wife to William Clifford Wilson by indenture dated the 18th day of March, 1952, and of record in the aforesaid Office in Deed Record No. 409, Page 347

Parcel No. 3: 1-34 12.00 1.00

ALL that certain triangular lot, piece or parcel of land, situate, lying and being near Clarksville, Baltimore Hundred, Sussex County, Delaware, more particularly bounded and described as follows, to-wit:

BEGINNING at a concrete marker found near the intersection of two ditches; thence, by and with other lands now or formerly of Harold H. Collins and wife, North 11° 00' 55" East, 266.00 feet to a point; thence, by a new line through the lands now or formerly of Calvin C. McComrick and wife, South 35° 12' 33" East, 368.06 feet to a point in the center of a ditch, a corner for this land and other lands now or formerly of Harold H. Collins and wife; thence, by and with the line of the ditch and lands of Harold H. Collins and wife, North 81° 26' West, 266.00 feet, home to the point and place of beginning, containing 35,346.875 square feet of land, more or less. The foregoing description is taken from a survey made by C. Kenneth Carter & Associates, Professional Land Surveyors, dated December 28, 1983, a copy of which survey is of record in the aforesaid Office in Plot Book 27, Page 901.

Parcel No. 4: 1-34 12.00 375.00

ALL that certain lot, piece, parcel or tract of land, lying and being situate in Baltimore Hundred, Sussex County, State of Delaware, bounded as follows: On the North by lands now or formerly of Harry N. Dukes, Jr., on the East by lands now or formerly of Jack Tubbs, on the South by a 30 foot County Road that leads from the Clarksville to Selbyville Road to Millville, on the West by lands now or formerly of the aforementioned Dukes and being more particularly described as follows to wit:

BEGINNING at an oak hub in the Northern right-of-way line of the said County Road, a corner for these lands and lands now or

formerly of Jack Tubbs; thence with the Tubbs line along and with a ditch, North 15° 50' East 506 feet to where a cross ditch intersects the line; thence with the cross ditch, a new division line, 3 courses; North 79° 15' West 213 feet, North 3° 45' East 23 feet, North 81° 45' West 87 feet to where a small ditch intersects the cross ditch, a new corner now established between these lands and lands now or formerly of the aforementioned Dukes; thence with a new division line now established, South 14° 10' West 549 feet to an oak hub in the Northern right-of-way line of the line of the said 30 foot County Road; thence with the Northern right-of-way line, South 84° 15' East 287.9 feet, home to the place of beginning and containing 3.57 acres, be the same more or less.

Parcel No. 5: 1-34 13.00 68.00

ALL that certain piece, parcel or lot of land, lying and being situate in Cedar Neck, Baltimore Hundred, Sussex County, State of Delaware and lying on the westerly side of the slag road leading from Ocean View to Cedar Grove, bounded and described as follows, to-wit:

BEGINNING at a bounder settled on westerly edge of aforesaid slag road right-of-way and corner for land now or formerly of Harry H. Dukes, Jr.; thence with land now or formerly of said Dukes, westerly 345-3/4 feet to a bounder corner for said Dukes, and said described land, thence, with said Dukes land northerly 97-1/3 feet to an iron bolt corner for land now or formerly of Peter Cunningham, thence, with land now or formerly of said Cunningham easterly 345-3/4 feet to an iron bolt driven on westerly side of said slag road right-of-way; thence, with westerly side of said slag road right-of-way southerly 129 feet to Beginning.

BEING a part of the lands conveyed unto Omeda T. Collins, Trustee of the Omeda T. Collins Revocable Trust by deed of Omeda T. Collins dated April 23, 1993 and filed of record in the Office of the Recorder of Deeds, in and for Sussex County, State of Delaware, in Deed Book 1908 at page 335.

#02482 #129

IN WITNESS WHEREOF, the party of the first part has hereunto set her Hand and Seal the day and year first above written.

Witness

Witness

ONEDA T. COLLINS (Seal)
ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 5th day of May, A.D. 2000, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, party to this indenture, known to be personally to be such, and acknowledged this Indenture to be her act and deed.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

DAVID W. BAKER
ATTORNEY AT LAW
NOTARY PUBLIC STATE OF DELAWARE
MY COMMISSION HAS NO EXPIRATION DATE
29 Del.C § 4323 (a) (3)

Notary Public (SEAL)

Received
MAY 0 8 2000
ASSESSMENT DIVISION
OF SUSSEX CTY

RECORDER OF DEEDS
RICHARD H. BELL, II
00 MAY -5 PM 2:42
SUSSEX COUNTY
DOC. SURCHARGE PAID

5,30/00

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

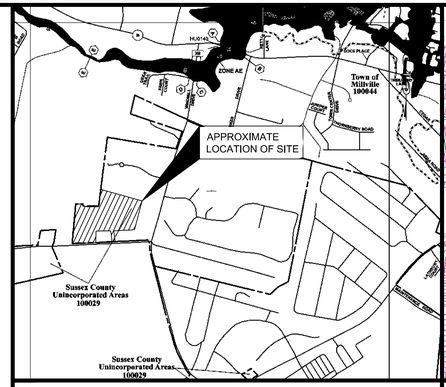
SHEET NO.: **EX-1**

# APPENDIX C

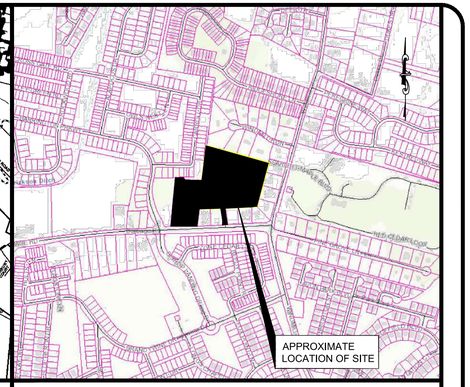
## PRELIMINARY PLANS

# PRELIMINARY PLAN
## FOR
# GLEN COVE

### BALTIMORE HUNDRED
### SUSSEX COUNTY, DELAWARE
### PREPARED FOR:
### GULFSTREAM GLEN COVE, LLC




F.E.M.A. FIRM MAP 10005C0511K
SCALE: 1" = 1000'




VICINITY MAP
SCALE: 1" = 1000'

## LEGEND

| | |
|---|---|
| EXISTING PROPERTY LINE | |
| ADJACENT PROPERTY LINE | |
| RIGHT-OF-WAY | ROW ROW |
| ADJACENT RIGHT-OF-WAY | ROW ROW |
| BUILDING SETBACK | |
| PROPOSED BUILDING | |
| EXISTING EASEMENT | |
| EXISTING PERMANENT EASEMENT | PE PE |
| EXISTING SEWER | SS SS |
| PROPOSED SEWER | 8SS 8SS |
| EXISTING WATER | W W |
| PROPOSED WATER | W W |
| EXISTING STORMDRAIN | SD |
| PROPOSED STORMDRAIN | SD |
| EXISTING WOODS LINE | |
| WOODS LINE TO REMAIN | |
| EXISTING WETLANDS | |
| EXISTING PAVEMENT | |
| PROPOSED PAVEMENT | |
| 20' WIDE TAX DITCH ROW | |
| TAX DITCH SPOILS-SET ASIDE AREA | |
| FORESTED BUFFER | |
| RESOURCE BUFFER | |
| WOODS TO REMAIN | |
| EXISTING SEWER MANHOLE | S |
| EXISTING SEWER CLEANOUT | |
| PROPOSED SEWER MANHOLE | S |
| PROPOSED SEWER CLEANOUT | |
| PROPOSED FIRE HYDRANT | |

## SITE DATA COLUMN

1. PROPERTY INFORMATION/OWNER:
   GULFSTREAM GLEN COVE, LLC
   27 ATLANTIC AVENUE
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-374.01, 134-12.00-3445.00 THROUGH 134-12.00-3460.00
   TOTAL AREA: 8.84 +/- ACRES

   OT COLLINS FAMILY LIMITED PARTNERSHIP
   30782 CEDAR NECK ROAD
   OCEAN VIEW, DE 19970
   TAX PARCEL NO:
   T.P. 134-12.00-375.00
   TOTAL AREA: 3.54 +/- ACRES

2. DEVELOPER/APPLICANT:
   FOXLANE HOMES DELAWARE
   32191 NASSAU RD, #2
   LEWES, DE 19958
   JOHN MURRAY
   (302) 344-1055

3. ENGINEER:
   CIVIL ENGINEERING ASSOCIATES, LLC
   55 WEST MAIN STREET
   MIDDLETOWN, DE 19709
   (302) 376-8833

4. AGENCY:
   SUSSEX CONSERVATION DISTRICT
   23818 SHORTLY ROAD
   GEORGETOWN, DE 19947
   (302) 856-2105

5. EXISTING ZONING: AR-1

6. PROPOSED ZONING: MR

7. PROJECT BENCHMARK:
   BENCHMARK 1 (IRON PIN FOUND): N: 197136.03 E: 740900.55 ELEV. = 15.30
   BENCHMARK 2 (IRON PIN TO BE SET): N: 197162.83 E: 741521.33

8. BUILDING TYPE: FRAME

9. BUILDING SETBACKS: FRONT YARD: 40 FEET; SIDE YARD: 10 FEET; REAR YARD: 10 FEET

10. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

11. PROPOSED USE: RESIDENTIAL - 46 CONDOMINIUMS

12. DENSITY: MAXIMUM DENSITY = GROSS AREA / 10,000 S.F.
    = (536,816.97 S.F.) / (10,000 S.F.) = 53.68 = 53 UNITS TOTAL
    PROVIDED = 46 UNITS

13. AREAS:

| | |
|---|---|
| BUILDING AREA | = 103,891.92 S.F. ± = 2.39 AC. ± |
| PRIVATE DRIVES/DRIVEWAYS | = 79,262.37 S.F. ± = 1.82 AC. ± |
| OPEN SPACE | = 353,662.68 S.F. ± = 8.12 AC. ± |
| WETLANDS | = 8,557.47 S.F. ± = 0.20 AC. ± |
| WATERS OF THE U.S. | = 23,958.00 S.F. ± = 0.55 AC. ± |
| TOTAL | = 536,816.97.F. ± = 12.32 AC. ± |

14. PARKING:
    OFF-STREET PARKING: 2 SPACES PER DWELLING UNIT
    REQUIRED: (46 UNITS)*(2 SPACES) = 92 PARKING SPACES
    PROVIDED: (46 UNITS)*(2 SPACES) + 6 OFF-STREET= 98 PARKING SPACES

15. RESOURCE BUFFER AREA:
    REQUIRED - 16,195 SF (0.37 AC)
    PROVIDED - 16,499 SF (0.38 AC) (ACCESS TO BUFFER WILL EXTEND FROM END OF PRIVATE DRIVE 1)

16. UTILITIES: WATER: TIDEWATER UTILITIES; SANITARY SEWER: SUSSEX COUNTY

17. FIRE LANES:
    ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

18. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0511K DATED MARCH 16, 2015.

19. WETLANDS:
    A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECO IN JANUARY 2024.

20. TOPOGRAPHIC REFERENCE: HORIZONTAL DATUM - NAD27; VERTICAL DATUM - NAVD88

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Robert Hanna DATE 7-16-24
GULFSTREAM GLEN COVE, LLC

## CERTIFICATION OF OWNERSHIP:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED. WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

SIGNATURE Dean W. Collins DATE 7-17-2024
OT COLLINS FAMILY LIMITED PARTNERSHIP

## CERTIFICATION OF PLAN ACCURACY

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E. 7-16-24
DATE

## INDEX OF DRAWINGS


| SHEET NUMBER | SHEET TITLE |
|---|---|
| T-1 | COVER SHEET |
| EX-1 | EXISTING CONDITIONS PLAN |
| C-1 | PRELIMINARY SITE PLAN |


DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|


CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM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COVER SHEET FOR GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY: SPR
APPROVED BY: RHS
FILE: P23101-PRELIM PLANS\COVER
SHEET NO.: T-1

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
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| L17 | N 75°58'06" E | 4.23' |

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REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

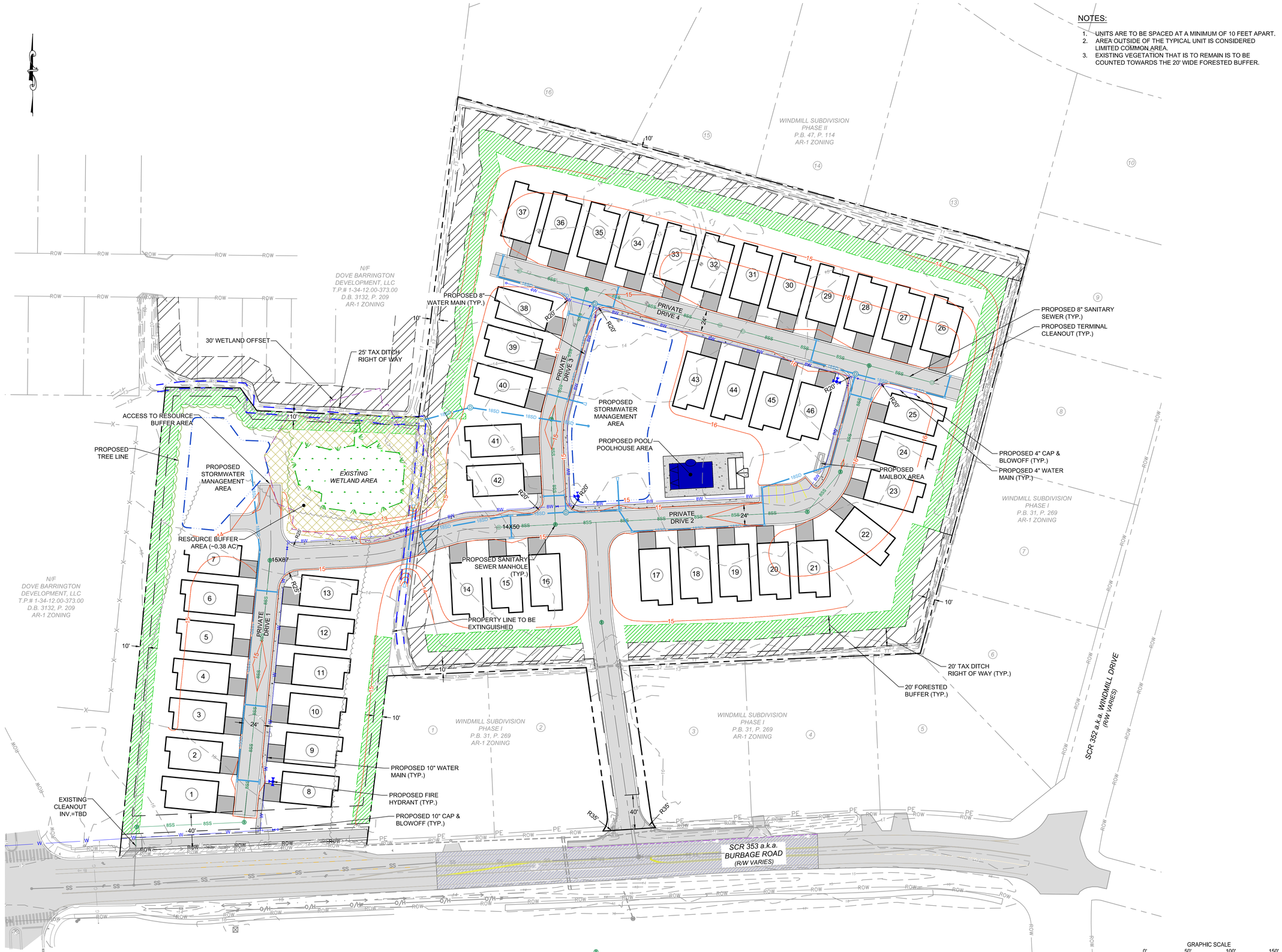
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**




NOTES:

1. UNITS ARE TO BE SPACED AT A MINIMUM OF 10 FEET APART.
2. AREA OUTSIDE OF THE TYPICAL UNIT IS CONSIDERED LIMITED COMMON AREA.
3. EXISTING VEGETATION THAT IS TO REMAIN IS TO BE COUNTED TOWARDS THE 20' WIDE FORESTED BUFFER.

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

CEA CIVIL ENGINEERING ASSOCIATES, LLC
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# PRELIMINARY SITE PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN/SITE

SHEET NO.: C-1

# APPENDIX D

## SUSSEX COUNTY CODE

## DESIGN CONSIDERATIONS (SECTION 99-9.C)

# GLEN COVE
## SUSSEX COUNTY
## DESIGN CONSIDERATIONS
## (SECTION 99-9.C)

### INTEGRATION OF THE PROPOSED SUBDIVISION INTO EXISTING TERRAIN AND SURROUNDING LANDSCAPE

The proposed project consists of 46 single family condominiums surrounded by existing landscaping/woods that will be maintained. Furthermore, landscape buffers will be provided to supplement the surrounding woods.

### MINIMAL USE OF WETLANDS AND FLOODPLAINS

There is a small portion of wetlands on the project property, no impact to the wetlands is anticipated. A resource buffer will be provided.

### PRESERVATION OF NATURAL AND HISTORICAL FEATURES

There are no existing natural or historical features on site.

### PRESERVATION OF OPEN SPACE AND SCENIC VIEWS

The project is surrounded by existing developments and residential areas, there are no existing scenic views from the property. Proposed open space will exceed the 30% requirement.

### MINIMIZATION OF TREE, VEGETATION AND SOIL REMOVAL AND GRADE CHANGES

During construction activities, care will be taken to preserve as many of the large trees around the perimeter of the property as well as any vegetation not impinging on the development. Proposed grades will closely match existing to tie-in to the surrounding developed areas.

### SCREENING OF OBJECTIONABLE FEATURES FROM NEIGHBORING PROPERTIES AND ROADWAYS

As stated above, the property is surrounded by existing woods which will be maintained and supplemented with additional landscaping.

### PROVISION FOR WATER SUPPLY

Water will be provided by Tidewater Utilities.

## PROVISION FOR SEWAGE DISPOSAL

Water will be provided by Sussex County.

## PREVENTION OF POLLUTION OF SURFACE AND GROUNDWATER

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## MINIMIZATION OF EROSION AND SEDIMENTATION, MINIMIZATION OF CHANGES IN GROUNDWATER LEVELS, MINIMIZATION OF INCREASED RATES OF RUNOFF, MINIMIZATION OF POTENTIAL FOR FLOODING AND DESIGN OF DRAINAGE SO THAT GROUNDWATER RECHARGE IS MAXIMIZED

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## PROVISION FOR SAFE VEHICULAR AND PEDESTRIAN MOVEMENT WITHIN THE SITE AND ADJACENT WAYS

The proposed layout of the road consists of twelve (12) foot travel lanes with curbing as well as five (5) foot sidewalks on one side of the road. The site entrance will be located off of Burbage Road within a 50-foot right-of-way through the Windmill Subdivision. A ten (10) foot wide shared use path is also proposed along a portion of the frontage for connection to adjacent ways.

# APPENDIX E

## ENVIRONMENTAL ASSESSMENT & PUBLIC FACILTY EVALUATION REPORT

# ENVIRONMENTAL ASSESSMENT
# &
# PUBLIC FACILITY EVALUATION REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
February 2025

_____
Seal

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- Scope of Project 1

B. ENVIRONMENTAL ASSESSMENT & PUBLIC FACILITY EVALUATION REPORT 2-4

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- Drainage and Stormwater Runoff 2
- Potable Water 2
- Wastewater Treatment and Disposal 2
- Impacts to Surrounding Roadways 2
- Endangered or Threatened Species 2
- Preservation and Protection of Tidal and Non-Tidal Wetlands 2
- Open Space and Buffers 3
- Proposed Public and Private Infrastructure 3
- Economic & Recreational Benefits 3
- Historic or Cultural Resources 3
- Affirmation of Conformance with Sussex County Comprehensive Plan 4
- Actions Taken to Mitigate Proposed Impacts of the Development 4

# A. EXECUTIVE SUMMARY

## Introduction

This Report has been prepared in accordance with Chapter 115 – Zoning: Article XXV Supplementary Regulations, 194.3 Coastal Area of the Sussex County Code. This Report provides a summary of site-specific information and accompanies the Preliminary Plans submittal, dated April 30, 2024. This report is not required however the Applicant is voluntarily providing this information as they are proposing less than 50 units.

## Scope of Project:

The proposed project will include forty-six (46) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 46 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by two (2) stormwater management areas (wet detention ponds).

## B. ENGINEER'S REPORT

### Drainage and Stormwater Runoff

Stormwater quality will be met by managing the Resource Protection Event (RPv) and quantity management will be met by managing the Conveyance Event and the Flooding Event (Cv and Fv) this will be achieved through two (2) proposed stormwater management areas and will be denoted on the plans as Stormwater Management Area. The proposed Stormwater Management Areas will be wet detention ponds that will collect all of the runoff from the site. It will discharge into an existing ditch that is in good working condition.

The runoff from the areas that are being developed will be collected by several methods. Road runoff will be collected by the proposed storm drain system which outlets into the proposed stormwater management areas. The runoff from the proposed lots will also be collected and directed to the proposed stormwater management areas by downspouts or by grass lined swales.

### Potable Water

A connection to the existing 12-inch waterline at the intersection of Doves Landing and Burbage Road is expected. During the Sussex County approval process Water Plans will be submitted to Tidewater Utilities for approval as well. Once the Tidewater Utilities approves the connection, both domestic and fire flows will be provided.

Since 46 condominium units are being proposed an estimated consumption of 12,500 GPD is anticipated. (46 lots * 250 GPD = 11,500 GPD)

As it is expected to be served by the extension of the existing Tidewater Utilities facilities, no private wells are expected to be impacted.

### Wastewater Treatment and Disposal

The proposed site lies within an existing Sussex County Sanitary Sewer District, it is anticipated to connect and be served by an existing gravity sewer line situated within Burbage Road. Ordinance No. 38 Plans will be submitted to the County for approval.

As it is anticipated to be served by the extension of the existing gravity sewer line situated in the road, no impacts to the surrounding surface or ground waters are expected.

## Impacts to Surrounding Roadways

The Glen Cove development is proposed to contain 49 single family condominium units. Based upon the latest Institute of Transportation Engineers Traffic Generation Manual, a single-family home (Land Use 210) is anticipated to generate approximately 9.43 vehicle trips per day (1/2 entering the site, 1/2 leaving the site), and the site is anticipated to generate approximately 524 vehicle trips per day (262 entering, 262 leaving).

Per DelDOT's Service Level Evaluation Report (SLER), dated August 19, 2024, the project will generate less than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day and therefore the traffic impact was determined to be negligible. Due to this, an Area Wide Study (AWS) will be required in lieu of a Traffic Impact Study (TIS). Based upon the 2023 DelDOT Traffic Counts, Burbage Road currently carries 3,224 average annual daily vehicles within the project area. Therefore, it is anticipated that the Glen Cove development will not cause any adverse impacts to the surrounding road network.

## Endangered or Threatened Species

Field investigations were performed by Watershed Eco, LLC. on the Glen Cove and OT Collins parcels. Based upon field investigations, the existence of any endangered or threatened species is not expected. In addition, A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property.

## Preservation and Protection of Tidal and Non-Tidal Wetlands

A wetland delineation was performed by Watershed Eco Inc. in January 2024. Based on the delineation it was determined that approximately 0.20 Acres of wetlands exist on the site. Subsequently, there will be no disturbance of wetlands associated with development of this project. Per the Drainage and Buffer Ordinance, a wetland buffer will be established on the plans.

## Open Space and Buffers

Under the designed layout of the proposed Glen Cove development, approximately 8.12 acres are provided as open space. The total area of the site is 12.32 acres, which produces 66% of provided open space.

In addition, forested buffer strips are proposed around the project site. These forested buffers strips will be composed of a mix of 70% deciduous shade trees and 30% evergreen trees. They will also follow the Sussex County code requirement of having a minimum total of 15 trees for every one-hundred-foot length of buffer.

## Proposed Public and Private Infrastructure

The surrounding properties are currently provided with sewer and water.

## Economic & Recreational Benefits

The proposed development is anticipated to provide several economic benefits including:

- Increase to the tax base of Sussex County.

The proposed development is anticipated to provide several recreational benefits including:

- Amenity area with pool.
- An aesthetic wet pond.

## Historic and Cultural Resources

There is no known presence of any historic or cultural resources listed on the National register of Historic Places at the site.

## Affirmation of Conformance with Sussex County Comprehensive Plan

The proposed development has been designed in accordance to the current Sussex County Comprehensive Plan. The site is located within the Coastal Area, a designated Growth Area, which is among the most desirable locations in Sussex County for new housing and the proposed multifamily use is permitted within this Future Land Use Designation. Furthermore, the site is located within a Level 2 Investment Area, where growth is anticipated by local, county, and State plans, and the project is therefore consistent with the 2020 Strategies for State Policies and Spending.

## Actions Taken to Mitigate Proposed Impacts of the Development

All mitigation measures, where required, have been discussed in their foregoing, respective section.

# APPENDIX F

## DRAINAGE ASSESSMENT REPORT

# DRAINAGE ASSESSMENT REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
February 2025

_____
Seal

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| | • Field Investigations & Findings | 2-3 |
| C. | SITE INVESTIGATION DOCUMENTATION | 4 |
| | • Photographs | 4 |
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| | • Condition and Conveyance Capability of Streams or Other Conveyances | 5 |
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B. DITCH CROSS SECTIONS

C. EXISTING CONDITIONS MAPPING

D. GEOTECHNICAL INVESTIGATION LETTER

E. FOREST STAND AERIAL IMAGERY

F. IPAC LETTER

G. WETLAND DELINEATION – COLLINS PROPERTY

H. WETLAND INVESTIGATION SUMMARY LETTER

## A. EXECUTIVE SUMMARY

Sussex County Code Section 115-193-F specifically states, “If a resource buffer abuts or contains features such as ephemeral, intermittent or perennial streams which are not part of an established tax ditch and which convey drainage from or through a site proposed for development, a drainage assessment report shall be prepared by a registered Delaware Professional Engineer.” The wetland resource buffer directly abuts the Derickson Canal Tax Ditch system. Therefore, it is our opinion that the Drainage Assessment Report is not required due to the resource buffer’s proximity to the tax ditch.

However, we are providing this Drainage Assessment Report on a voluntary basis for Sussex County’s use. This Drainage Assessment Report has been prepared in accordance with Sussex County Code Section 115-193-F and the county provided checklist.

## B. PROJECT NARRATIVE

### Introduction:

The proposed Glen Cove project will include forty-six (46) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 46 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by two (2) stormwater management areas (wet detention ponds).

### Existing Conditions:

The existing properties are located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The property is bound by existing single-family homes on the north, south, and east, and the Bishops Landing Community to the west. The project consists of approximately 12.32 acres and is primarily woodlands with some grassed areas. The existing woodlands are not mature, as referenced in the Forest Stand History section below. There are existing wetlands to the northwest and tax ditches located along the perimeter of the site. The tax ditches outfall west offsite to the Derrickson Ditch via offsite tax ditches.

### Field Investigations and Findings

Field investigations were performed by Watershed Eco, LLC. in September 2021 on the Glen Cove parcel. The site is surrounded by the Derrickson Canal Tax Ditch which appears to be ephemeral in nature. There are no other wetlands or drainage conveyance features within the subject property. An additional wetland investigation was conducted by Watershed Eco, LLC. on the adjacent Collins property to the west on January 22, 2024. This investigation identified an intermittent ditch and palustrine forested wetlands which drain off-site to the north.

No signs of stream bank erosion, debris, or any impediments to conveyance were observed throughout the surrounding tax ditches. In addition, no sand or gravel deposits were observed. As such, no remedial action is necessary regarding the structural integrity of the surrounding tax ditch system. State and federal permitting may be required for the ditch crossing for the connector

road to the west. See Section C. regarding documentation of the investigations.

## C. SITE INVESTIGATION AND DOCUMENTATION

### Photographs:

Photographs of the site are provided in Appendix A.

### Channel Cross-Sections:

Cross-sections of the surrounding tax ditch are provided in Appendix B.

## D. ENVIRONMENTAL CONDITIONS AND HABITAT ASSESSMENT REPORT

### Land Types:

Active Agricultural Fields, hedgerows, drainage ditches, and mixed deciduous/coniferous forest.

### Period of Investigation:

Glen Cove: Wetland Investigation-September 20, 2021

Collins Property: Wetland Investigation-January 22, 2024

### Soil Conditions:

According to the USDA Soil Survey, the majority of the subject property is underlain with well drained Rosedale loamy sand (RoA) with lesser areas of poorly drained Mullica-Berryland complex (MuA) and Klej loamy sand (KsA) in the western portion of the property. The perimeter ditches were likely excavated to facilitate drainage of the property.

Additional Geo-technical borings were conducted by Hardin Kight Associates, Inc. in 2021. Based on the soil boring logs, the site consists of loamy sand soils with seasonal high groundwater ranging from 4.7 to 6.2 feet below the existing surface. The geotechnical investigation report is provided in Appendix D.

### Forest Stand History:

The Glen Cove parcel is predominantly wooded with mixed deciduous/coniferous forest cover. Based on aerial imagery the western portion of the property was cleared around 2012 and now consists of sapling loblolly pine and sweetgum. The eastern portion of the property is dominated by (12-24"DBH) northern red oak, southern red oak, and white oak with red maple, sassafras, and American holly in the understory. Shrub/herbaceous species consisted of highbush blueberry, sweet pepperbush, lowbush blueberry, Virginia creeper, and common greenbrier. A small, wooded area was observed in the northern portion of the Collins property. This area was dominated by 12-18" DBH loblolly pine and sweetgum. The understory consisted of red maple and black gum. Common shrub species observed included lowbush blueberry, common greenbrier, sweet pepperbush, and loblolly pine saplings.

Based on historical aerial imagery, neither parcel is part of a larger contiguous forested area. The on-site forest would not qualify as Forest Interior Dwelling Bird Habitat and would not be classified as mature or old growth. Aerial imagery is provided in Appendix E.

## Wetland Identification:

As stated above, there is evidence of wetlands existing on the project site. Watershed Eco, LLC. identified and flagged a palustrine forested wetland on the Collins property during the January 2025 field investigation. The area of wetlands is approximately 0.20 acres. The wetland directly abuts an intermittent ditch and drains off-site to the north.

Per Sussex County Code, the wetland area will be protected by a future Resource Buffer. Access to the resource buffer and wetland area will be available at the end of Private Drive 1 for future maintenance as illustrated on the Preliminary Plans. A Resource Buffer Management Report has been created to establish the protocol for protection of the resource.

Please see Appendix G for the Wetland Delineation – Collins Property and Appendix H for the Wetland Investigation Summary Letter performed by Watershed Eco, LLC.

## Endangered Species:

A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property. A copy of the IPAC is provided in Appendix F.

## E. EXISTING CONDITIONS MAPPING

Please see Appendix C for Existing Conditions Mapping.

# APPENDIX A

## SITE PHOTOGRAPHS

GLEN COVE PROPERTY

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

Photo 3: Man-made drainage ditch along southern property boundary, facing east.

Photo 4: Man-made drainage ditch along southern property boundary, facing west.

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.

Photo 10: Upland forest cover in the northeastern portion of the property.

OT COLLINS PROPERTY

PHOTO 1: View looking east at southern portion of the property bordering Burbage Road.

PHOTO 2: View looking west at mowed field area in the southern portion of the property.

PHOTO 3: View looking north across mowed field in the central portion of the property.

PHOTO 4: View looking southeast across mowed field from the northwestern portion of the property.

PHOTO 5: Forest cover in the northwestern portion of the property.

PHOTO 6: Forested wetland in the northeastern portion of the property looking west.

PHOTO 7: Drainage ditch along the eastern boundary of the property.

PHOTO 8: View looking west at drainage ditch along the northern boundary of the property.

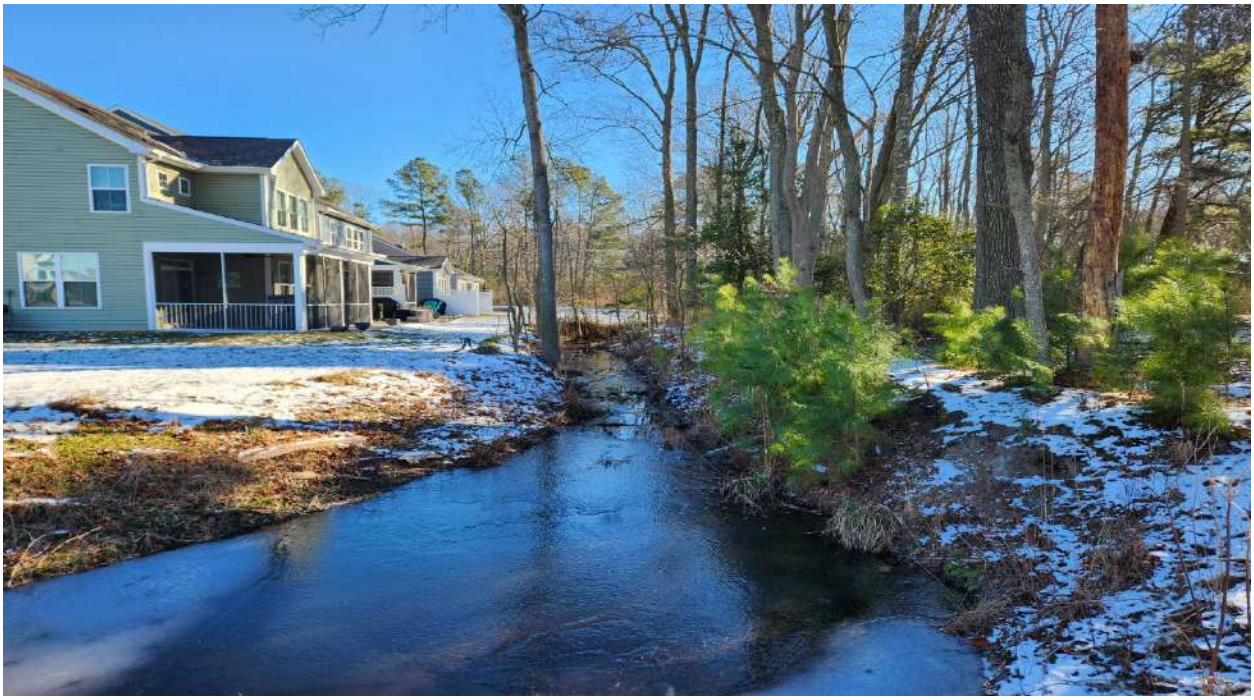

PHOTO 9: Residential properties north of the subject property, looking east.

PHOTO 10: View looking south across mowed field area bordering woodlands along the eastern property boundary.

# APPENDIX B

## DITCH CROSS SECTIONS

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE

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MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# DITCH CROSS-SECTIONS
## PLAN VIEW
FOR
# GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

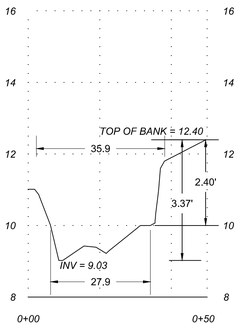
DATE: APRIL 30, 2024

DESIGNED BY:

APPROVED BY: RHS

FILE: P23101 - CONST DITCH

SHEET NO.: **CS-1**

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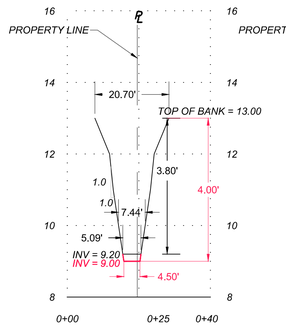


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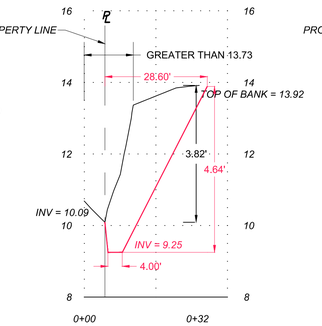


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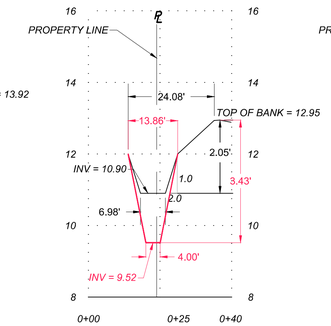


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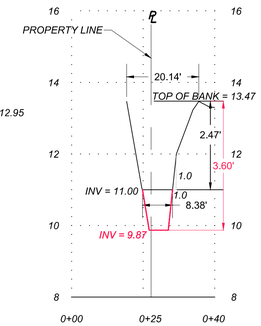


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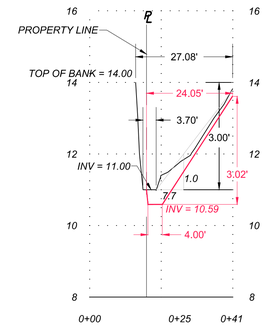


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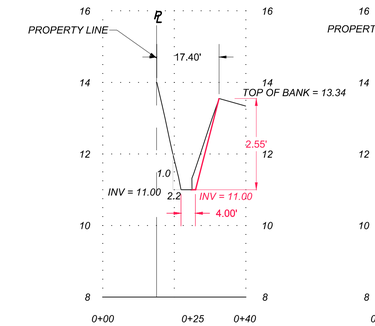


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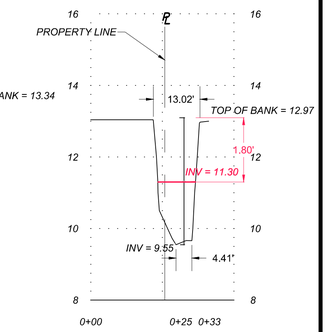


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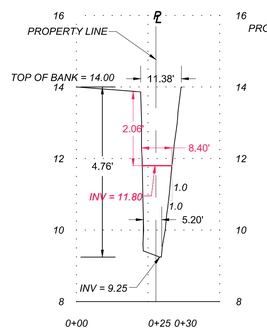


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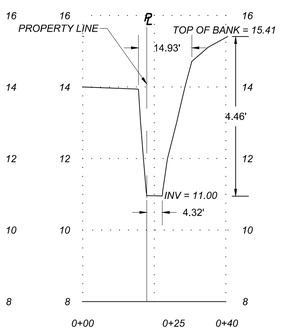


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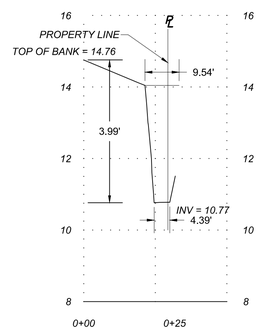


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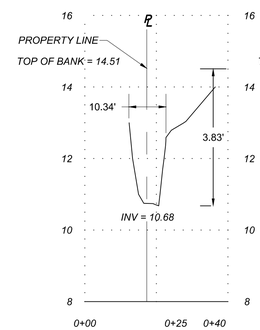


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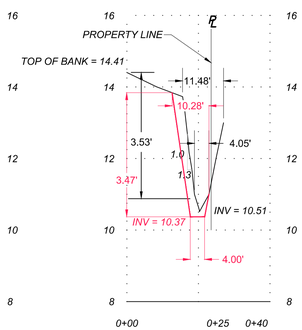


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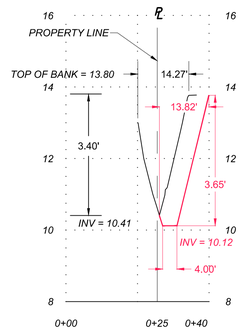


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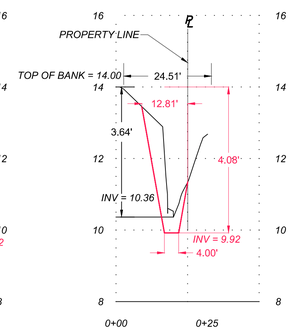


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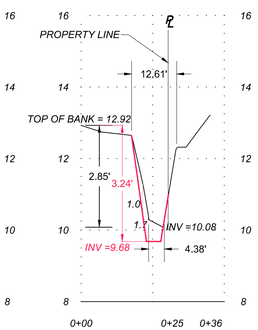


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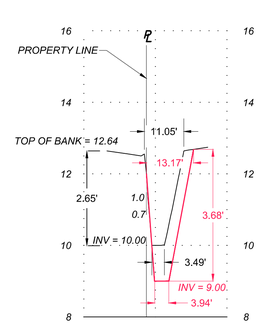


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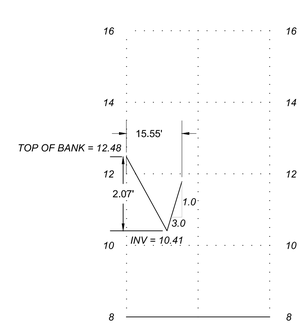


PROFILE
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SCALE: HORIZONTAL 1" = 20'
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REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
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FAX (302) 376-8834
WWW.CEA-DE.COM

# DITCH CROSS-SECTIONS

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY:
APPROVED BY: RHS
FILE: CONST-DITCH
SHEET NO.: CS-2

# APPENDIX C

## EXISTING CONDITIONS MAPPING

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR
APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

# APPENDIX D

## GEOTECHNICAL INVESTIGATION LETTER

HARDIN
KIGHT
ASSOCIATES,
INC.

December 30, 2021 Our Job Number: 21855

**GULFSTREAM DEVELOPMENT, LLC**
**27 Atlantic Avenue**
**Ocean View, Delaware 19970**

Attention: Mr. Bob Harris

Reference: Glen Cove II
SWM Geotechnical Investigation
Sussex County – Millville, Delaware

Dear Mr. Harris:

As requested by Mr. Al Ruble, we have completed a limited subsurface investigation of the soil and groundwater conditions for the stormwater management (SWM) pond proposed for construction in the Glen II Community, planned for development in Millville, Delaware. This investigation was performed to determine the depth to estimated seasonal high groundwater (SHG) and analyze the characteristics of the underlying soils with respect to the design of the stormwater management pond. This investigation included drilling five (5) hand auger probes, and review of available geological and soil survey literature for the subject site. Our findings and analysis are presented herein.

For this investigation we were provided with an electronic copy of a site plan entitled *Soil Testing Locations for Glen Cove II*, prepared by Civil Engineering Associates (CEA), dated November 1, 2021. The site plan illustrates the layout of the proposed development and roadways, the location of the SWM Pond, and includes existing and proposed grades. The site plan was used in preparation of this report.

## SITE DESCRIPTION

The site is located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The site consists of approximately 10 acres, most of which is wooded and contains light underbrush. The property is bound by existing single-family homes on the north, south and east, and the Bishops Landing Community to the west. The SWM Pond is proposed in the northwest corner of the site.

From review of the ground surface elevations provided, topographically, the site is relatively flat in surface elevation, at approximately 13 feet above Mean Sea Level (MSL). The natural site surface drainage is generally from south to north. At the time of this investigation, the ground surface was dry and stable.

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## PROPOSED CONSTRUCITON

One SWM Pond is proposed. The pond is proposed as a wet pond, with a top of berm at El. 13 and a pond bottom at El. 6. The pond will receive water from 2 stormwater pipes, and includes an outfall, discharging into an existing drainage ditch located along the west property boundary. From review of the proposed grades shown on the previously referenced site plan, excavations of approximately 7 to 8 feet will be required for pond construction.

## INVESTIGATION

In order to evaluate the soil and groundwater conditions in the area of the pond, five (5) hand-auger probes were drilled. The auger probes were advanced within the proposed SWM ponds at locations established by survey, provided by CEA. The auger probes are labeled as Auger Probes T-1 through T-5. Ground surface elevations were provided by CEA at each staked location. The auger probes were drilled to depths ranging from 6.5 to 8 feet below the existing ground surface. The soil conditions encountered were visually identified in general accordance with the Unified Soil Classification System (USCS), and United States Department of Agriculture (USDA) classification system. The locations of the auger probes are shown on the attached Auger Probe Location Plan, labeled as Figure 1, which is an altered version of the previously referenced site plan prepared by CEA.

Additionally, we have reviewed the monthly depth to groundwater readings for Monitoring Well Qi31-03, taken from the *Delaware Geological Survey* website. The depth to groundwater was at the normal seasonal high in January 2021. The depth to groundwater at Well Qi31-01, located approximately 5 miles west of the site, was approximately 5 feet below the normal SHG in September 2021. The monthly well report is attached for your reference.

## GEOLOGY

Based on the *Geologic Map of the Bethany Beach and Assawoman Bay Quadrangles GM-18* (Ramsey and Tomlinson, 2012), the the geologic unit underlying the site at the surface is the Ironshire Formation.

The Ironshire Formation is described as pale yellow to light gray, fine to very coarse sand. Very coarse sand to fine gravel are a common constituent of the unit, especially near its base. Thin, light gray, silty clay beds occur but are not present at all localities. Based on the profile provided in the above referenced map, it unconformably overlies the Omar Formation. Where the Ironshire Formation overlies the Omar Formation, the boundary is not always clear, but is commonly marked by a coarse sand or pebbly sand at the base of the Ironshire Formation. The estimated thickness at the site location is about 20 feet thick.

The top of the Omar formation is described as a gray to pale yellow, fine to very fine, clean to slightly silty Sand, with rare very fine beds of silt. These silty sands are underlain by a gray to light greenish gray, silty clay to silty fine sand with scattered thin beds of oyster shells. In places, there is a 2- to 10-foot thick bed of medium to coarse, relatively clean sand

underlying the shelly, silty clay. Underlying the shelly, silty clay or the medium to coarse sand, where present, in the areas where the Omar is thickest, there is a 10- to 40-foot-thick layer of greenish-gray, compact, silty clay to clayey silt. Beneath this silty clay, if present, is a 3- to 5-foot-thick bed of very dark-gray to black, organic-rich, sandy silt to silty clay. The bottom, up to 5 feet of the unit, normally consists of 1 to 3 feet of gray to very dark-gray fine to coarse silty sand with scattered laminae, to thin beds of peat composed of sand to gravel-size plant fragments, overlying light to dark gray, coarse to very coarse, sand.

## SOIL SURVEY

The information in this section is from the *Web Soil Survey* which was accessed on December 29, 2021. Soil Survey information can be used for general planning, onsite investigation is needed to supplement this information. Soil Survey information is limited to the upper most 6 feet in any given location.

Based on the Sussex County, Delaware survey the soils units on site are:

- The Klej loamy sand, 0 to 2 percent slopes (KsA) has one major component, the Klej component which makes up 70 percent of the unit. The minor components in the Klej loamy sand are the: Galloway (10%), Berryland, drained (5%), Hammonton (5%), Hurlock, drained (5%), and Runclint (5%). This soil does not meet hydric criteria.

- The Mullica-Berryland complex, 0 to 2 percent slopes (MuA) has four major components: the Mullica, drained (26%), the Mullica, undrained (16%), the Berryland, drained (24%), and the Berryland, undrained (14%). The minor components are: Klej (10%), Askecksy, drained (5%), and Galloway (5%). This soil meets hydric criteria.

- Rosedale loamy sand, 0 to 2 percent slopes, (RoA). It has one major component, the Rosedale (75%). The minor components include: Evesboro (10%), Klej (5%), Hambrook (5%), and Galloway (5%). This soil does not meet hydric criteria.

The following descriptions, properties, and limitations are based on Sussex County, Delaware survey area data, Version 22, August 26, 2021, with aerial images photographed between November 21, 2018 and March 12, 2019. The major components (greater than 10%) are described below. The minor components are not addressed in this report.

The Klej component parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. The natural drainage class is described as somewhat poorly drained with water movement in the most restrictive layer being moderately high. It has an apparent water table that exists at 12 inches during February. This soil typically does not flood or pond. The normal upper limit of the water table from June through October is greater than 6.0 feet. It typically has a seasonal upper limit of water saturation between 0.8 to 1.7 feet from December to April. The pH is typically between 4.3 and 5.5, and the organic matter content in the surface horizon is about 0 percent.

The Mullica parent material consists of sandy and loamy fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content in the surface horizon is about 16 percent. The pH is typically between 4.0 and 6.5. The shrink-swell potential is low. The potential for frost action is low.

The drained component has rare ponding events throughout the year. It typically has a seasonal zone of water saturation from January through March between 0 and 8 inches. The undrained component has frequent ponding events for long periods during January through April, and occasionally during the remaining part of the year. It typically has a seasonal zone of water saturation from December through April, between 0 and 8 inches. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 66 percent.

The Berryland, parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content of the surface horizon is about 11 percent. The pH is typically between 4.3 and 6.5. The shrink-swell potential is low as is the potential for frost action.

The drained component has rare ponding events during November through May. It typically has a seasonal zone of water saturation between 0 and 8-inches during January, February, and March. The undrained component has frequent ponding events for long periods during January through April, and occasionally for the remaining part of the year. It typically has a seasonal zone of water saturation between 0 and 8 inches, from December through May. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 68 percent.

The Rosedale parent material consists of sandy eolian deposits over fluviomarine sediments. The undisturbed hydrologic soil group is A. The natural drainage class is described as well drained. Water movement in the most restrictive layer is moderately high. This unit is typically not flooded, nor does it pond. The upper limit of the water table is greater than 6 feet, and typically has a seasonal upper limit of water saturation between 3.3 to 6.0 feet during January, February, March, and April. The pH is typically between 4.3 and 6.5. Organic matter content in the surface horizon is about 1 percent.

The following limitations and restrictions described below may be mitigated by following the recommendations provided in this report and our recommendations during construction.

| Limitations for | Klej | Mullica | Berryland | Rosedale |
|---|---|---|---|---|
| Infiltration Systems | Severely Limited<br>Wetness<br>adsorptive capacity | Severely Limited<br>wetness<br>water movement | Severely Limited<br>wetness<br>water movement | Deep -Severely<br>Shallow – Somewhat<br>wetness<br>water movement<br>adsorptive capacity |
| Unlined Retention Systems | Somewhat Limited<br>water movement<br>wetness interfering with installation | Somewhat Limited<br>wetness interferes with installation<br>water movement | Somewhat Limited<br>water movement<br>wetness interferes with installation | Somewhat Limited<br>wetness interferes with installation<br>insufficient groundwater<br>water movement |
| Lined Retention Systems | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface,<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement<br>insufficient groundwater |
| Embankments | Very Limited<br>depth to saturated zone<br>piping<br>seepage | Very Limited<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Very Limited<br>piping<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Somewhat Limited<br>Seepage<br>depth to saturated zone |
| Aquafer Fed Excavated Ponds | Very Limited<br>Unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls<br>Depth to saturated zone |
| Pond Reservoir Areas | Very Limited<br>seepage | Very Limited<br>Seepage | Very Limited<br>seepage | Very Limited<br>seepage |
| Shallow Excavations | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls | Very Limited<br>depth to saturated zone<br>unstable excavation walls<br>Undrained areas are subject to ponding. | Very Limited<br>depth to saturated zone | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls |
| Shrink-swell Potential | Low | Low | Low | Low |
| Frost Action Potential | Low | Low | Low | Low |
| Corrosion Risk Uncoated Steel | High | High | High | Moderate |
| Corrosion Risk Concrete | High | High | High | High |

## FINDINGS

The findings at the auger probes are consistent with the geology and soil survey as described above. Approximately 3 to 20 inches of topsoil was present at the existing ground surface. Below the topsoil, the soil conditions consist of sand with varying amounts of silt. The soils generally consist of material visually classified as predominately Poorly-graded Sand with Trace Silt (USCS SP/SM; USDA Loamy Sand), Poorly-graded Sand with Silt (USCS SM; USDA Sandy Loam), Silt (USCS ML; USDA Silt Loam), and Poorly-graded Sand (USCS SP;

USDA Sand). Detailed descriptions of the soil conditions encountered can be found on the attached auger probe logs.

At the time of drilling the probes, water was encountered at a depth ranging from approximately 5 to 6 feet below the existing ground surface. Subsequent groundwater readings were taken after 7 days, with groundwater recorded at depths of 4.7 to 6.2 feet below the existing site surface, corresponding to elevations ranging from 7.5 to 8.4 feet above MSL.

**ANALYSIS / DISCUSSION**

Based on our findings, the seasonal high groundwater (SHG) is estimated to be approximately 2.7 to 4.5 feet below the existing site surface, corresponding to approximately elevation 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Our estimate of the SHG at the auger probe locations are based on the field measurements of the depth to groundwater, soil coloring and mottling, and should be considered approximate. The results of the groundwater readings and Hardin-Kight Associates professional opinion of the estimated SHG depth are summarized as follows:

| Auger Probe Number | Existing Surface Elevation (MSL) | Depth To Water Below Surface At Completion (Ft.) | Depth To Water Below Surface After 7 Days (Ft. - MSL) | Estimated Depth Below Surface to SHG (Ft. - MSL) | Estimated Depth Below Surface To Normal Water (Ft. – MSL) |
|---|---|---|---|---|---|
| T-1 | 13.32 | 6.25 | 5.71 – 7.61 | 3.3 – 10.0 | 4.0 – 9.3 |
| T-2 | 12.59 | 5.00 | 4.75 – 7.84 | 3.0 – 9.6 | 3.5 – 9.1 |
| T-3 | 12.76 | 5.50 | 5.26 – 7.50 | 2.7 – 10.0 | 3.5 – 9.3 |
| T-4 | 12.85 | 5.75 | 5.30 – 7.55 | 3.0 – 9.8 | 4.5 – 8.9 |
| T-5 | 14.64 | 5.25 | 6.19 – 8.45 | 4.5 – 10.1 | 5.0 – 9.6 |

Considering that the normal SHG is estimated to be within a few feet of the existing site surface, wet pond construction is feasible. Based on our findings, we do not anticipate that an impervious liner will be required to maintain water within a few feet of the existing surface. Although, seasonal groundwater variations of approximately 2 feet should be anticipated between the traditional wet and dry seasons.

From our analysis, and assuming wet pond construction, the groundwater levels found on this site will likely be above the pond bottom during construction. The contractor should be prepared to control groundwater during pond excavation. Cut subgrades below the groundwater will be susceptible to instability and softening. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

**PRELIMINARY RECOMMENDATIONS**

In consideration of the above data, we have prepared the following preliminary recommendations for your review and consideration. These recommendations are considered preliminary, pending our review of the final grading plans and construction drawings. Once the grading plans and construction drawings are finalized, our office should be contacted for additional review and comment.

1. We recommend that wet pond storage practices be used for stormwater collection on this site.

2. We recommend that the SWM ponds be designed and constructed in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

3. We recommend that both permanent fill and cut slopes be constructed on a maximum gradient of 3:1 (horizontal to vertical). Flatter slopes are suggested where possible to aid in the establishment of vegetative cover, reduce the potential for erosion, and facilitate maintenance.

4. We recommend that the contractor be prepared to control groundwater during pond basin excavation.

5. We recommend that the SWM pond excavation be monitored by Hardin-Kight Associates, Inc. (HKA) for slope seepage and stability. If slope seepage resulting in slope instability is observed, supplemental stabilization practices (ie; underdrains, drainage blankets, and rip-rap) may be required. HKA will provide recommendations and details during construction, as needed.

6. We recommend that the material proposed for use backfill placed around stormwater inflow and outfall pipes, meet the USC classification of SP, SM SP/SM, SC, CL, CL/ML or CH, be free of deleterious materials, and be approved by Hardin-Kight Associates, Inc. (HKA).

7. We recommend that the pipe trench backfill be placed in uniform 8-inch thick layers and be compacted to a minimum of 95% of the maximum dry density as determined in accordance with the standard moisture density relationship test (ASTM D-698/AASHTO T99).

8. We recommend that each layer of trench backfill, be tested and approved prior to placement of the succeeding layer. We recommend that fill which fails to meet the minimum compaction requirements be compacted and reworked, until satisfactory compaction is obtained.

9. We recommend that the construction of the SWM Ponds be monitored by HKA.

## CONCLUSIONS

Based on our findings, the SHG at the auger probe locations is estimated to be at an elevation of approximately 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Groundwater will likely be encountered above the pond bottom during construction. The contractor should be prepared to control groundwater during pond basin excavation. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378,* latest editions.

## LIMITATIONS

This preliminary report was prepared in accordance with generally accepted practice for geotechnical engineering in this area. It is intended for the use of the client for the specific site, as shown on the Auger Probe Location Plan.

The soil and water conditions discussed herein represent the conditions encountered at the locations of the exploratory auger probes as shown on the Auger Probe Location Plan. Variations in the soils and groundwater between the auger probe locations, and below the depths explored, should be anticipated.

A copy of the auger probe logs and location plan are enclosed for your reference. If you have any questions concerning this report, or if we can be of any further assistance at this time, please feel free to contact us.

Very truly yours,

**HARDIN-KIGHT ASSOCIATES, INC**

Paul M. Till

Justin A. Frizzell, P.E.

JUSTIN AMASA FRIZZELL
LICENSE
No. 16715
DELAWARE
PROFESSIONAL ENGINEER

Cc: Al Ruble – Awruble@aol.com
Ron Sutton - CEA

# APPENDIX E

## FOREST STAND AERIAL IMAGERY

1937 Aerial Photograph.

1954 Aerial Photograph.

1968 Aerial Photograph.

1992 Aerial Photograph.

1997 Aerial Photograph.

2002 Aerial Photograph.

Glen Cove

Sussex County, DE

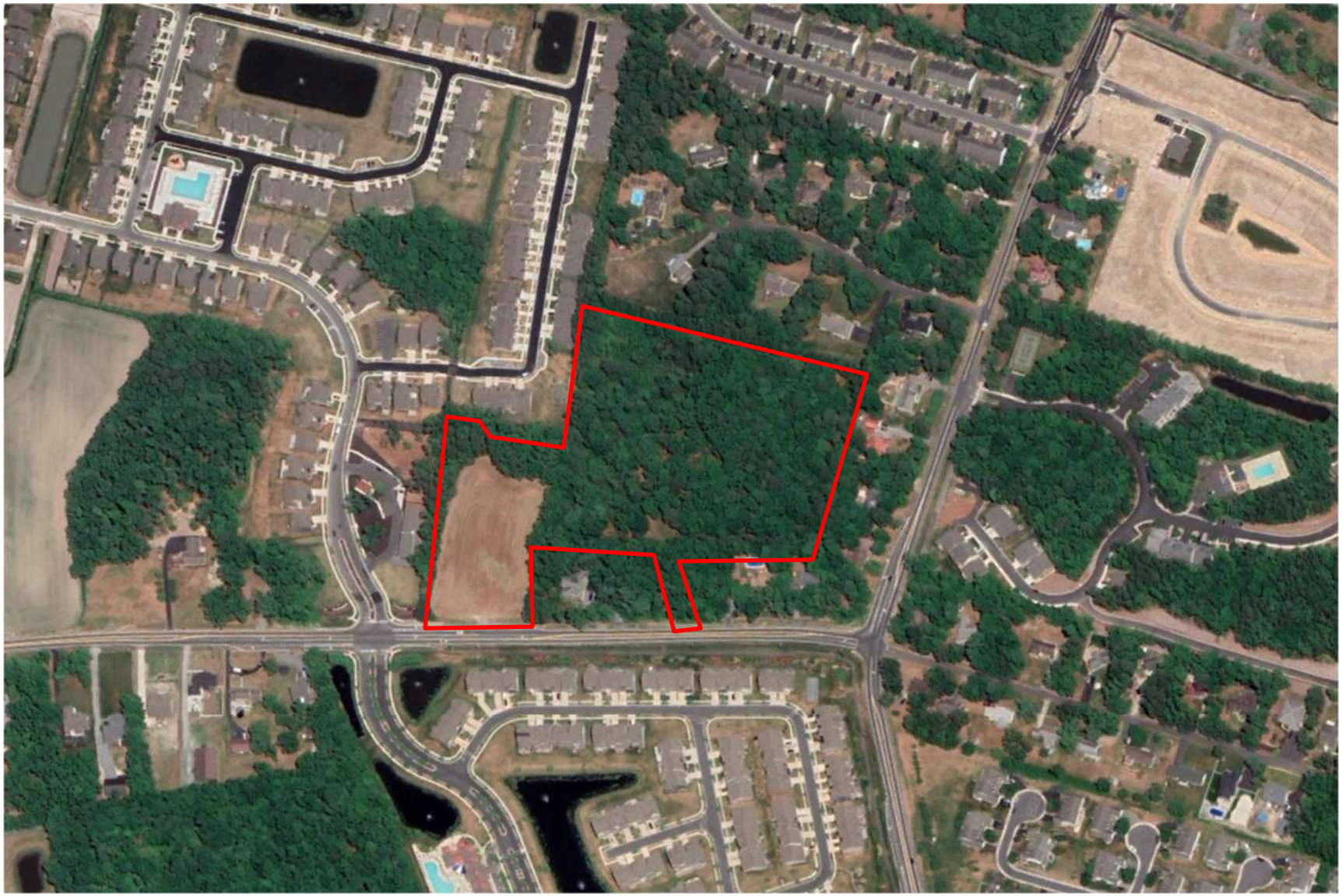
2012 Aerial Photograph

Glen Cove Sussex County, DE

2017 Aerial Photograph

Glen Cove

Sussex County, DE



2021 Aerial Photograph

Glen Cove

Sussex County, DE

2024 Aerial Photograph

# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

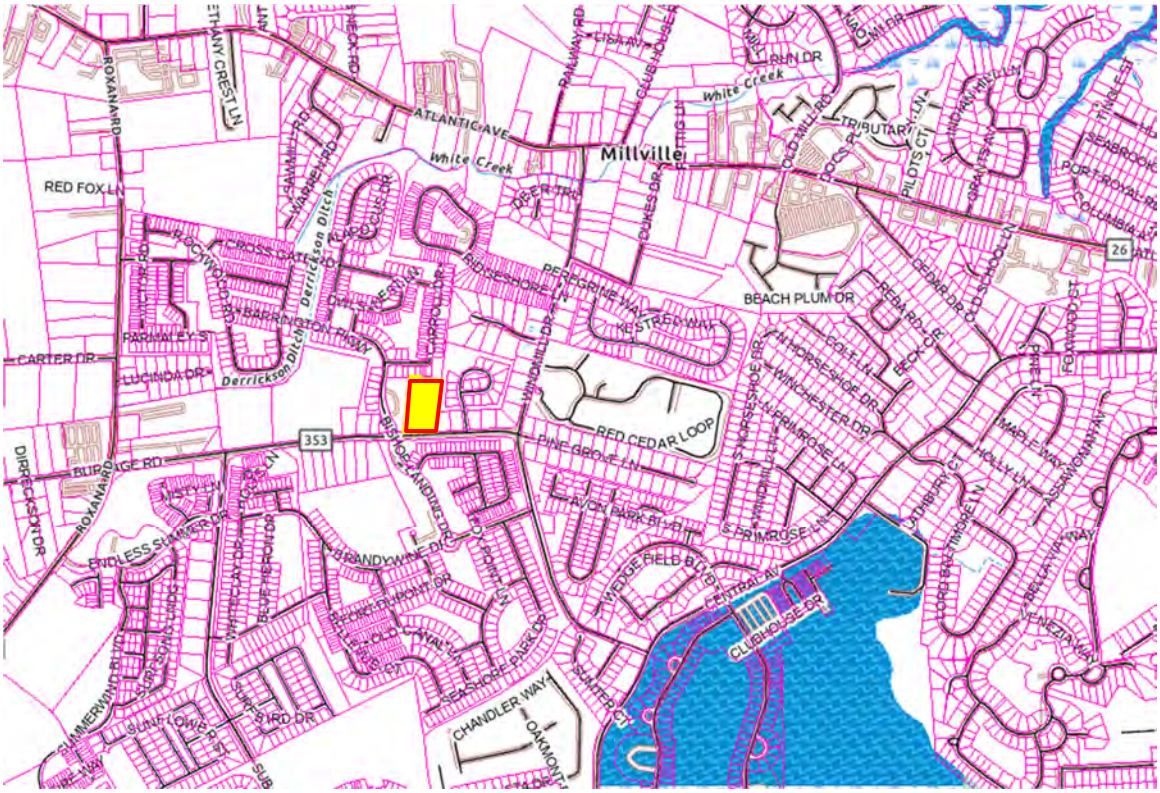



Figure 1: Location Map

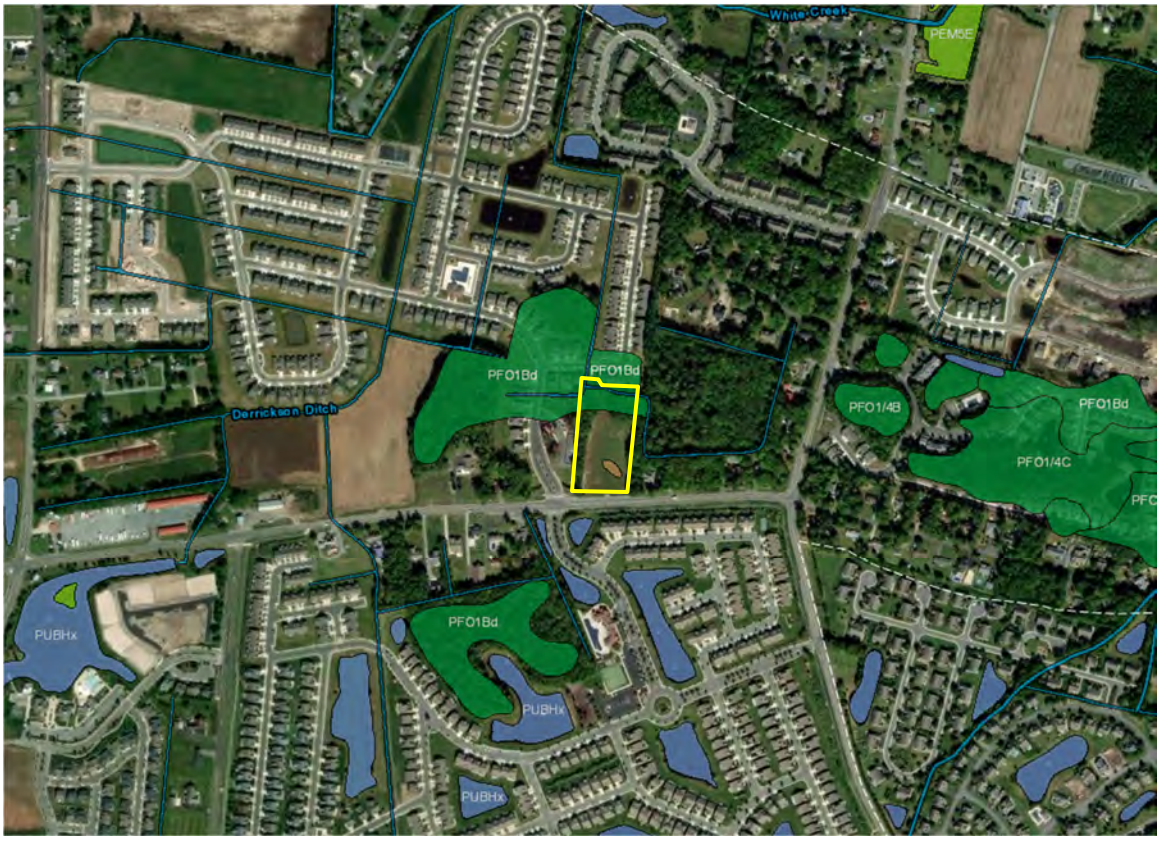



Figure 2: National Wetland Inventory Map.

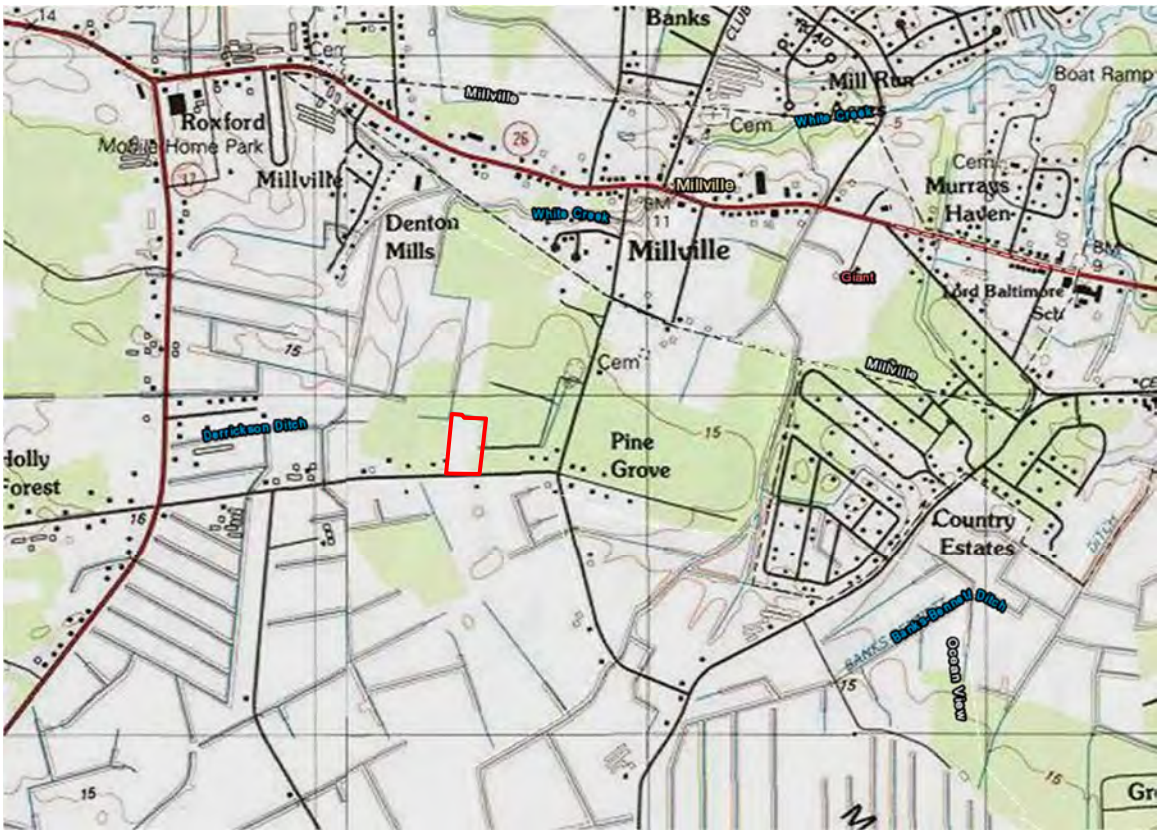



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

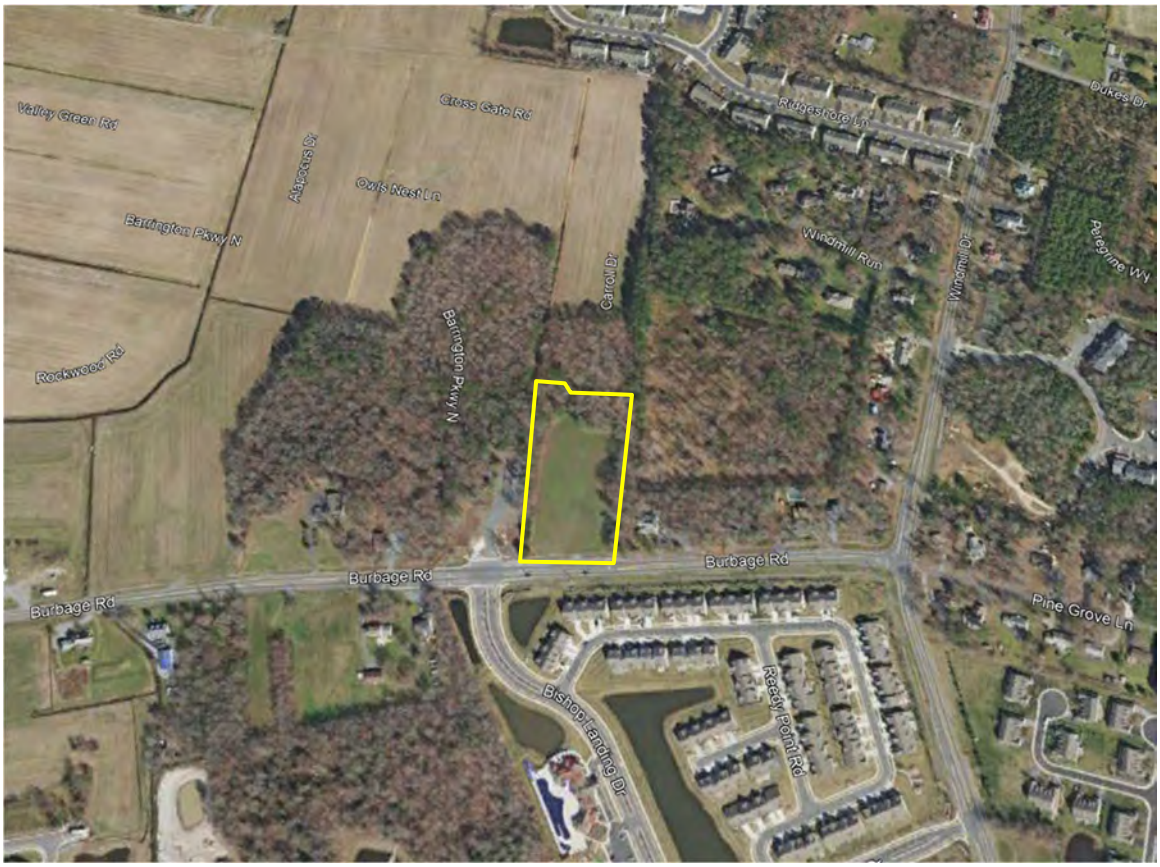



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

View looking west at intermittent ditch at the northwestern boundary of the property.

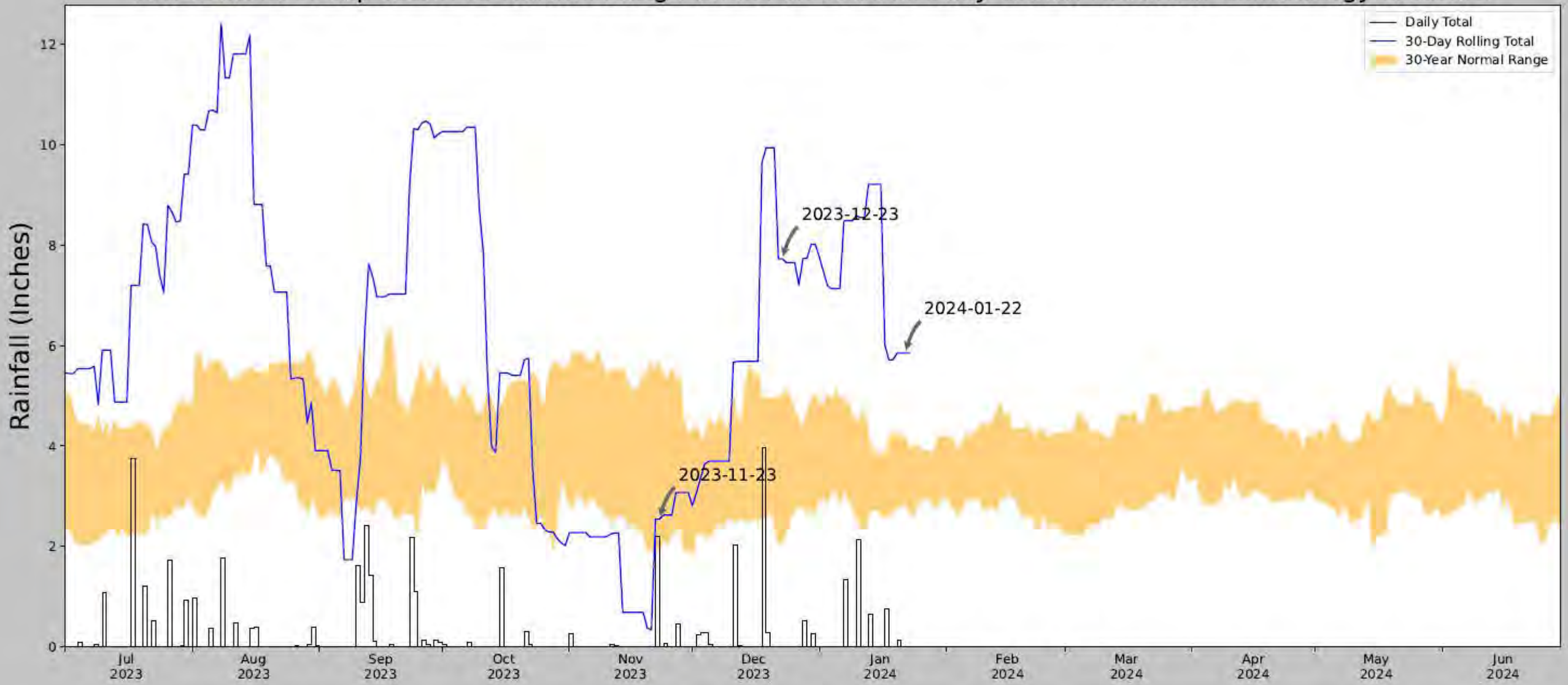
Intermittent ditch draining northerly, off-site.

# Appendices

# Collins Property

Wetland Delineation Map

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

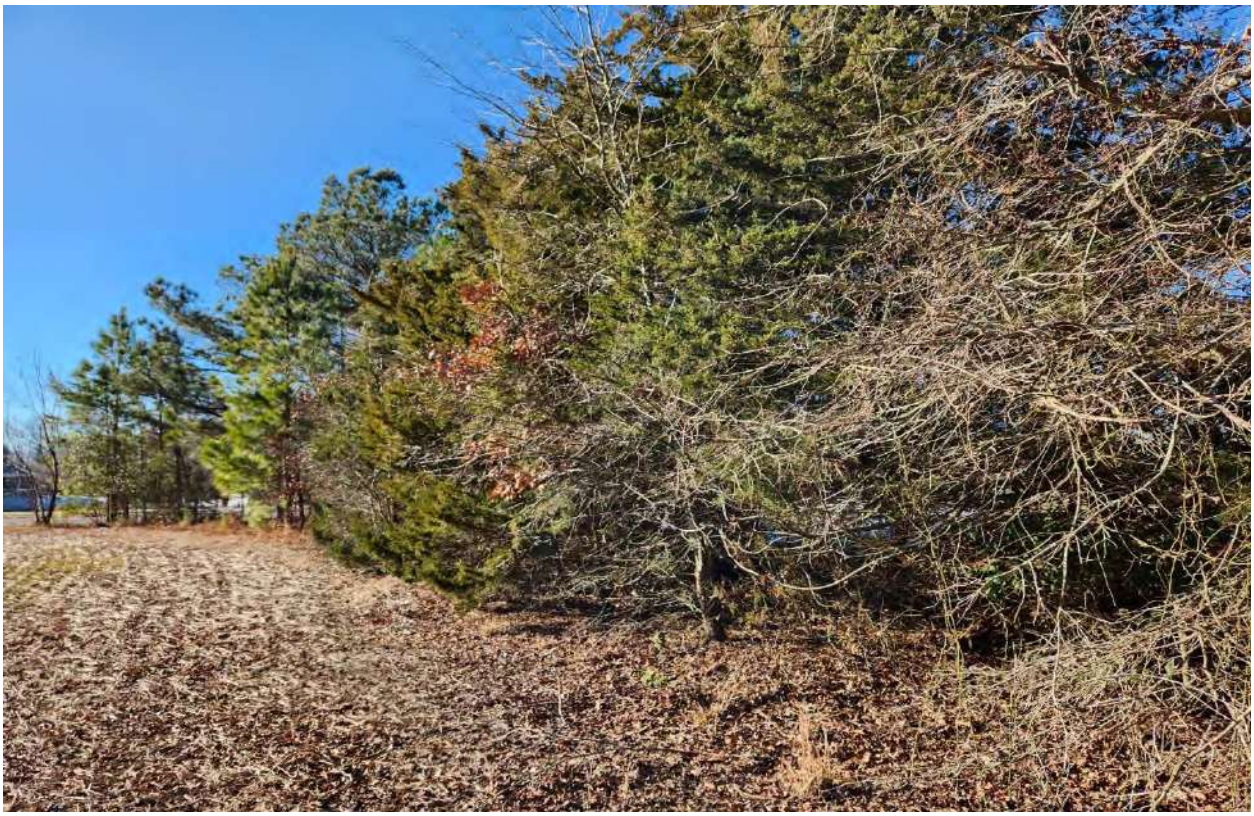
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**

___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
✓ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

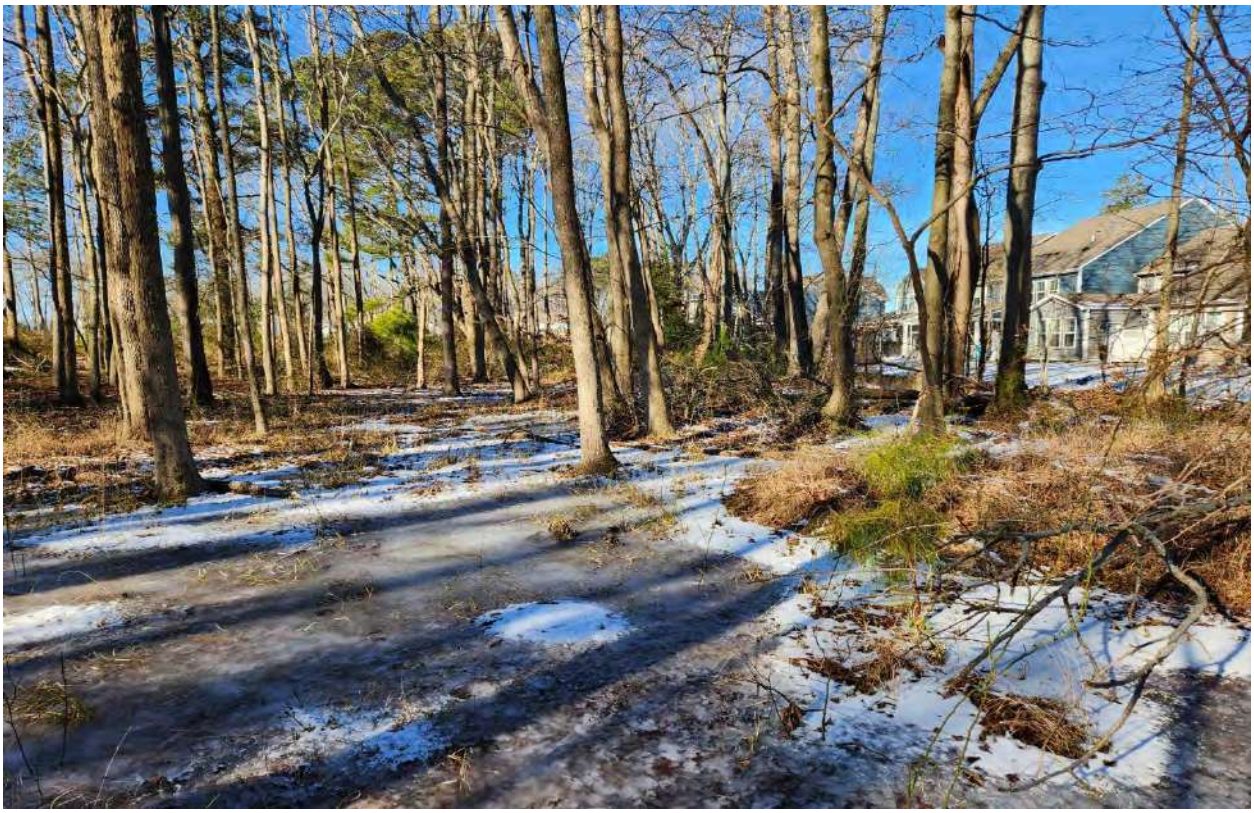
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

NRCS

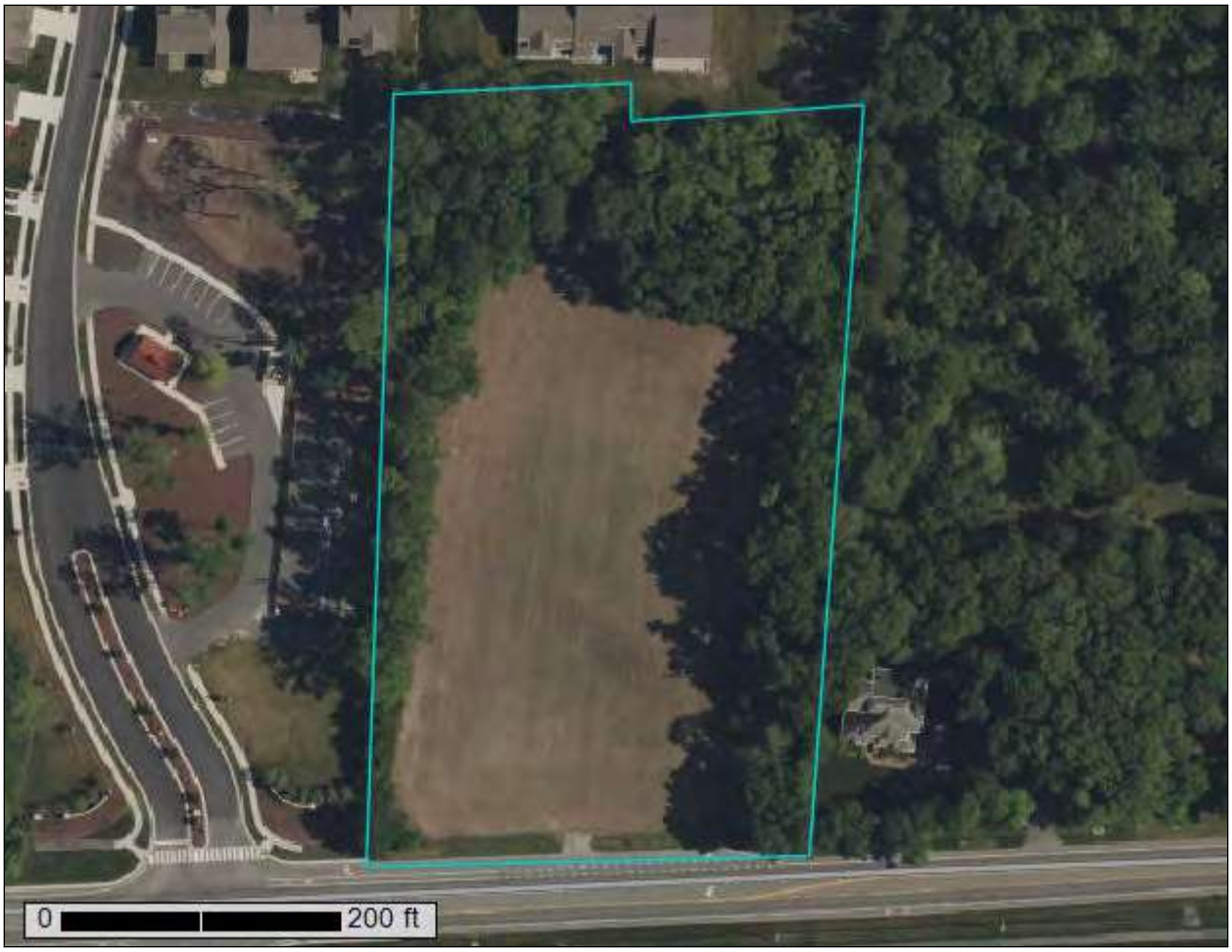
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:993 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

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# APPENDIX H

## WETLAND INVESTIGATION SUMMARY LETTER

*www.WatershedEco.com*
*Creating Value*

September 23, 2021

Gulfstream Glen Cove, LLC.
27 Atlantic Avenue
Ocean View, DE 19970

Attention: Mr. Robert Harris

Subject: Wetland Investigation Summary Letter
Glen Cove
36199 Burbage Road, Ocean View, DE 19970
Tax Parcel: 134-12.00-374.01

Dear Bob:

Watershed Eco, LLC. investigated the above referenced property on September 20, 2021 for the purpose of conducting a wetland delineation within the 3.88 acres subject property. The wetland delineation followed the criteria in the 1987 Corps Delineation Manual (Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Additionally, I have reviewed the National Wetland Inventory Map, National Hydrographic Dataset, U.S. Geological Survey mapping, and USDA Soil Survey mapping.

The field investigation and review of mapping confirmed that the site is entirely wooded with a man-made ditch excavated around the perimeter of the property as depicted on the National Hydrography Dataset, NWI and USGS maps (Figures 2-4). This ditch network drains westerly off-site then north to White Creek, a tributary of Indian River Bay. No wetland features were observed within the boundaries of the subject property.

*302-464-0831*
*Jim@WatershedEco.com*

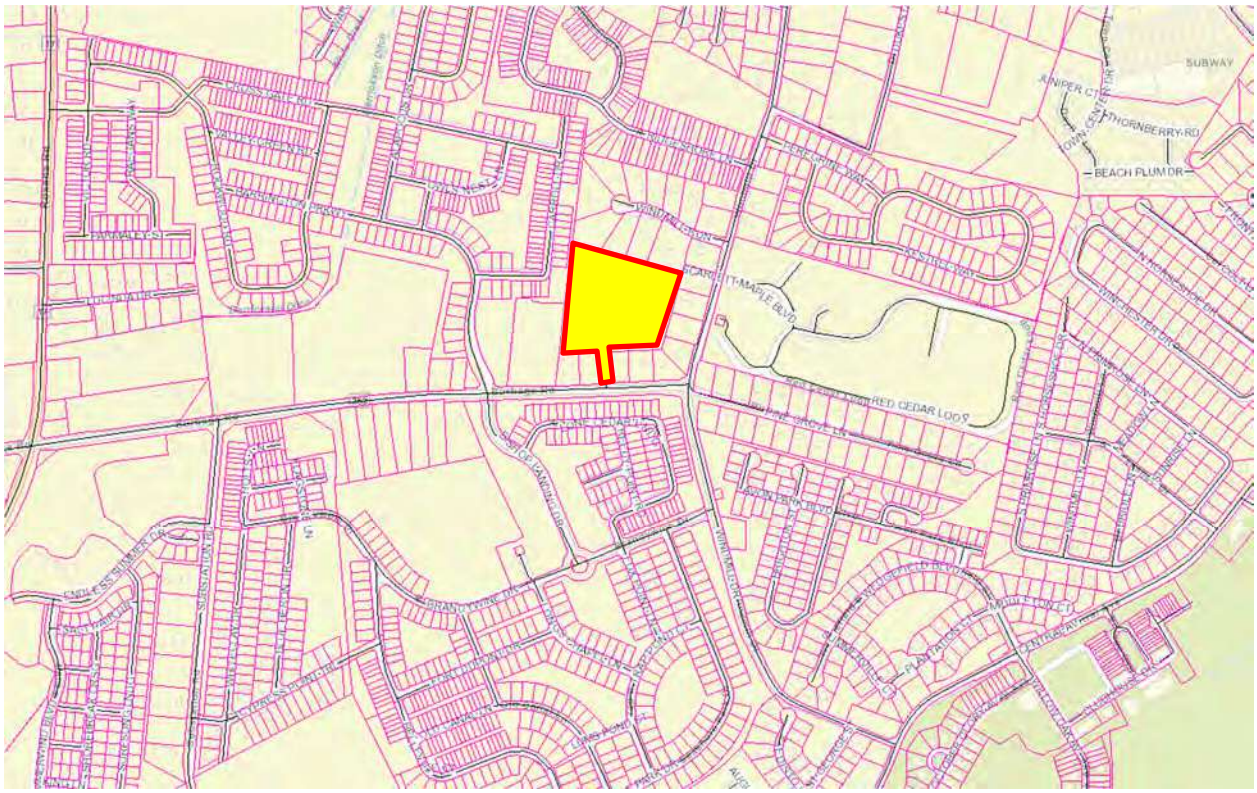



**Figure 1: Location Map.**

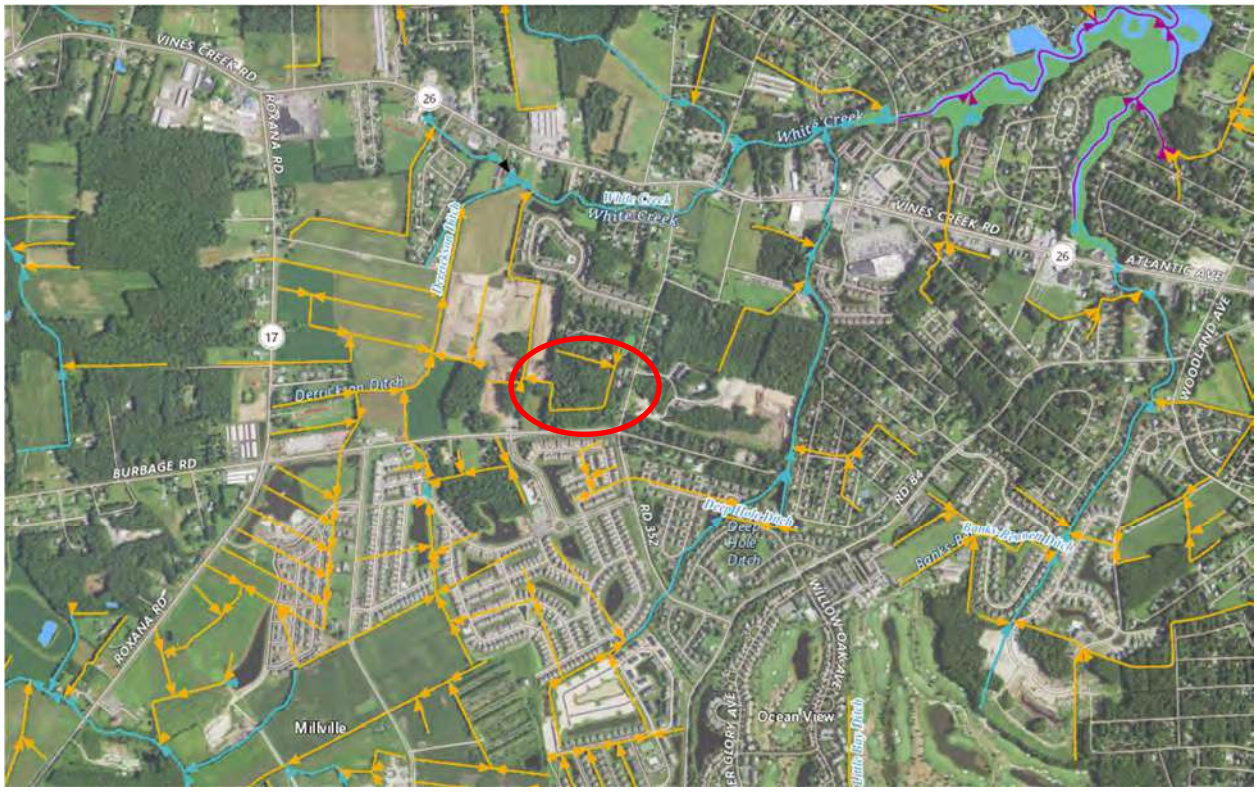



**Figure 2: National Hydrography Dataset Map.**

The National Wetland Inventory Map depicts a blue-line drainage feature along the northern, eastern, southern and southwestern property boundaries. This ditch extends off-site to the west, then drains north to White Creek.

Figure 3: NWI Map

The USGS topo map depicts a similar ditch network to the NWI and NHD map.

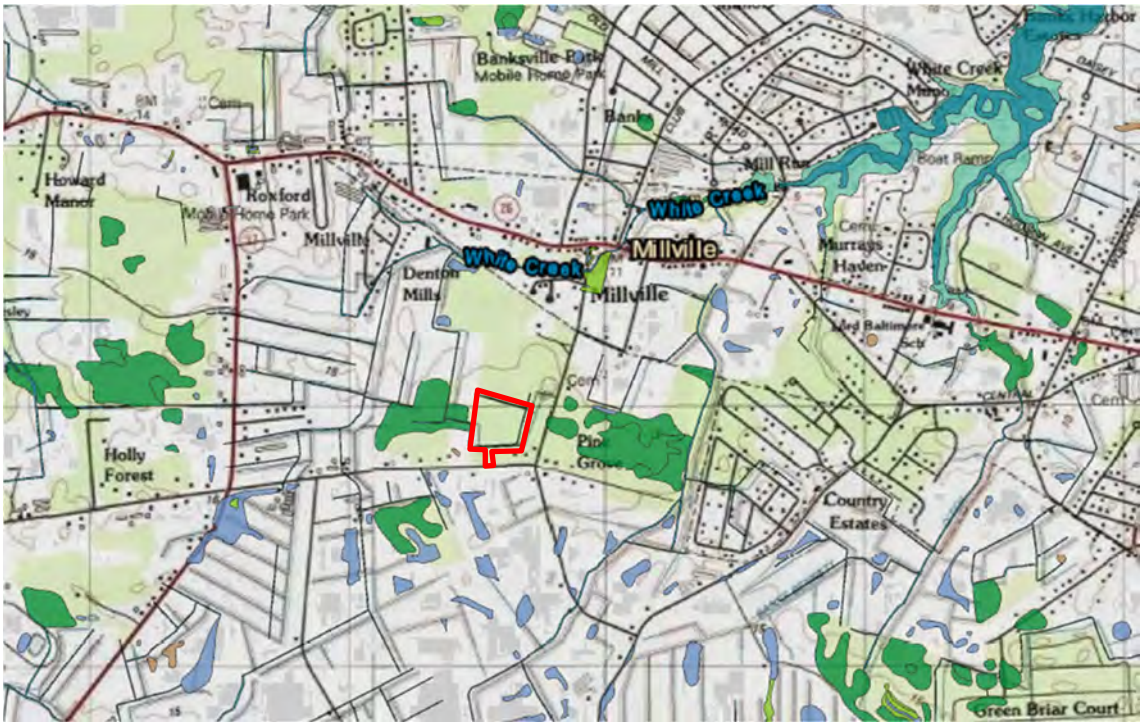



Figure 4: Topo Map

The current USDA Soil Survey Mapping (Figure 5) depicts the majority of the site is underlain with well-drained Rosedale loamy sand (RoA). Areas of very poorly-drained Mullica-Berryland complex (MuA) are identified in the northwestern and southern portions of the property and a small area of Klej loamy sand in the southwest.

**Figure 5: Soil Map**

Figure 6: Aerial Photograph

The subject property was dominated by a mixture of upland and facultative tree species consisting of northern red oak, southern red oak, white oak, and lobolly pine. Understory species observed included sweetgum, red maple, sassafras, and American holly. Common shrub-herbaceous species included sweet pepperbush, American holly, highbush blueberry, lowbush blueberry, and Virginia Creeper.

No visible indicators of standing water or saturated soil conditions were observed within the majority of the subject property. Standing water was limited to the man-made ditch in the south-central portion of the property.

The man-made drainage ditches observed within the property were constructed in uplands and no available mapping indicates these features were ever associated with a tributary stream. In addition, these ditches appear to be ephemeral in nature. No base flow of water was observed within any of the ditches at the time of the site investigation. Standing water was observed within the ditch in the south-central portion of the property. According to the U.S. Army Corps of Engineers Antecedent Precipitation Tool data, normal hydrological conditions were present at the time of the site investigation. Based on observations during the field investigation it

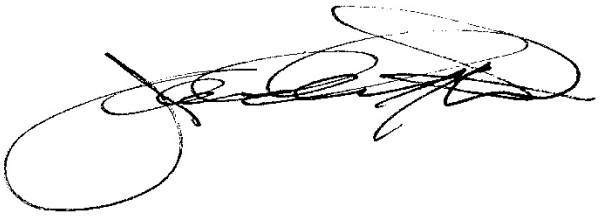
appears that the drainage ditches have silted in over time and no longer provide positive drainage off-site.

In conclusion and based on all of the evidence above and attached, Watershed Eco, LLC. has determined the no areas meeting the three wetland criteria were located within the subject property boundaries. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule which stated that ephemeral and man-made drainage features were not federally jurisdictional. At the present time there is no clear guidance from the Corps on ephemeral drainage features and the Corps is currently not issuing approved jurisdictional determinations. The U.S. Army Corps of Engineers Dover Field Office should be consulted prior to any impacts to the man-made ditches to avoid potential violations.

It is the professional opinion of Watershed Eco, LLC. that the man-made drainage ditches around the perimeter of the property are ephemeral in nature and would not be regulated by Delaware Department of Natural Resources and Environmental Control as Subaqueous Lands.

If you have any questions or concerns, please feel free to give me a call.

Sincerely,



James C. McCulley IV, PWS (#000471)
Environmental Scientist

## Site Photographs:

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

**Photo 3: Man-made drainage ditch along southern property boundary, facing east.**

**Photo 4: Man-made drainage ditch along southern property boundary, facing west.**

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

**Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.**

**Photo 10: Upland forest cover in the northeastern portion of the property.**

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-NWI

August 19, 2021

**Wetlands**

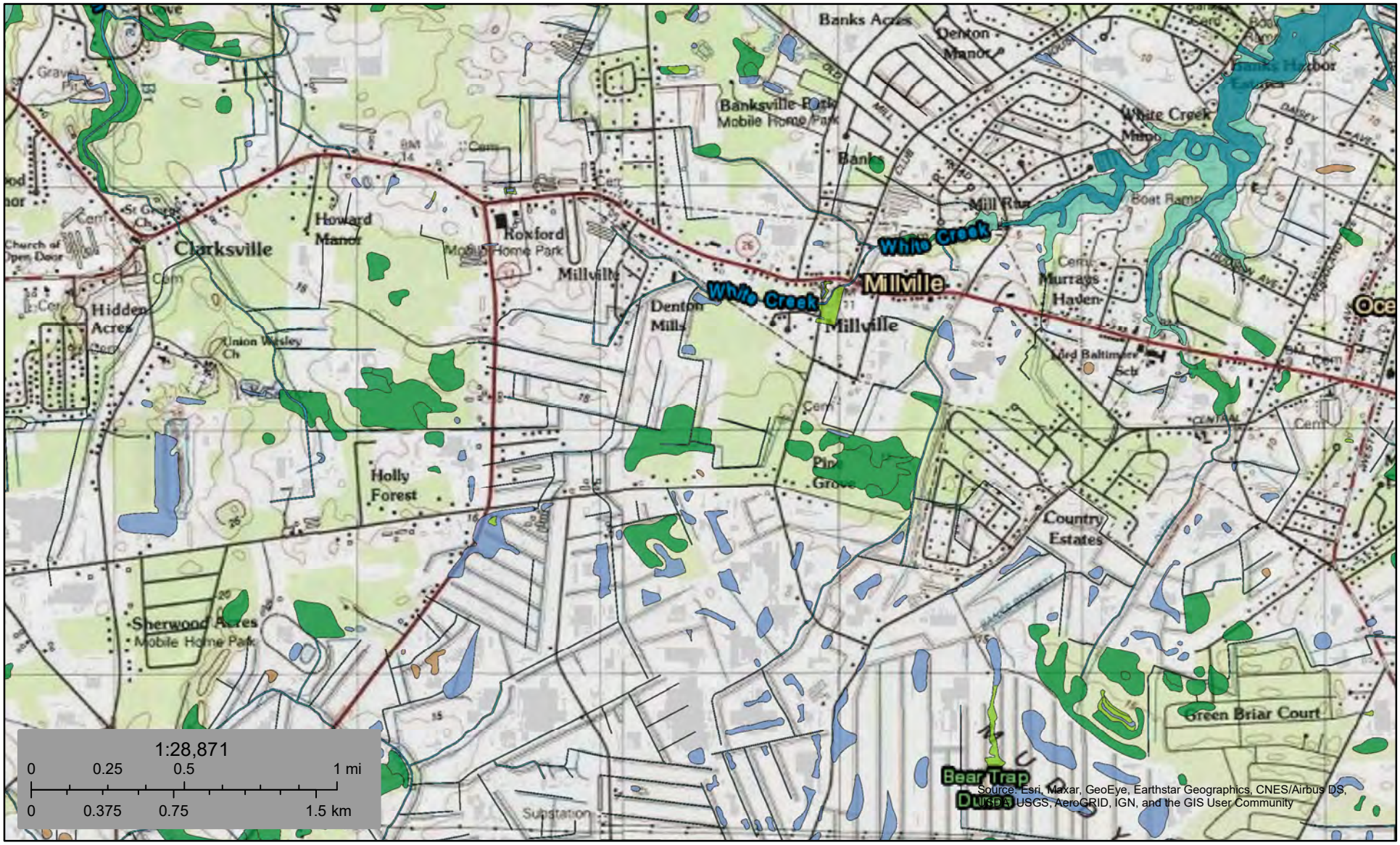
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-USGS




August 19, 2021

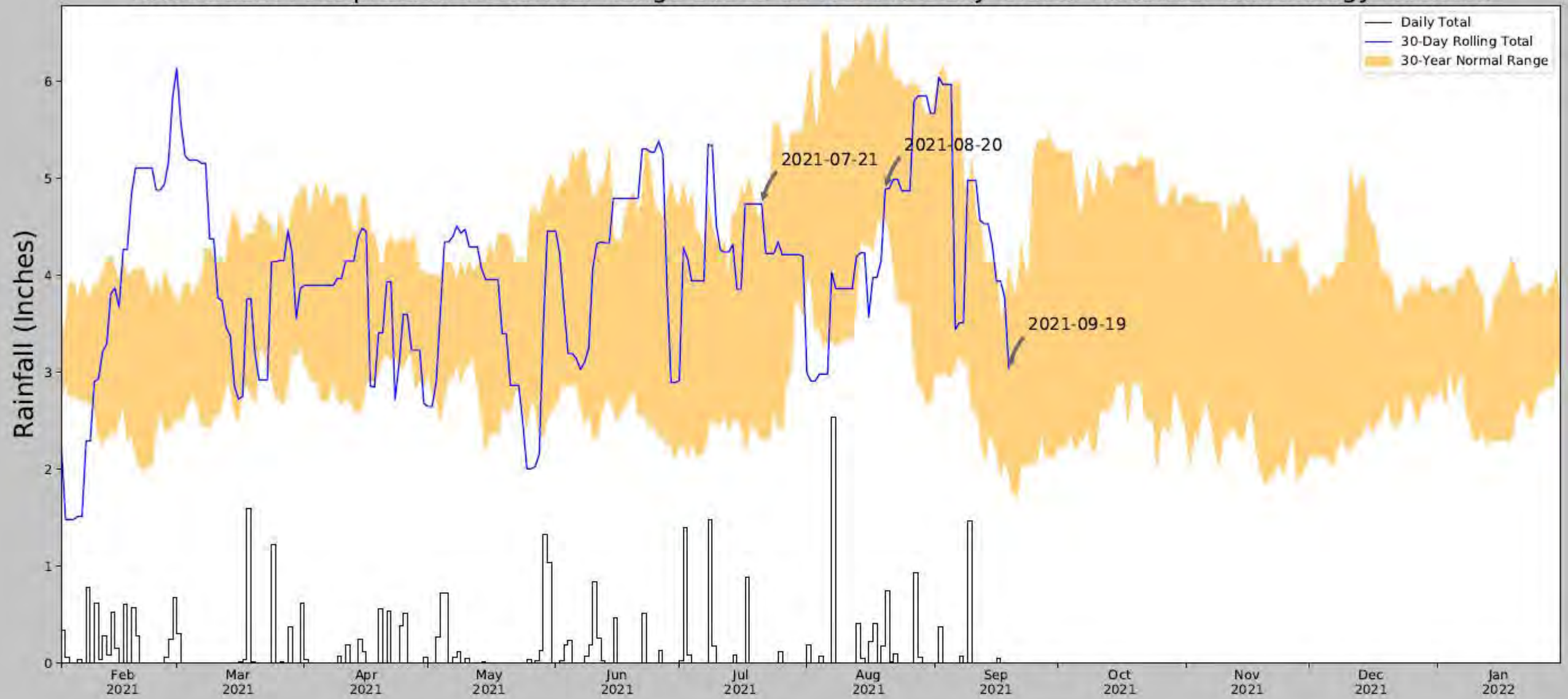
**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.166922, -75.351506 |
| Observation Date | 2021-09-19 |
| Elevation (ft) | 21.42 |
| Drought Index (PDSI) | Mild wetness (2021-08) |
| WebWIMP $H_2O$ Balance | Dry Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2021-09-19 | 1.959843 | 4.075591 | 3.031496 | Normal | 2 | 3 | 6 |
| 2021-08-20 | 4.583071 | 6.590945 | 4.889764 | Normal | 2 | 2 | 4 |
| 2021-07-21 | 2.323622 | 4.638189 | 4.740158 | Wet | 3 | 1 | 3 |
| Result | | | | | | | Normal Conditions - 13 |

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days (Normal) | Days (Antecedent) |
|---|---|---|---|---|---|---|---|
| SALISBURY WICOMICO RGNL AP | 38.3406, -75.5103 | 47.9 | 14.773 | 26.48 | 7.039 | 11350 | 83 |
| SNOW HILL 0.4 S | 38.167, -75.3921 | 20.997 | 2.205 | 0.423 | 0.993 | 0 | 7 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 4.671 | 8.436 | 2.141 | 3 | 0 |

# Glen Cove

Datapoint Location Map

©2021 Google

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.542413 Long: -75.119833 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Young forested upland in the northwestern portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | yes | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 20 | yes | FAC |
| 2. *Liquidambar styraciflua* | 80 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Phytolacca americana* | 5 | yes | FACU |
| 2. *Parthenocissus quinquefolia* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 4-12 | 10YR 5/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 3/2 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Young forest at Datapoint UPL-1.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541774 Long: -75.119214 Datum: NAD 83

Soil Map Unit Name: Rosedale loamy sand (RoA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the central portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus rubra* | 30 | yes | FACU |
| 2. *Quercus falcata* | 20 | yes | FACU |
| 3. *Quercus alba* | 20 | yes | FACU |
| 4. *Sassafras albidum* | 20 | yes | FACU |
| 5. *Acer rubrum* | 10 | no | FAC |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 5 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Clethra alnifolia* | 10 | yes | FACW |
| 2. *Vaccinium corymbosum* | 5 | no | FACW |
| 3. *Vaccinium angustifolia* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: ____ | 20% of total cover: ____ | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ | x 1 = ____ |
| FACW species | ____ | x 2 = ____ |
| FAC species | ____ | x 3 = ____ |
| FACU species | ____ | x 4 = ____ |
| UPL species | ____ | x 5 = ____ |
| Column Totals: | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-12 | 10YR 4/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 4/6 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at UPL-2 in the central portion of the property.

Non-hydric soils at UPL-2.

United States Department of Agriculture

NRCS

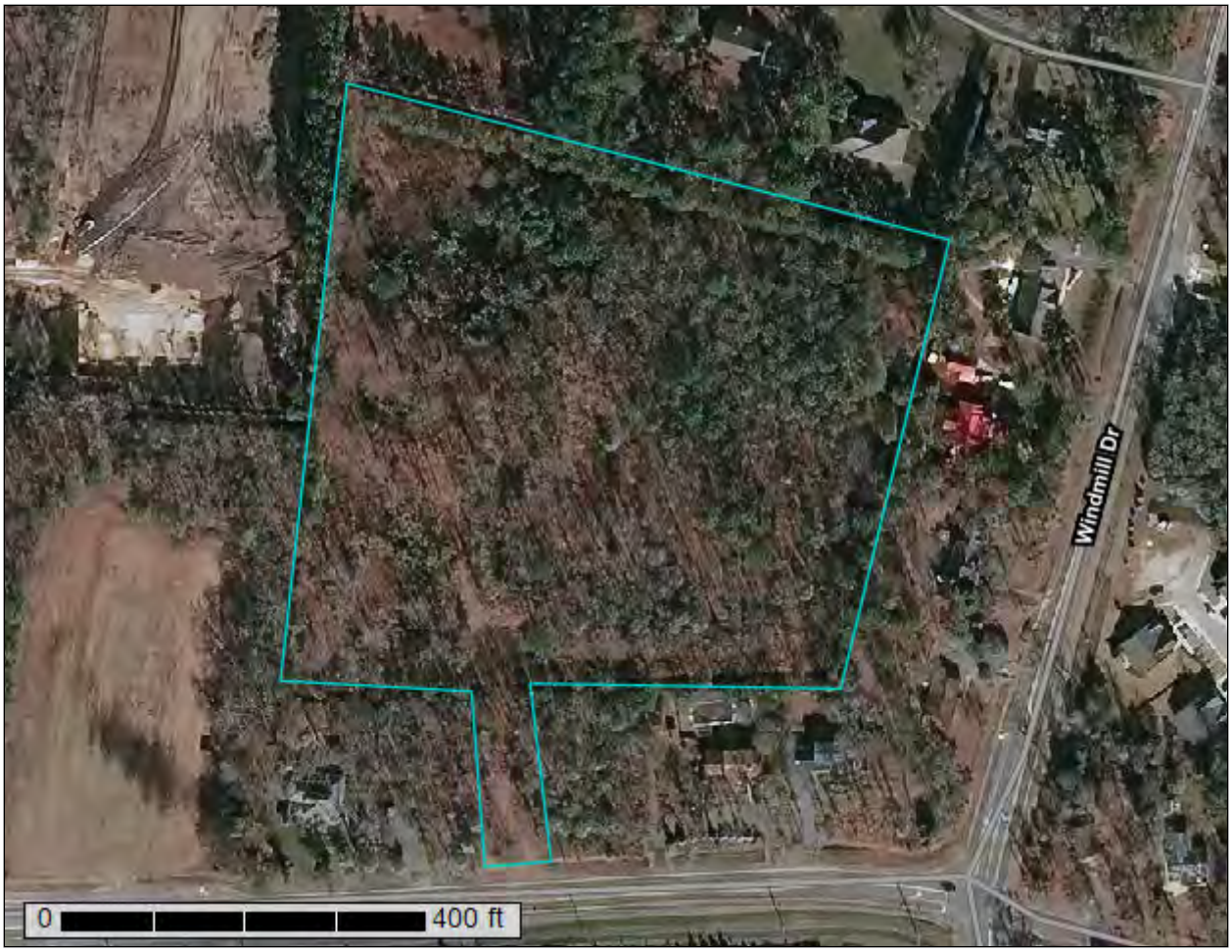
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Glen Cove 2




August 19, 2021

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:1,730 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Mar 12, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 0.2 | 1.9% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 2.5 | 28.0% |
| RoA | Rosedale loamy sand, 0 to 2 percent slopes | 6.3 | 70.1% |
| **Totals for Area of Interest** | | **8.9** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Flats, depressions, drainageways
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, flats, fluviomarine terraces, dunes
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* Yes

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

### Map Unit Composition
*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mullica, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear

#### Typical profile

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Berryland, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare

*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Drainageways, swales, flats, depressions
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

**Setting**

*Landform:* Flats, depressions, drainageways, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

**Minor Components**

**Klej**

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Askecksy, drained**

*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Hydric soil rating:* Yes

## RoA—Rosedale loamy sand, 0 to 2 percent slopes

**Map Unit Setting**

*National map unit symbol:* 1qtjx
*Elevation:* 0 to 120 feet

*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rosedale**

**Setting**

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

**Typical profile**

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2s
*Land capability classification (nonirrigated):* 2s
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

**Minor Components**

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Fluviomarine terraces, flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

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# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

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Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

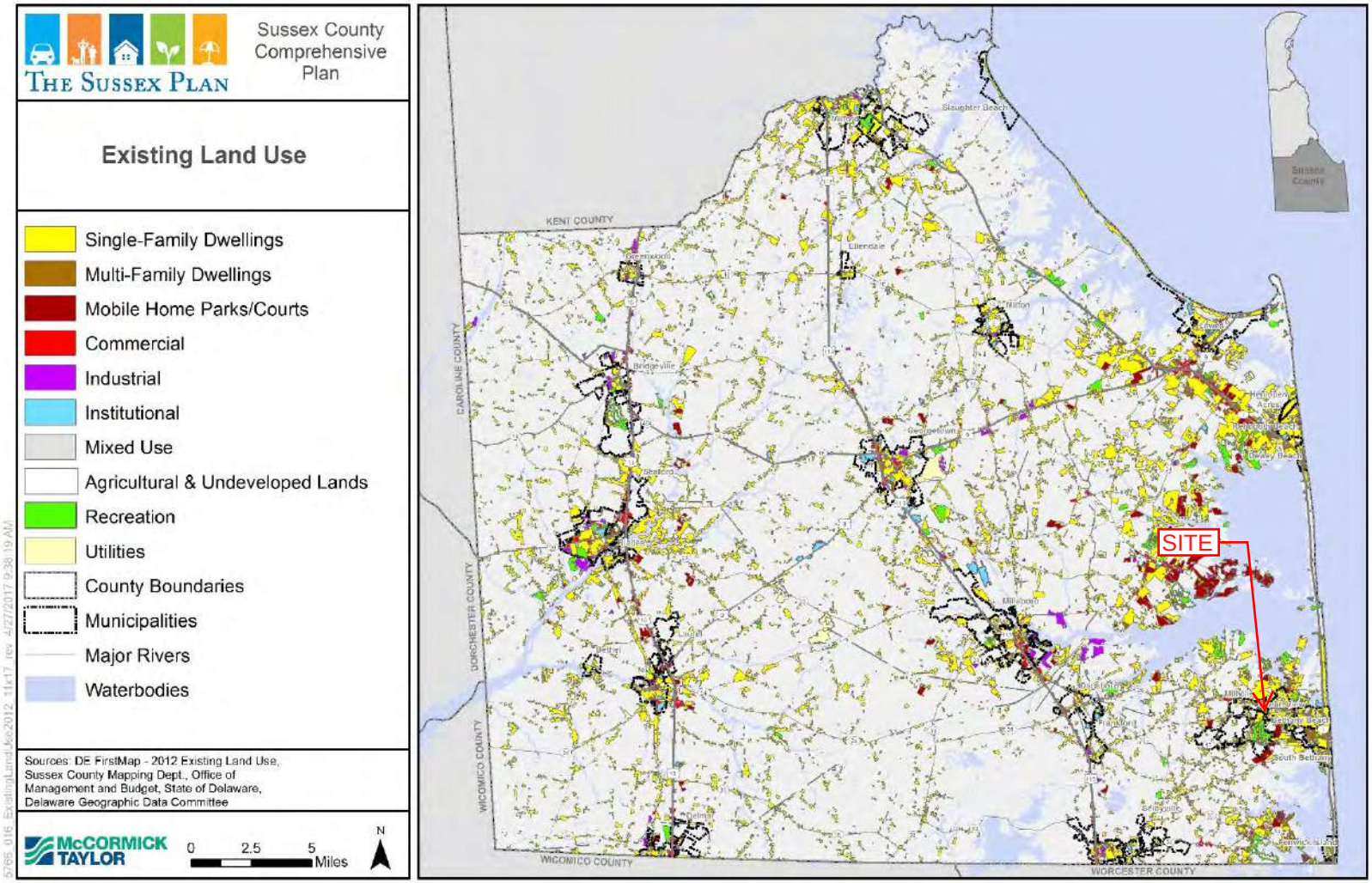
Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## ZONING & COMPREHENSIVE PLAN CONTEXT & MAPPING

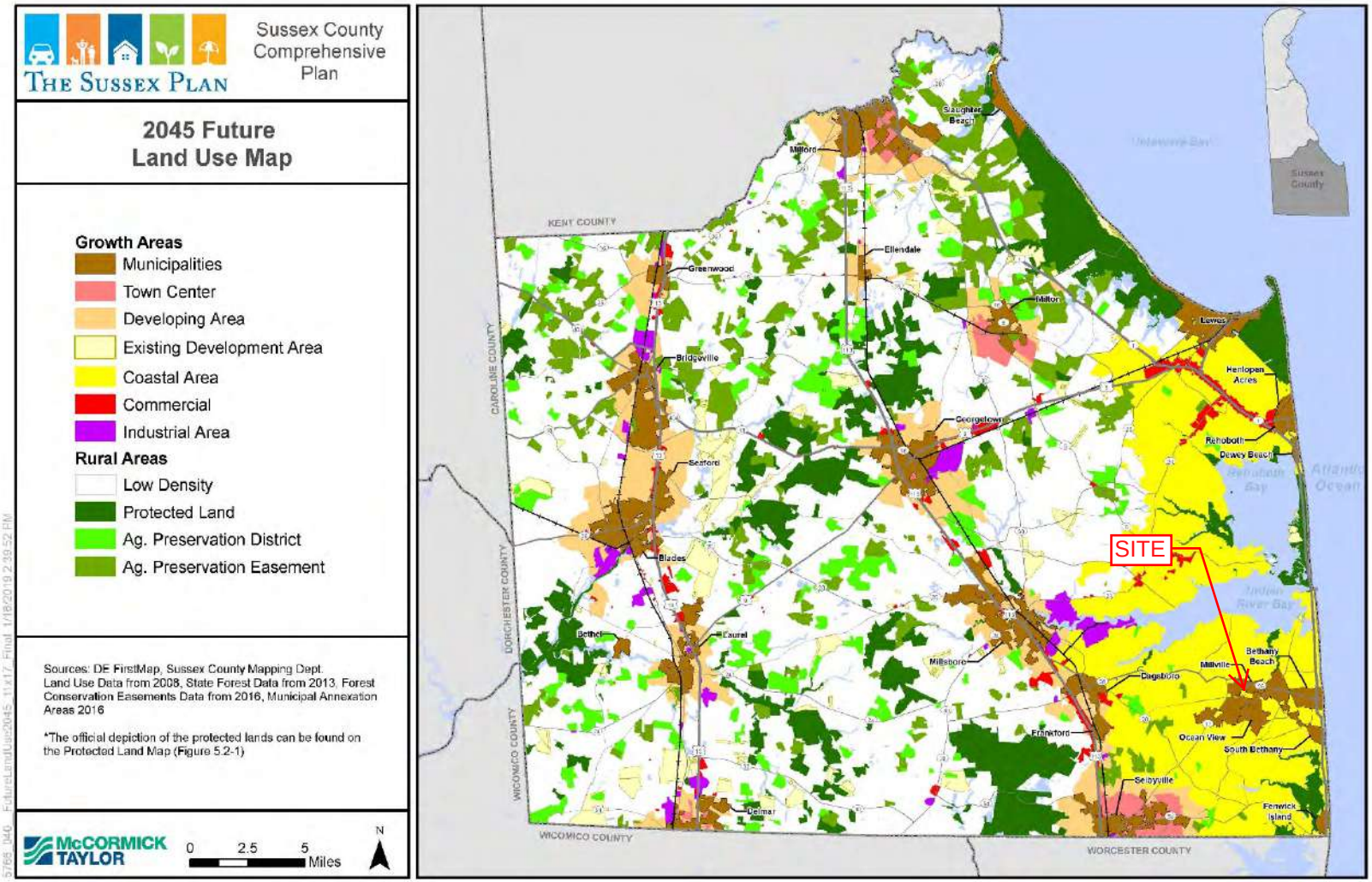
THE SUSSEX PLAN

**Figure 4.2-1 Existing Land Use**



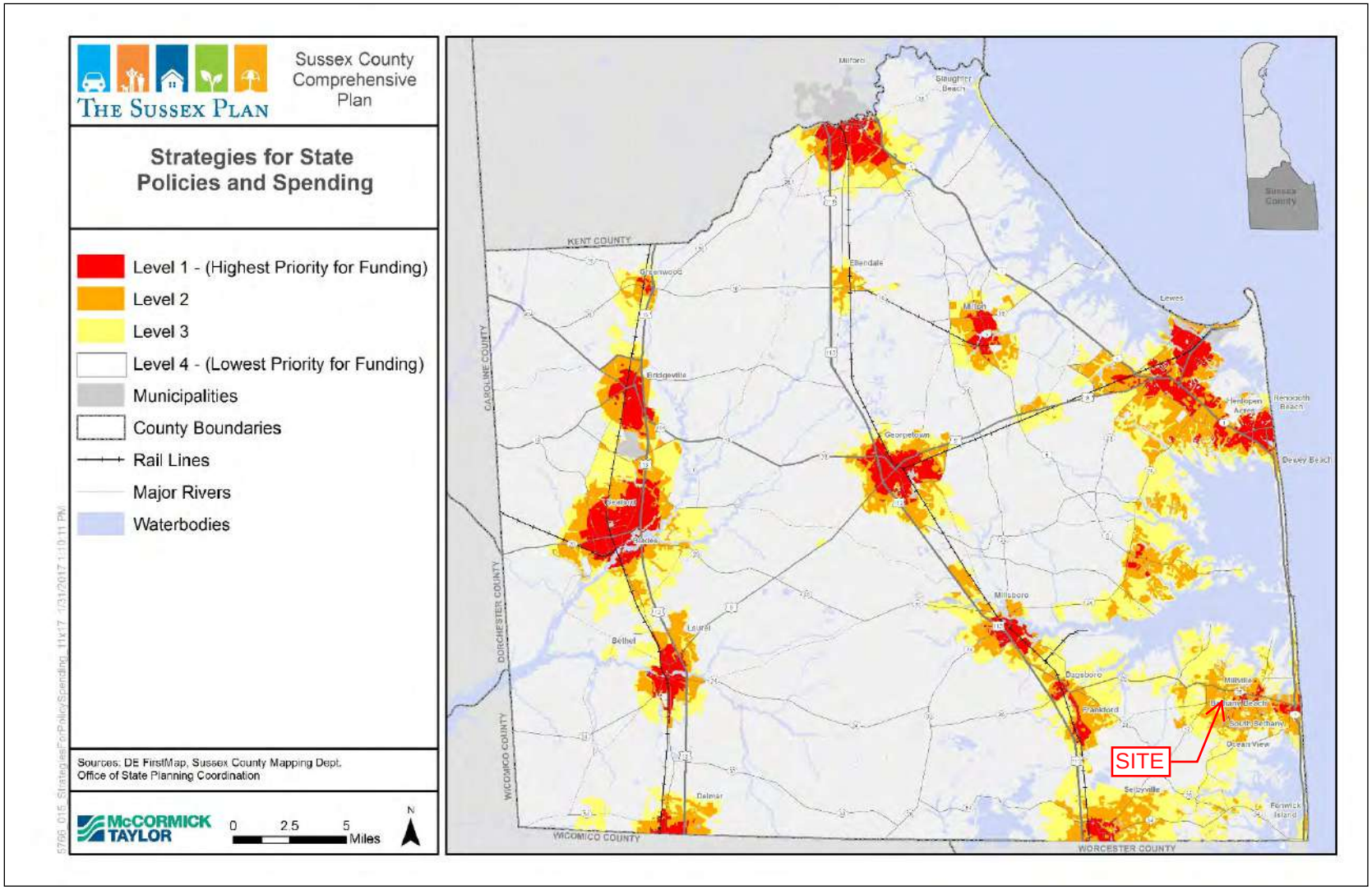
THE SUSSEX PLAN

**Figure 4.5-1 Sussex County 2045 Future Land Use**



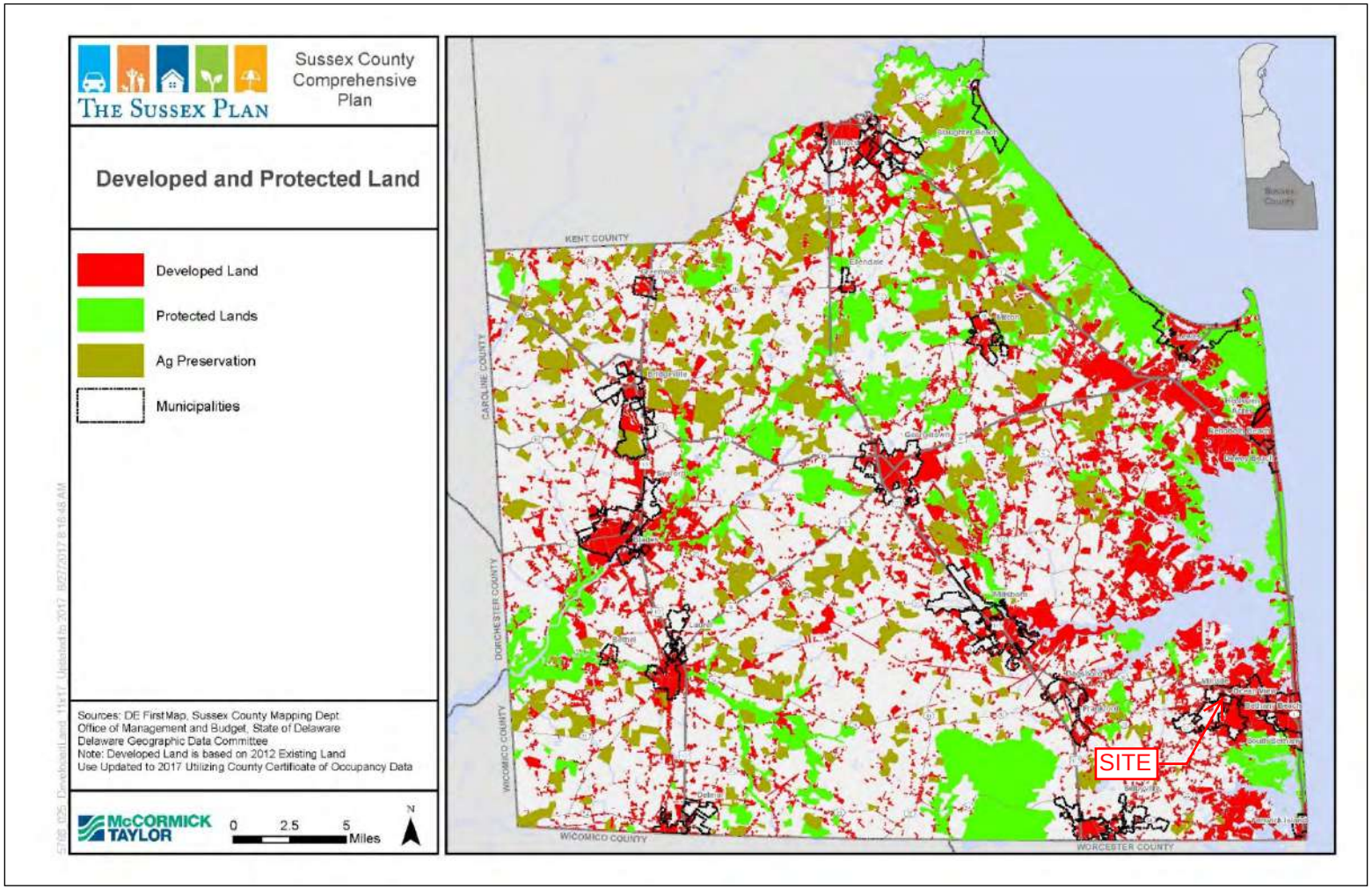
THE SUSSEX PLAN

**Figure 4.4-1 Strategies for State Policies and Spending**



THE SUSSEX PLAN

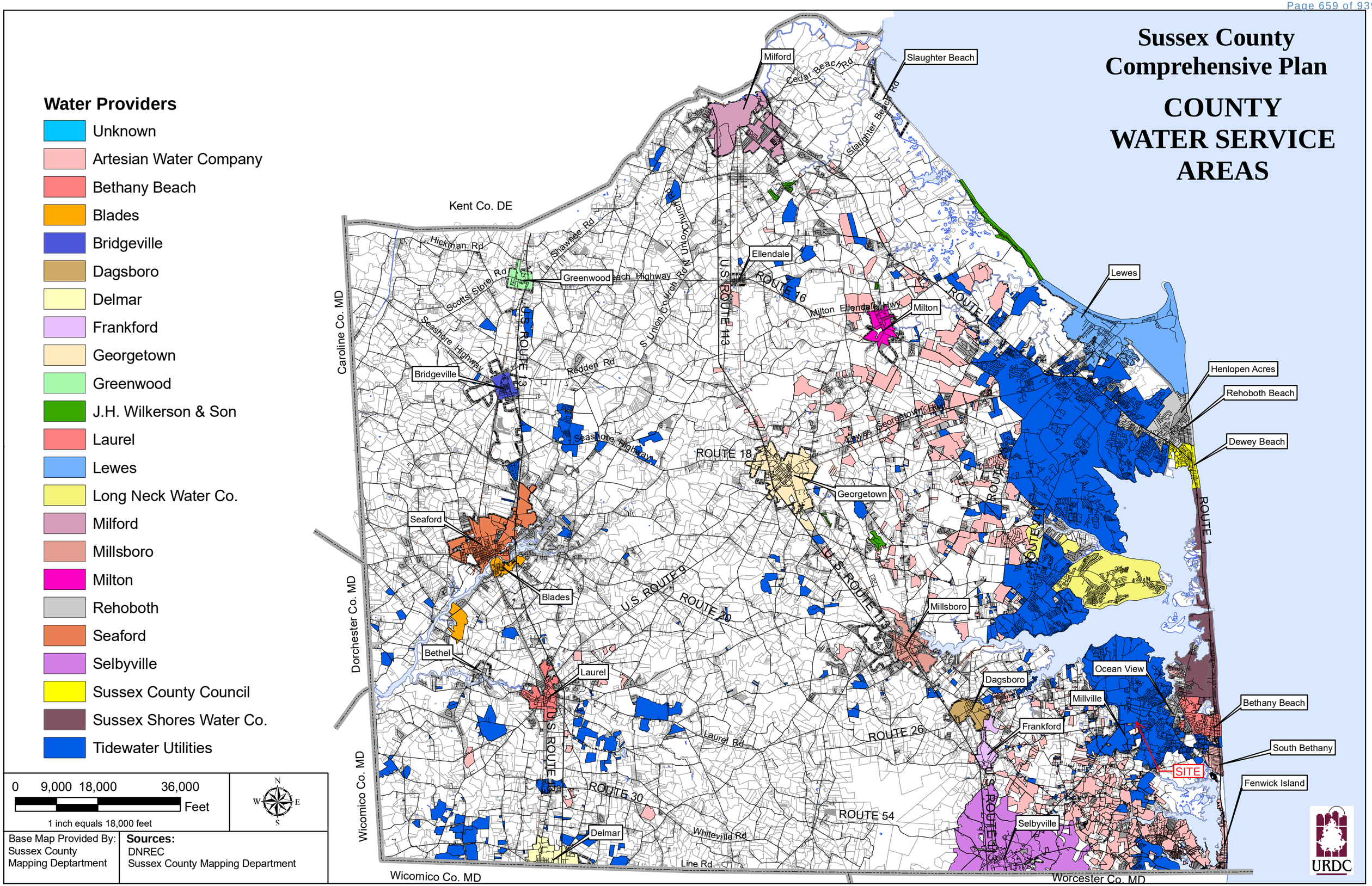
**Figure 4.2-2 Developed and Protected Land** *




* Parcels enrolled in the State's Agricultural Lands Preservation Program change frequently and that the Delaware Department of Agriculture can be contacted for latest update.

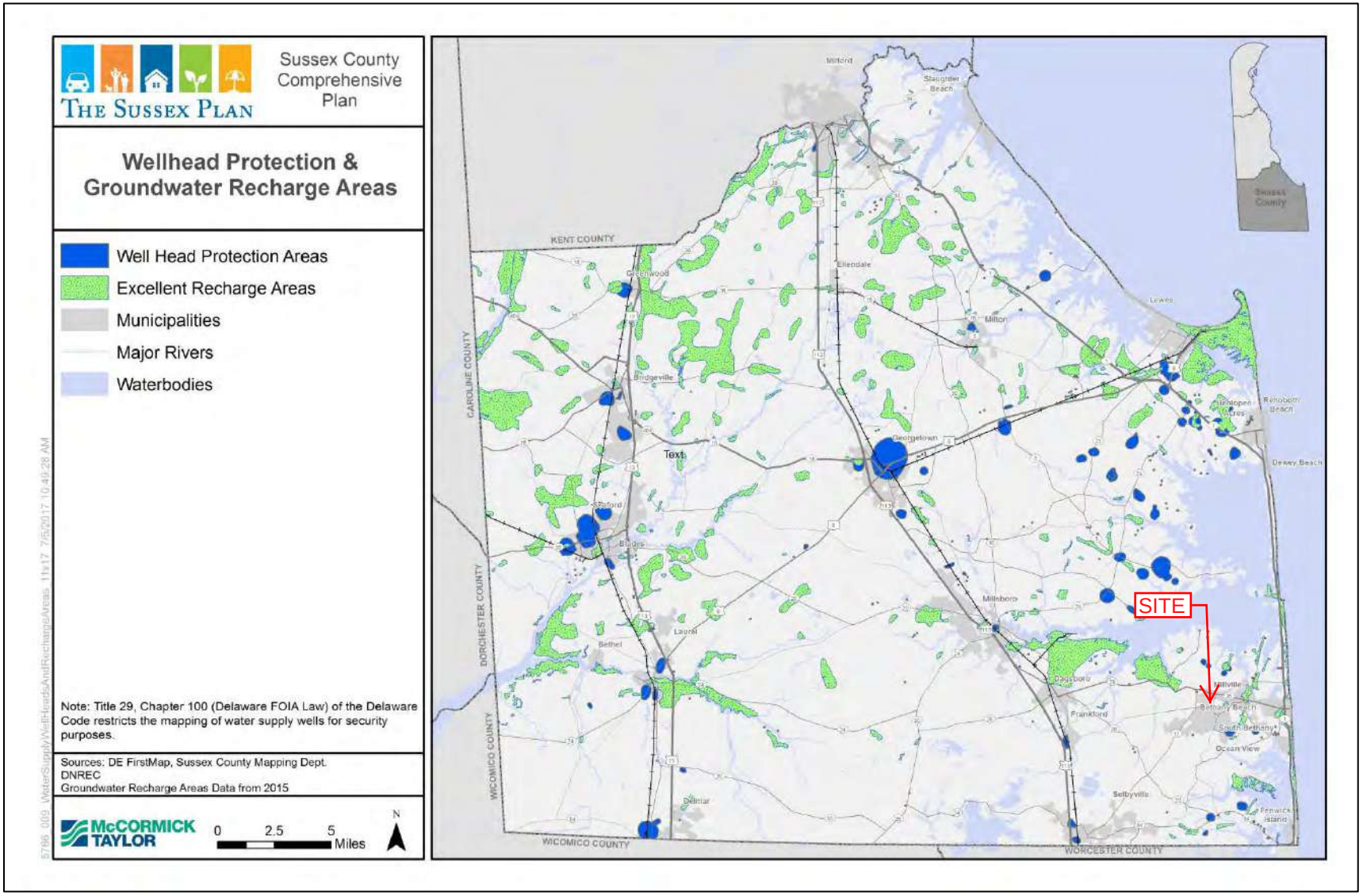
# Sussex County Comprehensive Plan

# COUNTY WATER SERVICE AREAS



THE SUSSEX PLAN

Figure 7.2-2 Wellhead Protection & Excellent Recharge Areas



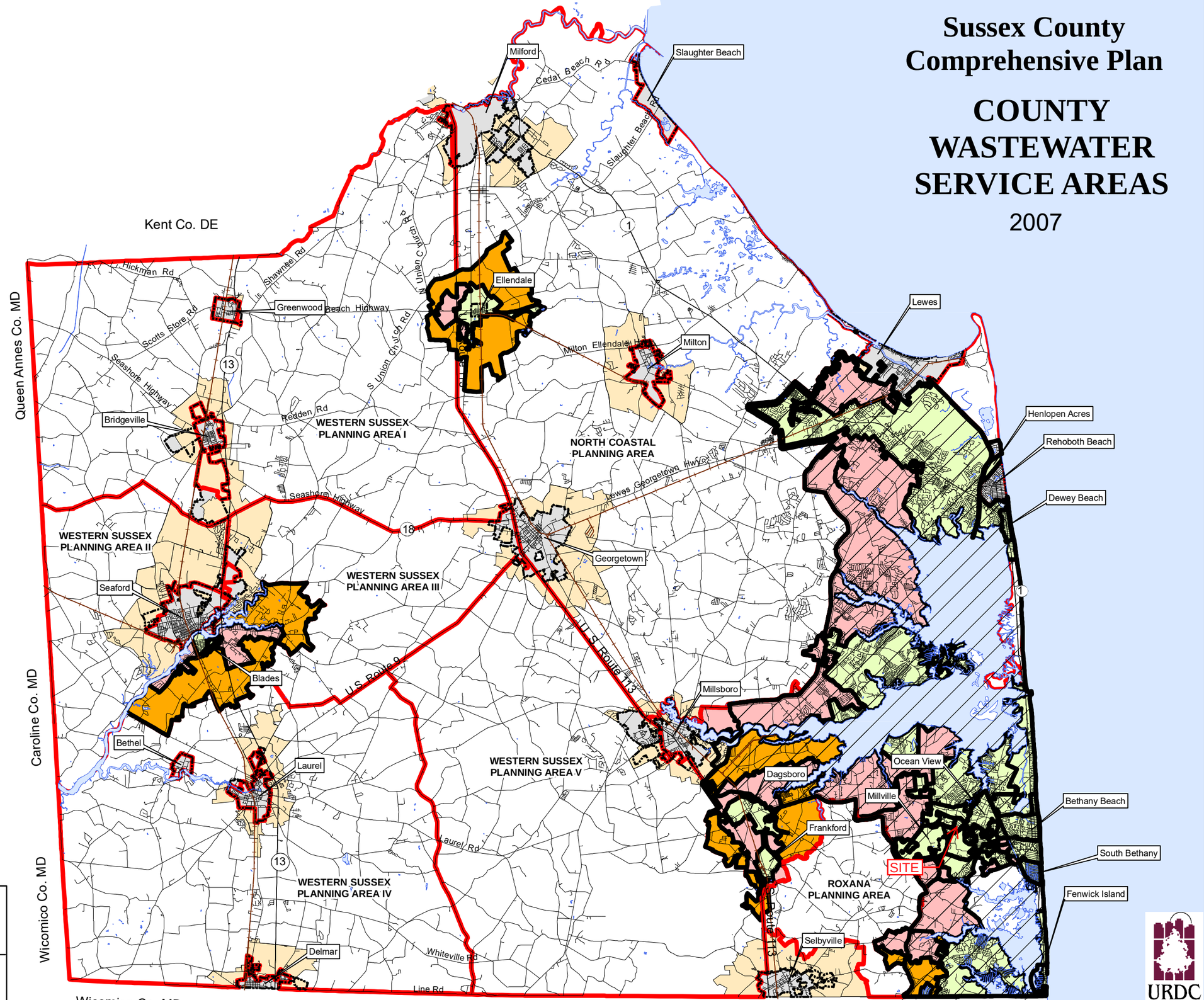
# Sussex County Comprehensive Plan

# COUNTY WASTEWATER SERVICE AREAS

2007

- Environmentally Sensitive Development Area (ESDA)
- Roads
- Boundaries of Sewer Planning Areas
- Existing County Sewer Districts
- Primary County Service Areas
- Secondary County Service Areas
- Unclassified Service Areas
- Town/City Potential Annexation Areas (intended to be eventually served by Town/City in most cases.)
- Municipal Boundaries

Please see text for planning area and service area definitions.




0 9,000 18,000 36,000 Feet

1 inch equals 18,000 feet

N W E S

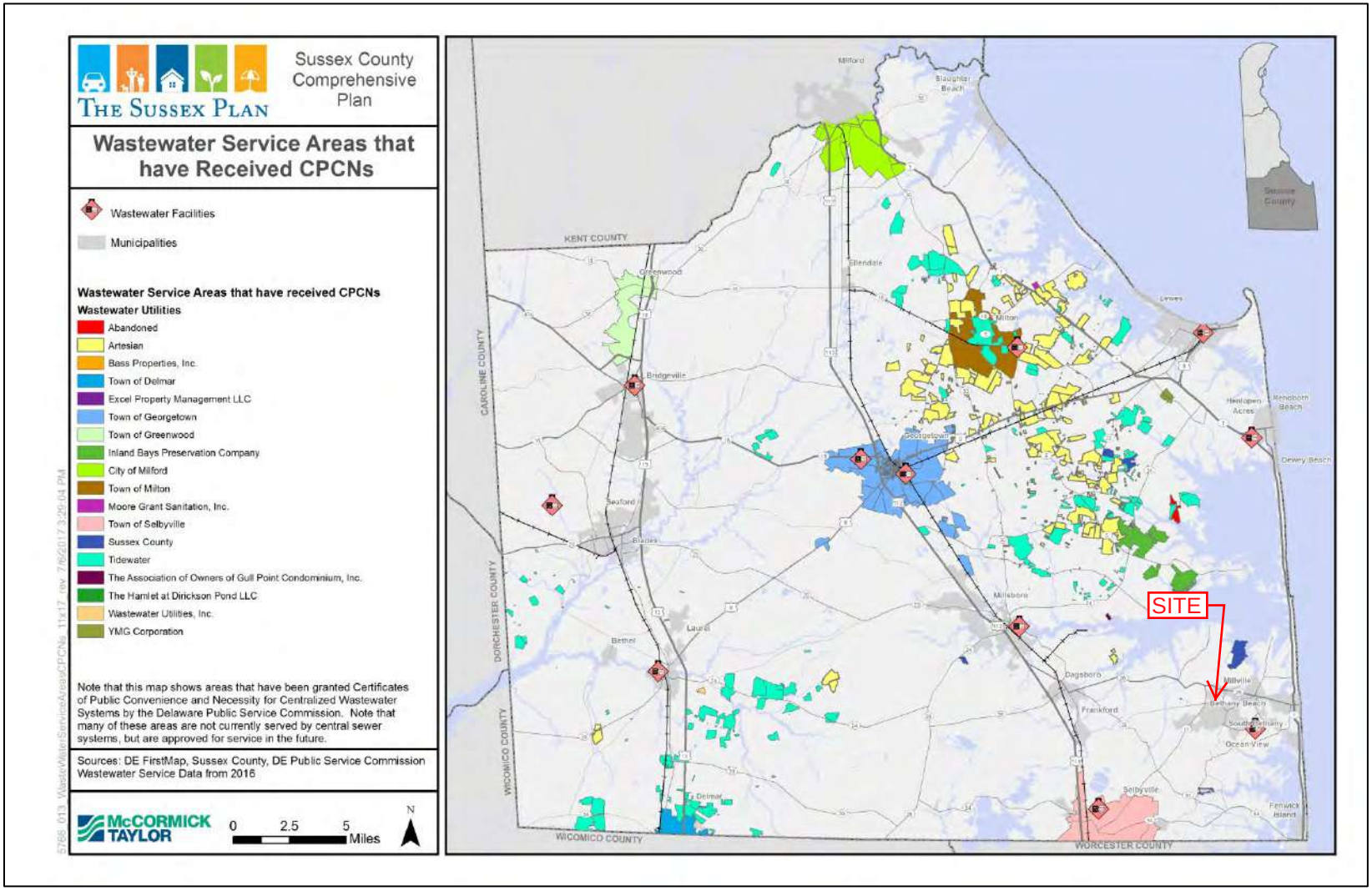
Base Map Provided By: Sussex County Mapping Deptartment

**Sources:** Sussex County Engineering Department

URDC

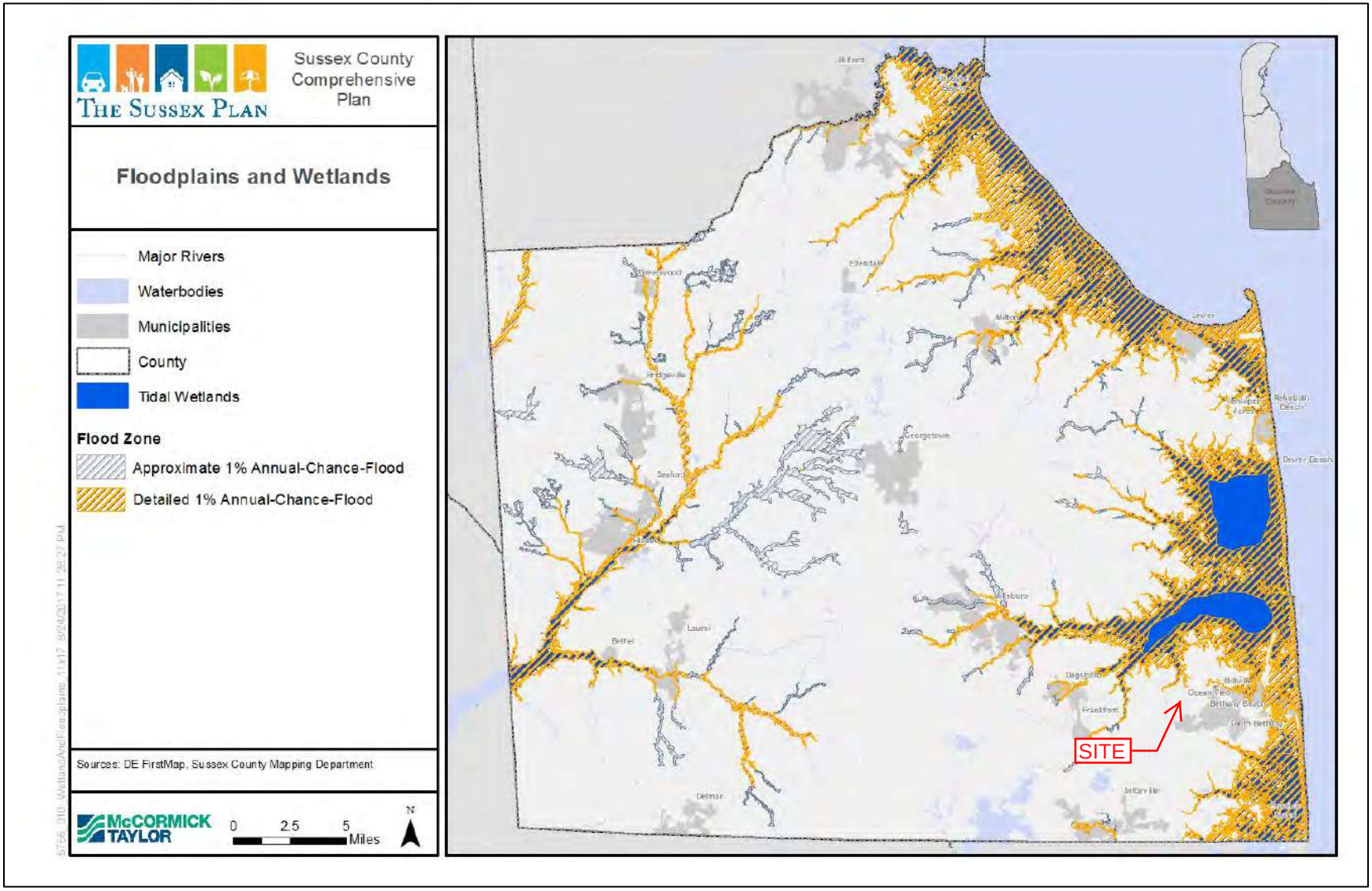
THE SUSSEX PLAN

Figure 7.3-1 Wastewater Service Areas that have Received Certificates of Public Convenience and Necessity



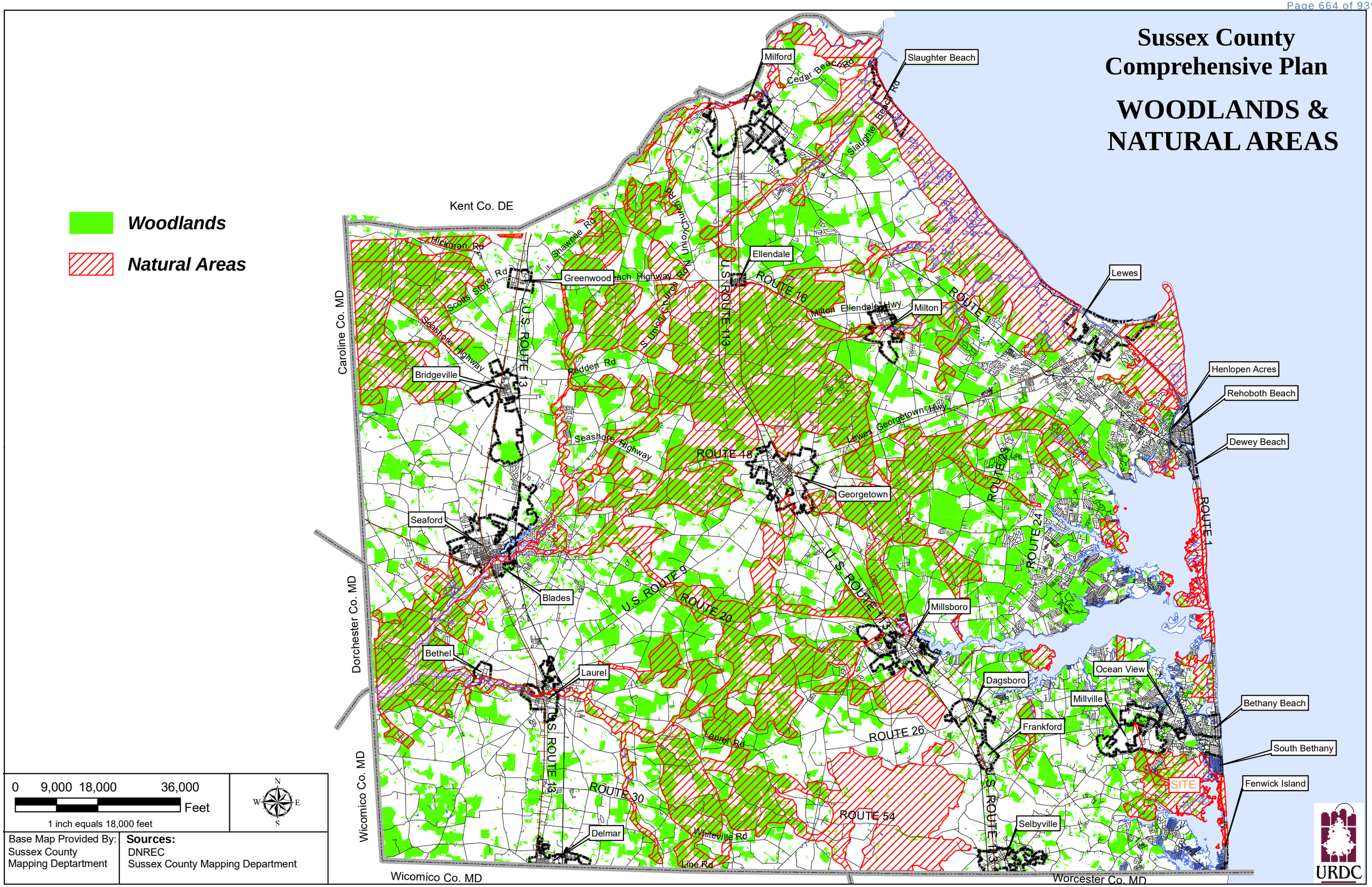
THE SUSSEX PLAN

Figure 5.2-4 Wetlands and Floodplains



# Sussex County Comprehensive Plan

## WOODLANDS & NATURAL AREAS



# APPENDIX H

## DELAWARE PLUS COMMENTS AND RESPONSES

**CIVIL ENGINEERING ASSOCIATES**
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 W. Main Street
Middletown, DE 19709

cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

October 9, 2024

Mr. David L. Edgell, AICP
Director
Office of State Planning Coordination
112 William Penn Street
Dover, DE 19901

**RE: PLUS Review Responses: 2024-08-02**
**Glen Cove 2**
**Sussex County, Delaware**

Dear Mr. Edgell:

This letter will serve as our response to the comments provided to us regarding the above-mentioned subdivision on September 17, 2024. In response to the review comments within the PLUS report that follows, ***we offer our answers highlighted in color.***

## Strategies for State Policies and Spending

This project is located in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. This site is also located in the Coastal Area of Sussex County.

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this **rezoning and site plan** provided it meets the relevant codes and ordinances of the Sussex County.

With that said, this parcel is adjacent to the Town of Millville and within their planned growth area. The developer should consider annexing or at least working with the town to ensure the planned development meets the desires of their comp plan.

***Acknowledged.***

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis and based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF). This project is located in an area anticipated to be in the future Roxana Transportation Improvement District (TID). This TID will not be operational for at least a year. If your development timeline allows participation in the TID may be an option in place of the AWSF.

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across any property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation.**"

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Department of Transportation (DelDOT).***

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Tax Ditches**
Prong 2 of the Derrickson Tax Ditch lies along several of the property boundaries and bisects the western and eastern parcels. Derrickson Canal Sub 2 Prong 2 runs along the property boundary in the northeast. Tax ditches are man-made channels created to move normal water flow off agricultural lands. These channels have associated tax ditch Rights-of-Way (ROW) that are utilized for access as well as sediment and debris disposal during maintenance. Tax ditch ROWs vary by channel size and location. Prong 2 and Sub 2 Prong 2 of the Derrickson Tax Ditch have a 20-foot to Top of Bank (TOB) ROW extending into the project boundary.

- The previous Court Order Change stipulates that a l5-foot by 285-foot Special Disposal ROW be added to the terminus of Prong 2 for sediment disposal. This disposal ROW must remain.

- If the site and/or stormwater management features are designed to discharge into Prong 2 of the Derrickson Tax Ditch, design must consider existing conditions versus design specifications. Please consult with the DNREC Drainage Program for As-Built design information if necessary.

- Proposed structures or construction lies within the existing tax ditch ROW. Contact the DNREC Drainage Program to discuss the on-site tax ditch ROWs prior to the project application meeting with the appropriate plan review agency for construction stormwater management.

- The site plan appears to show a road crossing the tax ditch between Lots 16 and 17. The applicant must consult with the DNREC Tax Ditch Program on the elevation of the crossing. To reduce or change existing tax ditch ROWs, a Court Order Change must be submitted by the DNREC Drainage Program. The associated Land Development Project Review Request form is attached, as well as the aerial drainage map.

- Permanent obstructions including, but not limited to, stormwater management facilities, buildings, sheds, streets, wells, and septic systems are not allowed within the tax ditch ROWs.

- Existing tax ditches on the property must be surveyed and compared to tax ditch design specifications for effective function. The channel should be cleared or excavated prior to the construction of the project if needed.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Stormwater Management**

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Wetlands and Waterways**

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the western portion of the site, as well as riverine wetlands associated with the canal that runs around the periphery of the site. The application indicates that wetlands have been delineated. According to the application, the U.S. Army Corps of Engineers sign-off is completed. The application states that the project does not propose direct impacts to the wetlands.

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.

- If road crossings are proposed in drainage features functioning as intermittent or perennial features, state permits from the DNREC Wetlands and Waterways Section may be required for disturbance proposed in state jurisdictional wetlands and waterways. To apply for a permit online, please visit their website at https://dnrec.delaware.gov/water/wetlands-subaqueous/permits/.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Wastewater Disposal Systems – Large Systems**

- For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Electric Vehicle Charging**

Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or
2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.
Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

***Acknowledged***

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Proposed Project Parcel Flood Concern**

- This parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within two Sussex County Evacuation Zones B (red) and D (yellow).

**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Emergency Management Agency.***

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There are no known archaeological sites or known National Register-listed or eligible properties on the parcel. Prehistoric archaeological potential is low. Soils are mixed well-drained and poorly drained. Distance to water is not favorable for sites. Derrickson Ditch appears to have been extended from White Creek, which in historic topo does show reaching more south than it currently does. But still not favorable distance. Historic potential is low. Beers and historic topos and aerials do not show anything in that area. There has been ground disturbance where the tax ditch has been dug out. A survey conducted at the intersection of Burbage Road and Windmill Drive placed one STP near where the current parcel is. No cultural material was found.

- If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the State Historic Preservation Office (SHPO).***

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Clubhouse)
- Where a water distribution system is proposed for single-family dwellings, it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)
- One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq. ft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Burbage Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn-around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.
- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware State Fire Marshall's Office.***

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.
- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Department of Transportation (DelDOT).***

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Forest**
The preliminary plan proposes the elimination of approximately 9 of 12 acres forest on the site. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

- Removing forested areas for development should be avoided to the greatest extent possible.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st. Likewise, avoid mowing open space areas and grass filter strips during the same timeframe, as various species of birds utilize these areas for nesting sites.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Forested Wetlands and Vegetated Buffer Zones**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of freshwater forested wetlands on the western portion of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb wetlands. Wetlands are a critical part of our natural environment. They reduce the impacts of flooding, improve water quality, and sequester carbon dioxide from the atmosphere. Wetlands also provide habitat for plants and animals that are uniquely adapted to saturated conditions.

- Maintain an upland buffer of at least 100 feet along all wetlands, except tax ditches, including those containing existing forest or natural vegetative cover.

- Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Maintain vegetated buffer zones as either meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

- Grass cutting for vegetated buffer zones if maintained as meadow should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Tax Ditches**

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/
Tax Ditch Mapper: de.gov/taxditchmap
Tax Ditch guidelines: https://documents.dnrec.delaware.gov/swc/Drainage/Documents/Tax-Ditch-Land-Development-Guidelines.pdf

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.

Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Water Quality**
This site lies within the Indian River Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable.
- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.
- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939.
https://dnrec.alpha.delaware.gov/watershed-stewardship/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.

- Offer the option to install solar or geothermal systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities such as the proposed pool house, consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st

to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Department of Natural Resources and Environmental Control (DNREC).***

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 23, though, with development, this will undoubtedly change. The 5 adjacent blocks aggregated bring the area to a total population of 404.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the

$$\frac{\text{Expected Annual Loss} \times \text{Social Vulnerability}}{\text{Community Resilience}} = \text{Risk Index}$$

Community Resilience.

- According to FEMA's National Risk Index, the parcel is considered relatively low for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-

enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated at relatively moderate whereas its social vulnerability is rated as very low.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware Emergency Management Agency.***

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes electricity as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

***Acknowledged***

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

Preliminary meetings with Fire Protection Specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

***Acknowledged. If approved, the project will be designed in compliance with all standards and specifications of the Delaware State Fire Marshall's Office.***

If you have any questions or require any additional information, please do not hesitate to contact me at (302) 547-2444.

Sincerely,
**Civil Engineering Associates, LLC**

Ronald H. Sutton Jr.

Ronald H. Sutton Jr.
Principal

# APPENDIX I

## DELDOT SERVICE LEVEL EVALUATION REQUEST FORM/DELDOT RESPONSE

**PLANNING & ZONING**
Jamie Whitehouse, AICP ,MRTPI
Director
(302) 855-7878 T
(302) 854-5079 F

**Sussex County**
DELAWARE
sussexcountyde.gov

# Service Level Evaluation Request Form

This form **shall** be submitted to the Planning and Zoning Office and a response **shall** be received back from DelDOT prior to the applicant being able to submit an application to the Planning and Zoning Office.

Date: 8/5/24

**Site Information:**

Site Address/Location: northwest of Burbage Road + Windmill Drive intersection

Tax Parcel Number: 134-12.00-374.01, 134-12.00-3445.00-3460.00, + 134-12.00-375.00

Current Zoning: AR-1

Land Use Classification: Residential / Agriculture

Acreage: 12.32 AC

Subdivision: ☐

Conditional Use: ☒

Change of Zone: ☒ Proposed Zoning: MR

Proposed Use(s):

50 Condominiums - Residential

Square footage of any proposed buildings or number of units: 50 units

**Applicant Information:**

Applicant's Name: Foxlane Homes Delaware (John Murray)

Applicant's Address: 32191 Nassau Road, #2

City: Lewes State: DE Zip Code: 19958

Applicant's Phone Number: 302-344-1055

Applicant's e-mail address: jmurray@foxlanehomes.com

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

August 19, 2024

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray** (Burbage Road, Millville, DE 19967) proposed land use application, which we received on August 6, 2024. This application is for an approximate 12.32-acre assemblage of parcels (Tax Parcel: 134-12.00-374.01, 134-12.00-3445.00 Thru 3460.00, and 375. 00). All Parcels are located on the north side of Burbage Road (Sussex County Road 353) and approximately 460 feet west of the intersection of Windmill Drive (Sussex County Road 352) and Burbage Road. The parcels are currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a Conditional Use approval to place 50-Condos units, on the parcels.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Burbage Road where the subject land is located, which is from Windmill Drive to Substation Road (Sussex County Road 366), is 3,224 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 50), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at annamaria.furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:bfm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Engineer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Engineer, Development Coordination
José Quixtan, Sussex County Subdivision Engineer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination

# APPENDIX J

## DELDOT AREA WIDE STUDY FEE MEMO

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

# MEMORANDUM

**TO:** John Pietrobono, Acting Sussex County Review Coordinator

**FROM:** Sireen Muhtaseb, TIS Group Manager

**DATE:** November 4, 2024
**Revised December 13, 2024**

**SUBJECT:** **Glen Cove**
**(Protocol Tax Parcel # 134-12.00-374.01)**
**Area Wide Study Fee (AWSF) and Off-site Improvements**

---

**Note Concerning Revision**: This document has been updated to revise the proposed trip generation of the development due to a reduction in the number of dwelling units of the proposed site. Specifically, the revision updates the number of single-family detached houses from 50 dwelling units to 49 dwelling units. As such, the trip generation and the Area Wide Study Fee has been updated to reflect this change. This document replaces our previous AWSF memorandum dated November 4, 2024, a copy of which is enclosed herein.

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 49 dwelling units of single-family detached houses. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 523 average vehicle daily trips (ADT) and 51 vehicle trips during the

p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be □5,230.

2. The developer shall improve the State-maintained Roads on which they front (Burbage Road, Sussex Road 353), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

SAM: km
Enclosure
cc: John Murray, Foxlane Homes Delaware
Scott Roberts, Civil Engineering Associates, LLC
Jamie Whitehouse, Sussex County Planning □ Zoning
Lauren DeVore, Sussex County Planning □ Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming □ Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tijah Jones, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

# APPENDIX K

## DELDOT ENTRANCE CORRESPONDENCE

## Scott Roberts

**From:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Sent:** Friday, November 15, 2024 6:30 AM
**To:** John Murray
**Cc:** Mackenzie Peet
**Subject:** Re: Glen Cove Entrance Location

Good morning John,

The DCM regulations described below will suffice.

John

---

**From:** John Murray <jmurray@foxlanehomes.com>
**Sent:** Thursday, November 14, 2024 4:21 PM
**To:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** RE: Glen Cove Entrance Location

John,

Thank you for the detailed response. Would it be acceptable to state that, in this instance, a design deviation would likely not be approved by DelDOT to have the entrance at that location for the reasons stated?

Thank you,
John

John Murray
Land Development Manager
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055 (cell)
www.foxlanehomes.com

---

**From:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Sent:** Thursday, November 14, 2024 3:27 PM
**To:** John Murray <jmurray@foxlanehomes.com>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** Re: Glen Cove Entrance Location

John,

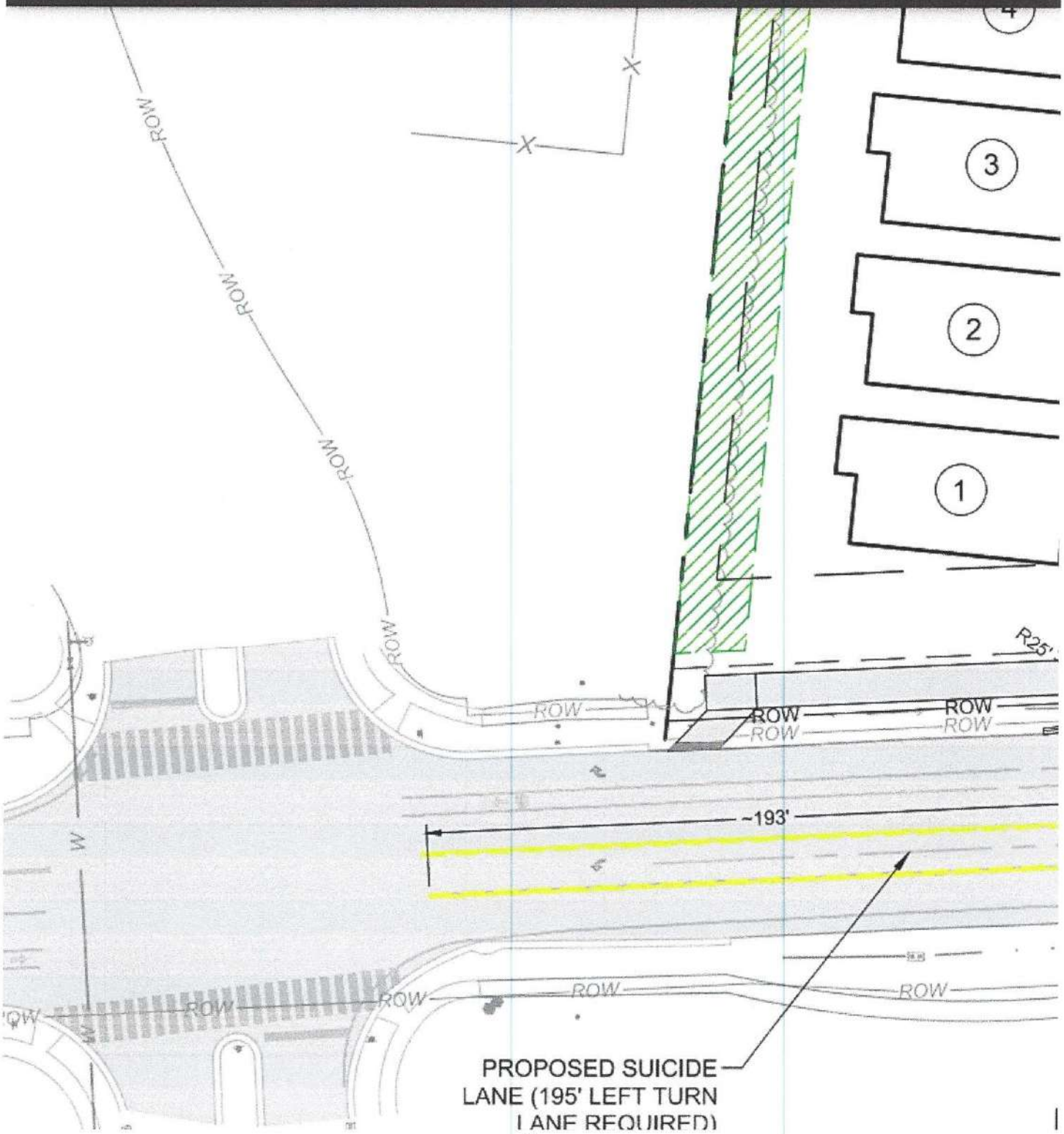
As was discussed during the 11/06/24 presubmittal meeting, the location of the proposed entrance that was shown on the plan presented at the meeting is not acceptable, as it violates both DCM 1.6.1; entrance location in a deceleration lane, which, in this case, is the existing right turn lane for the adjacent site and DCM Fig. 1.5.1, access spacing, as the proposed location is less than 250', required for a major collector.

The screen shot below is the plan that was presented at the presubmittal meeting.

Home | Development | Planning & D | Planning & D

pdcaprod.blob.core.windows.net/pdca-files/3453/2024101610

C-1



John Pietrobono

Delaware Department of Transportation
Division of Planning
Development Coordination Section
Acting Sussex County Review Coordinator

---

**From:** John Murray <jmurray@foxlanehomes.com>
**Sent:** Thursday, November 14, 2024 2:18 PM
**To:** Pietrobono, John (DelDOT) <John.Pietrobono@delaware.gov>
**Cc:** Mackenzie Peet <mackenzie.peet@saul.com>
**Subject:** Glen Cove Entrance Location

Good afternoon John,

When we had our pre-submittal meeting last week for the Glen Cove project, you made mention on multiple occasions that the development entrance would not be permitted where it was originally proposed. This was due to the proposed location being within the limits of the right-turn deceleration lane for the Bishop's Landing community, which would be in conflict with the DCM. We will be working with our design engineer to relocate the proposed entrance but, when we have our public hearing before the Sussex County Planning Commission, we expect members of the commission to have questions about why the entrance is not located where more frontage to Burbage Road is available. While we can explain the reasoning to the Planning Commission, we expect them to include in any motion for preliminary approval that the entrance be relocated to the location where more frontage is available. We have experienced this very same situation on other projects.

In order to prevent a conflict between the County and DelDOT, we were hoping that you could provide a statement in writing for us that DelDOT would not support an emergency/alternate access for this project. We would then be able to put that statement into the project record so that the Planning Commission understand, officially, why the entrance is located where it is. If you or someone else at DelDOT could help us with this, it would be greatly appreciated!

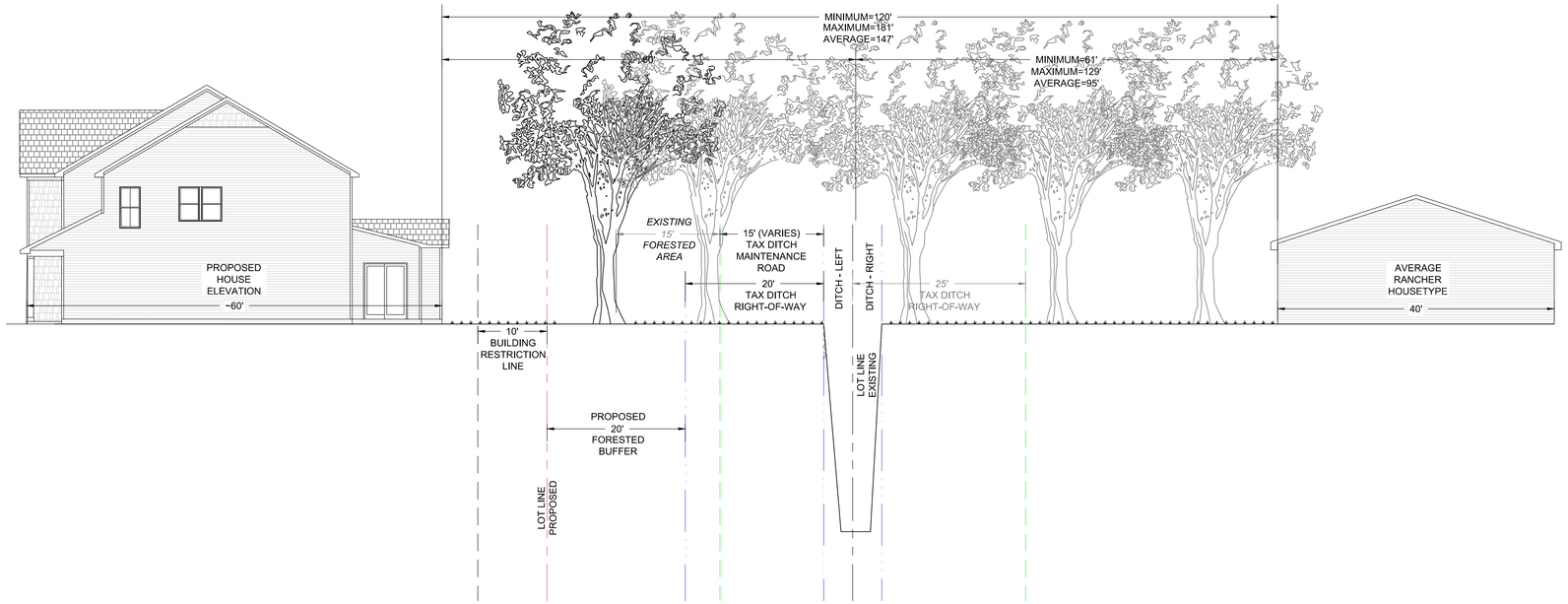
Thank you for your consideration and feel free to contact me at your earliest convenience if you have any questions.

Thank you,
John

John Murray
Land Development Manager
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055 (cell)
www.foxlanehomes.com

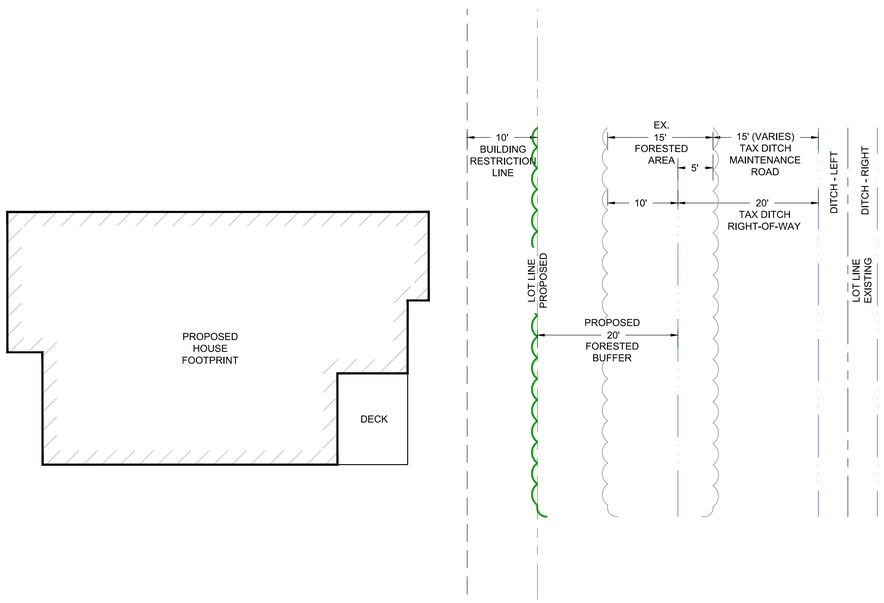
# APPENDIX L

## TAX DITCH BUFFER EXHIBIT




## CROSS SECTION: TAX DITCH & BUFFER

SCALE: 1" = 10'




## PLAN: TAX DITCH & BUFFER

SCALE: 1" = 10'

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE

Copyright©2008
CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# TAX DITCH & BUFFER EXHIBIT

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: JANUARY 14, 2025

DESIGNED BY:

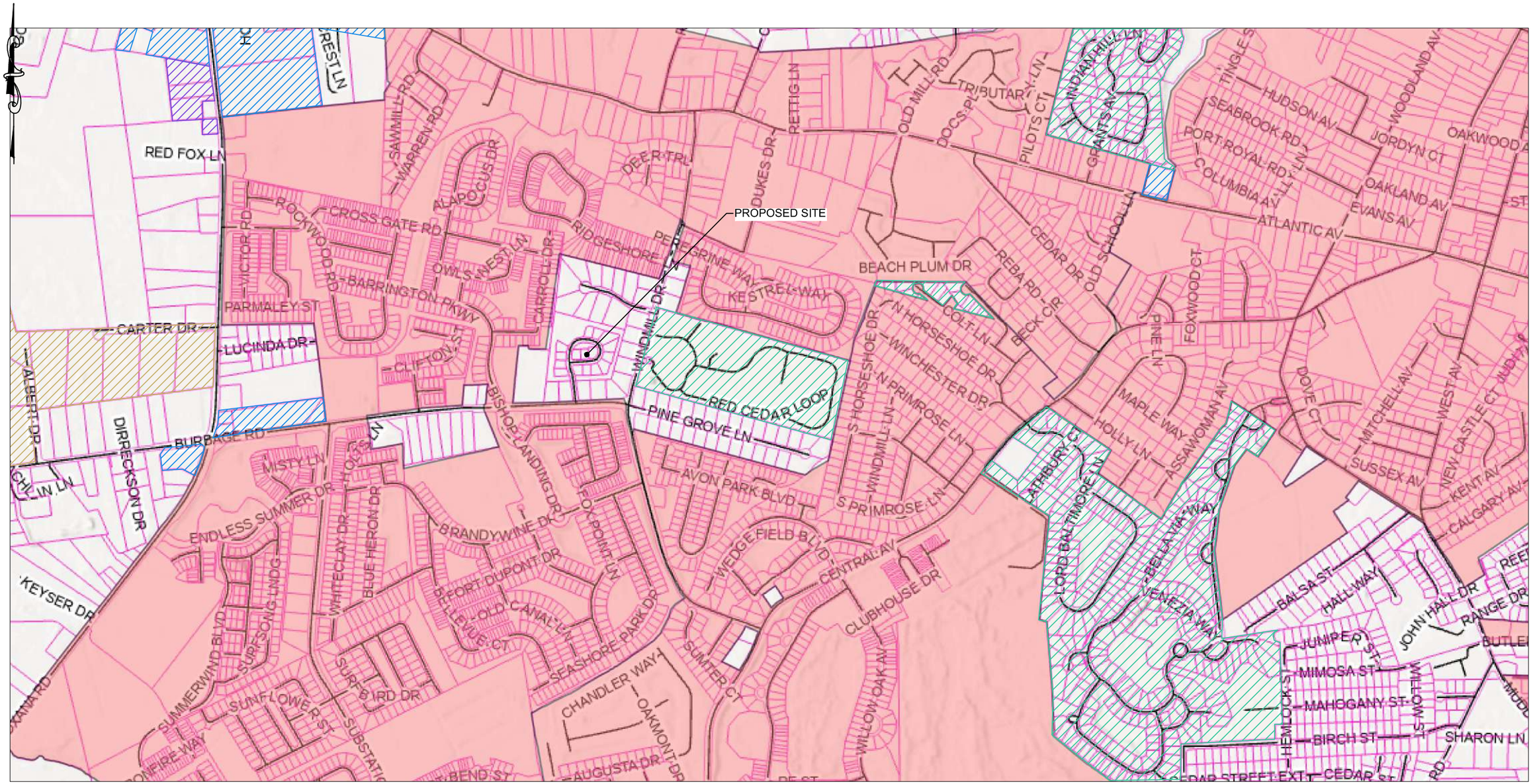
APPROVED BY: RHS

FILE: P23101-TD EXHIBIT

SHEET NO.: **TD-1**

# APPENDIX M

## MAP OF SURROUNDING COMMUNITIES




MR ZONING

AR-2 ZONING

C1 ZONING

AR-1 ZONING

CR-1 ZONING

MBTS BOUNDARY

# GLEN COVE 2
# SURROUNDING USE MAP

SUSSEX COUNTY, DELAWARE
BALTIMORE HUNDRED

DATE: 1/17/25

CIVIL ENGINEERING ASSOCIATES, LLC
● ENGINEERING ● SURVEYING ● CONSTRUCTION SERVICES
55 WEST MAIN STREET
MIDDLETOWN, DE 19709
(302) 376-8833
FAX (302) 376-8834
CEA-DE.COM

# APPENDIX N

## SUSSEX COUNTY SSCE COMPLETED FORM

CIVIL ENGINEERING ASSOCIATES
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 West Main Street
Middletown, DE 19709

cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

# GLEN COVE
# SEWER SERVICE CONCEPT EVALUATION
# SUSSEX COUNTY, DELAWARE

**Engineer:**
Civil Engineering Associates
55 W. Main Street
Middletown, De 19709
Scott Roberts
302-584-6632

**Developer:**
Foxlane Homes Delaware
32191 Nassau Rd. #2
Lewes, DE 19958
302-344-1055

**Project Name:**
Glen Cove 2

**Tax Maps:**
134-12.00-374.01, 134-12.00-3445.00 through 3460.00; 134-12.00-375.00

**Proposed EDUs:**
49 Single Family Units = 49 EDUs (1.0 EDU/SF Unit)

**Current Zoning:**
AR-1

**Proposed Zoning:**
MR

**Acreage:**
~12.32 Acres

# ENVIRONMENTAL ASSESSMENT
# &
# PUBLIC FACILITY EVALUATION REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
January 2025

_____
Seal

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# A. EXECUTIVE SUMMARY

## Introduction

This Report has been prepared in accordance with Chapter 115 – Zoning: Article XXV Supplementary Regulations, 194.3 Coastal Area of the Sussex County Code. This Report provides a summary of site-specific information and accompanies the Preliminary Plans submittal, dated April 30, 2024. This report is not required however the Applicant is voluntarily providing this information as they are proposing less than 50 units.

## Scope of Project:

The proposed project will include forty-nine (49) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 49 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by one (1) stormwater management area (Wet detention pond).

## B. ENGINEER'S REPORT

### Drainage and Stormwater Runoff

Stormwater quality will be met by managing the Resource Protection Event (RPv) and quantity management will be met by managing the Conveyance Event and the Flooding Event (Cv and Fv) this will be achieved through the proposed stormwater management area and will be denoted on the plans as Stormwater Management Area. The proposed Stormwater Management Area will be a wet detention pond that will collect all of the runoff from the site. It will discharge into an existing ditch that is in good working condition.

The runoff from the areas that are being developed will be collected by several methods. Road runoff will be collected by the proposed storm drain system which outlets into the proposed stormwater management area. The runoff from the proposed lots will also be collected and directed to the proposed stormwater management areas by downspouts or by grass lined swales.

### Potable Water

A connection to the existing 12-inch waterline at the intersection of Doves Landing and Burbage Road is expected. During the Sussex County approval process Water Plans will be submitted to Tidewater Utilities for approval as well. Once the Tidewater Utilities approves the connection, both domestic and fire flows will be provided.

Since 49 condominium units are being proposed an estimated consumption of 12,500 GPD is anticipated. (49 lots * 250 GPD = 12,250 GPD)

As it is expected to be served by the extension of the existing Tidewater Utilities facilities, no private wells are expected to be impacted.

### Wastewater Treatment and Disposal

The proposed site lies within an existing Sussex County Sanitary Sewer District, it is anticipated to connect and be served by an existing gravity sewer line situated within Burbage Road. Ordinance No. 38 Plans will be submitted to the County for approval.

As it is anticipated to be served by the extension of the existing gravity sewer line situated in the road, no impacts to the surrounding surface or ground waters are expected.

## Impacts to Surrounding Roadways

The Glen Cove development is proposed to contain 49 single family condominium units. Based upon the latest Institute of Transportation Engineers Traffic Generation Manual, a single-family home (Land Use 210) is anticipated to generate approximately 9.43 vehicle trips per day (1/2 entering the site, 1/2 leaving the site), and the site is anticipated to generate approximately 524 vehicle trips per day (262 entering, 262 leaving).

Per DelDOT's Service Level Evaluation Report (SLER), dated August 19, 2024, the project will generate less than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day and therefore the traffic impact was determined to be negligible. Due to this, an Area Wide Study (AWS) will be required in lieu of a Traffic Impact Study (TIS). Based upon the 2023 DelDOT Traffic Counts, Burbage Road currently carries 3,224 average annual daily vehicles within the project area. Therefore, it is anticipated that the Glen Cove development will not cause any adverse impacts to the surrounding road network.

## Endangered or Threatened Species

Field investigations were performed by Watershed Eco, LLC. on the Glen Cove and OT Collins parcels. Based upon field investigations, the existence of any endangered or threatened species is not expected. In addition, A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property.

## Preservation and Protection of Tidal and Non-Tidal Wetlands

A wetland delineation was performed by Watershed Eco Inc. in January 2024. Based on the delineation it was determined that approximately 0.20 Acres of wetlands exist on the site. Subsequently, there will be no disturbance of wetlands associated with development of this project. Per the Drainage and Buffer Ordinance, a wetland buffer will be established on the plans.

## Open Space and Buffers

Under the designed layout of the proposed Glen Cove development approximately 7.96 acres are provided as open space. The total area of the site is 12.32 acres, which produces 65% of provided open space.

In addition, forested buffer strips are proposed around the project site. These forested buffers strips will be composed of a mix of 70% deciduous shade trees and 30% evergreen trees. They will also follow the Sussex County code requirement of having a minimum total of 15 trees for every one-hundred-foot length of buffer.

## Proposed Public and Private Infrastructure

The surrounding properties are currently provided with sewer and water.

## Economic & Recreational Benefits

The proposed development is anticipated to provide several economic benefits including:

- Increase to the tax base of Sussex County.

The proposed development is anticipated to provide several recreational benefits including:

- Amenity area with pool.
- An aesthetic wet pond.

## Historic and Cultural Resources

There is no known presence of any historic or cultural resources listed on the National register of Historic Places at the site.

## Affirmation of Conformance with Sussex County Comprehensive Plan

The proposed development has been designed in accordance to the current Sussex County Comprehensive Plan. The site is located within the Coastal Area, a designated Growth Area, which is among the most desirable locations in Sussex County for new housing and the proposed multifamily use is permitted within this Future Land Use Designation. Furthermore, the site is located within a Level 2 Investment Area, where growth is anticipated by local, county, and State plans, and the project is therefore consistent with the 2020 Strategies for State Policies and Spending.

## Actions Taken to Mitigate Proposed Impacts of the Development

All mitigation measures, where required, have been discussed in their foregoing, respective section.

# RESOURCE BUFFER MANAGEMENT PLAN

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
January 2025

_____
Seal

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# APPENDICES

A. WETLAND DELINEATION – COLLINS PROPERTY

## A. EXECUTIVE SUMMARY

The proposed Glen Cove project will include forty-nine (49) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 49 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by one (1) stormwater management area (Wet detention pond).

This Report provides a summary of site-specific information relative to resource protection and accompanies the Preliminary Plans submittal, dated April 30, 2024. This Report has been prepared in accordance with Chapter 115 – 193 of the Sussex County Code.

## B. ESTABLISHMENT OF RESOURCE BUFFERS

Per the Wetland Delineation performed by Watershed Eco, LLC., the subject property contains approximately 0.20 acres of wetlands. Specifically, Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the OT Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted in the attached wetland report (See Appendix A). These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway.

Using a 30-foot resource buffer offset, we determined that the resource buffer area required totals 16,195 square feet (0.37 acres). As shown on the plans, the area designated by the hatching equals 16,677 square feet (0.38 acres). This area was obtained through buffer averaging. In summary, a resource buffer around the existing wetlands of 0.37 acres is required and a resource buffer totaling 0.38 acres is proposed.

The location of the required resource buffer for the existing wetland is shown on Sheet C-1 of the Preliminary Plans.

## C. RESOURCE BUFFER MANAGEMENT PLAN

The Resource Buffer Management Plan for the Glen Cove project will consist of a hands-off approach once construction is completed. No land disturbing maintenance activities within the resource buffer, wetland, or associated drainways is currently required or anticipated.

Should any emergency removal of vegetation endangering residents, infrastructure or capacity of the onsite wetland drainageway be required, those activities are permitted to occur. As specified by the Drainage and Resource Buffer Ordinance No. 2852, such work will be conducted under the supervision of a qualified professional as designated by the Code. No lots are situated nearby the proposed resource buffer, so emergency situations are unlikely.

This Resource Buffer Management Plan will serve as a guideline for the Homeowners Association. Silvicultural or Pest Management plans to promote the health of the Resource Buffer are also permitted as needed, under the supervision of a qualified professional.

Access to the buffer will extend from the end of Private Drive 1.

The outer perimeter of the resource buffer shall be marked with signage in 100-foot intervals. The developer, succeeded by the future Homeowners Association, shall be responsible for inspecting signage and making any necessary repairs at a minimum 2-year interval.

# APPENDIX A

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

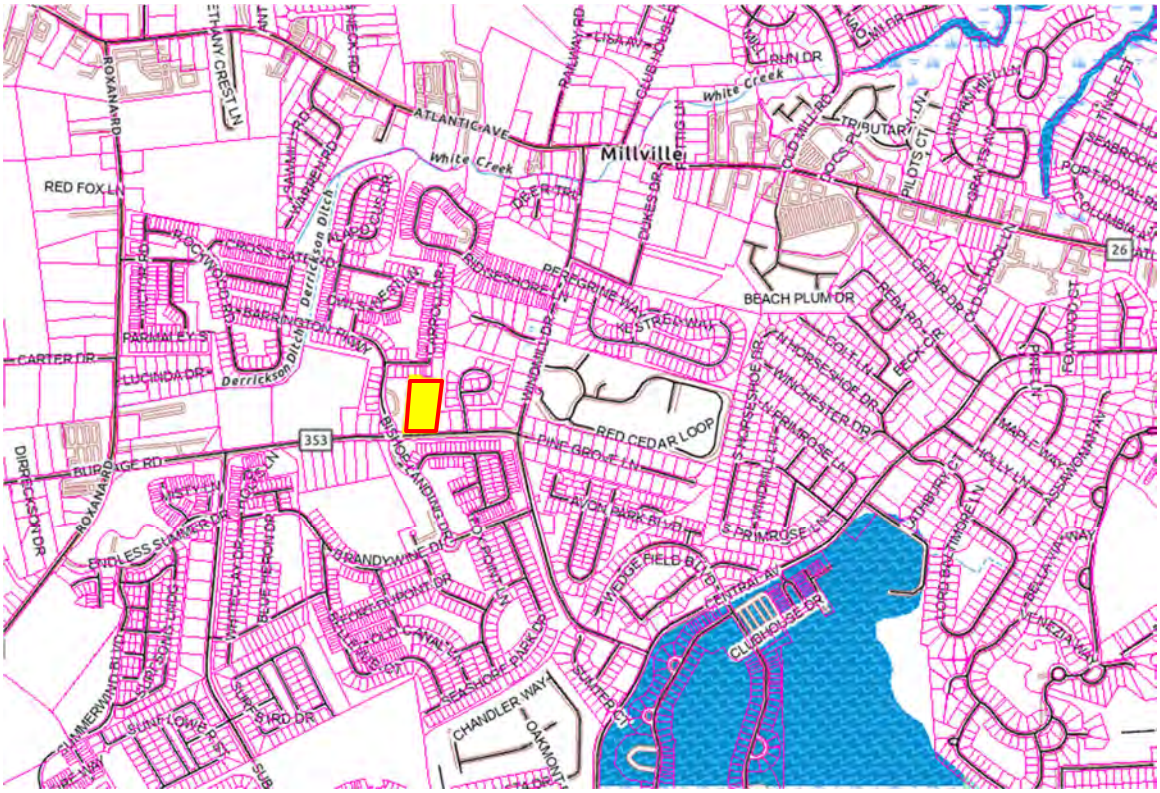



Figure 1: Location Map

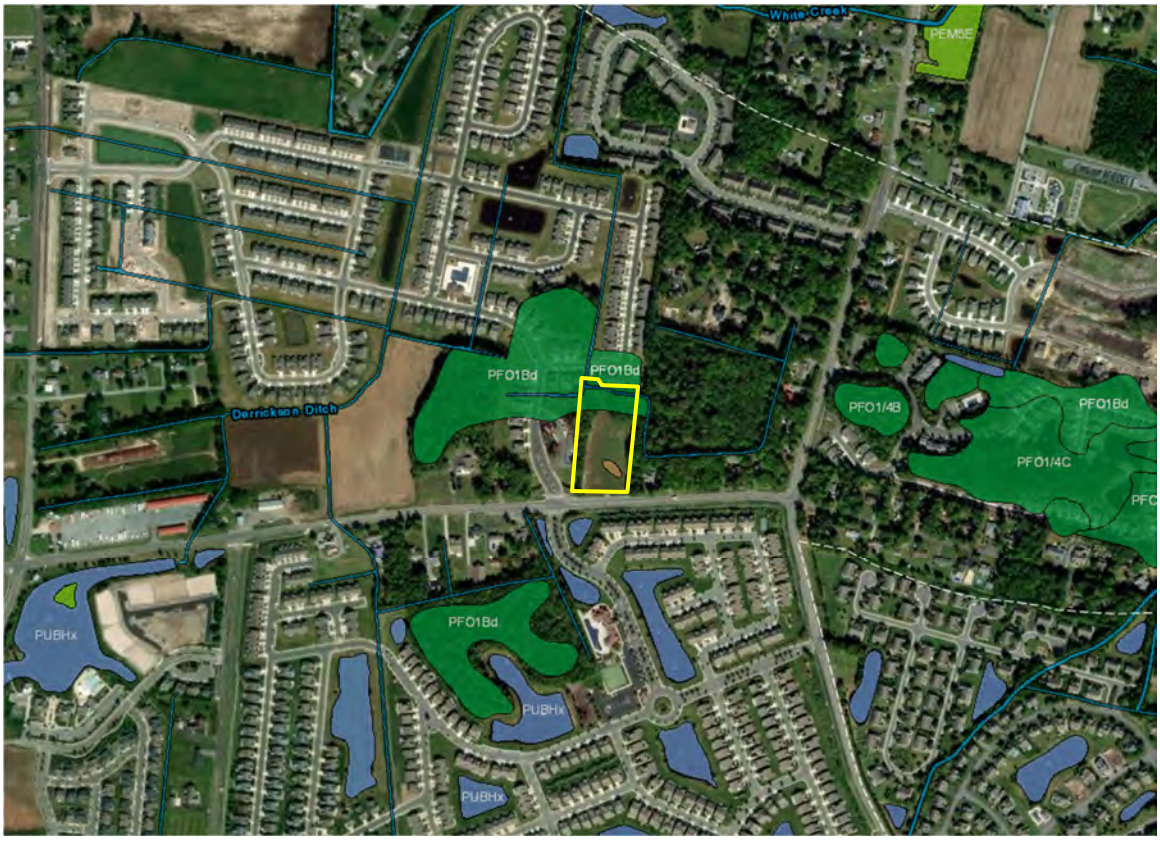



Figure 2: National Wetland Inventory Map.

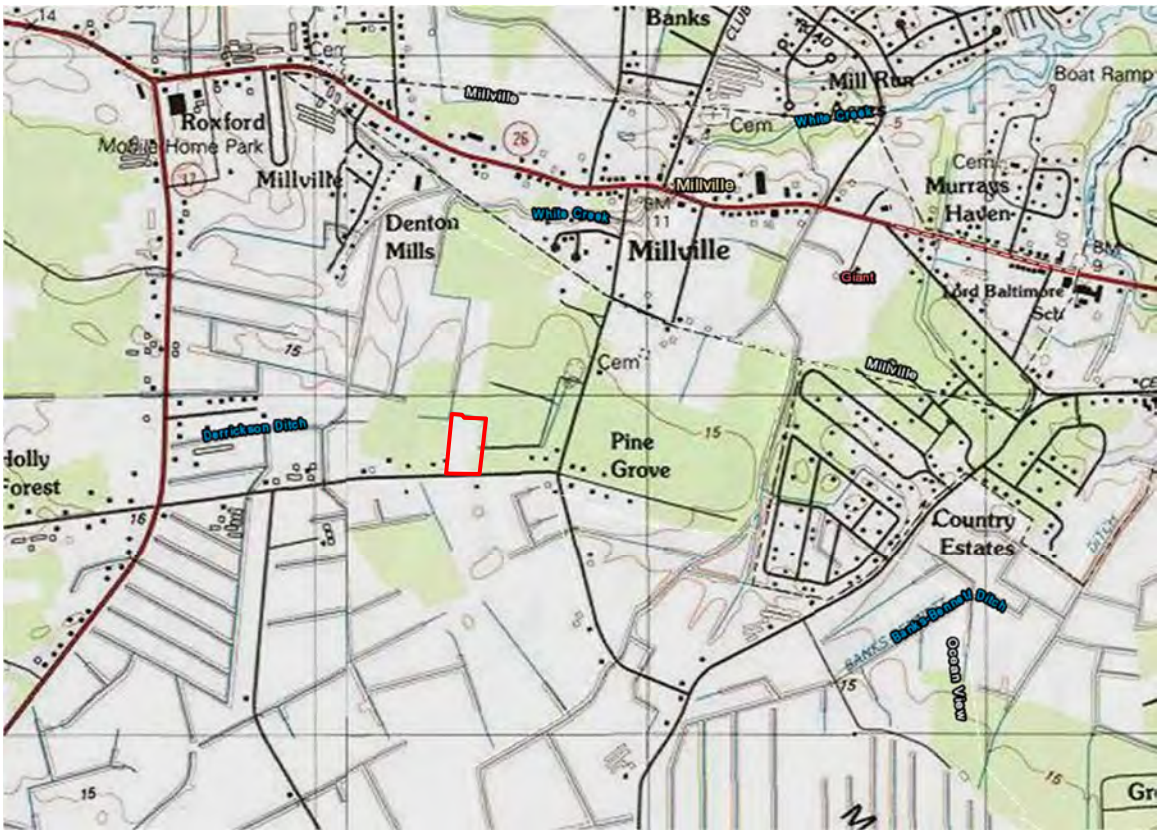



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

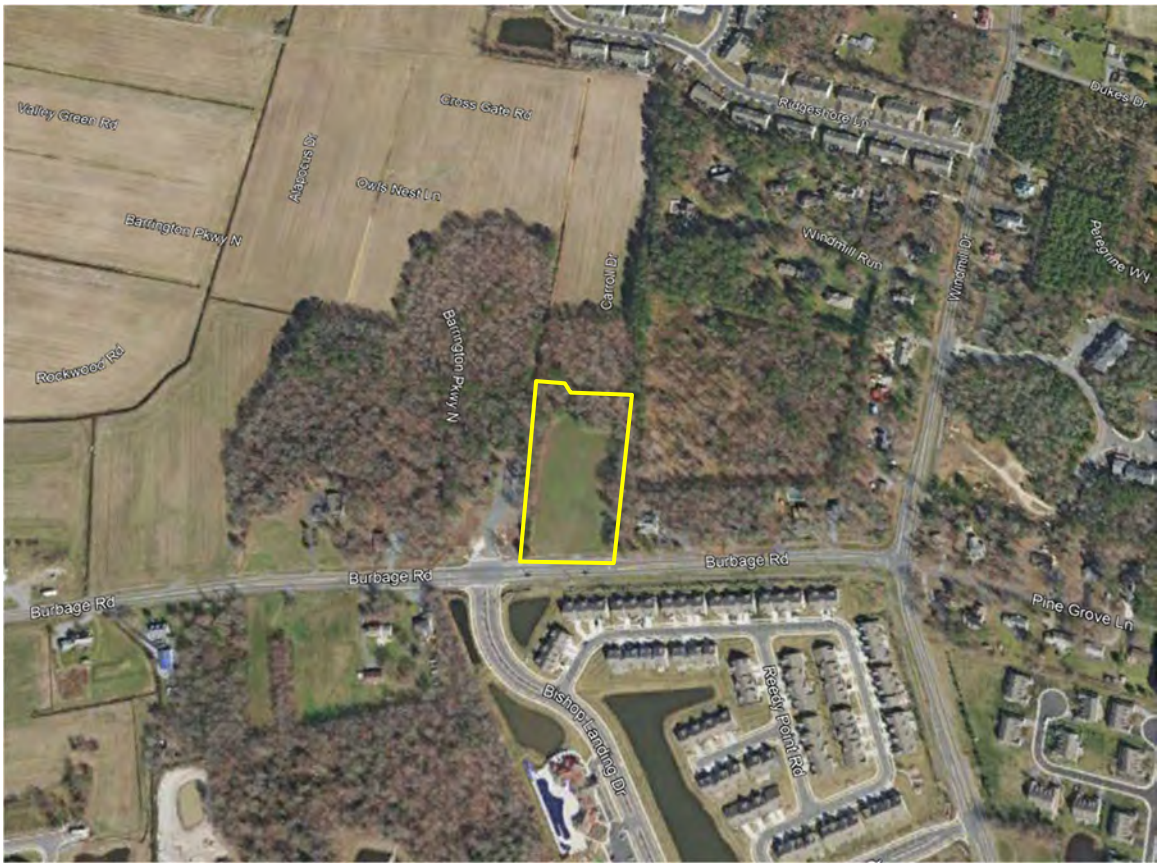



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

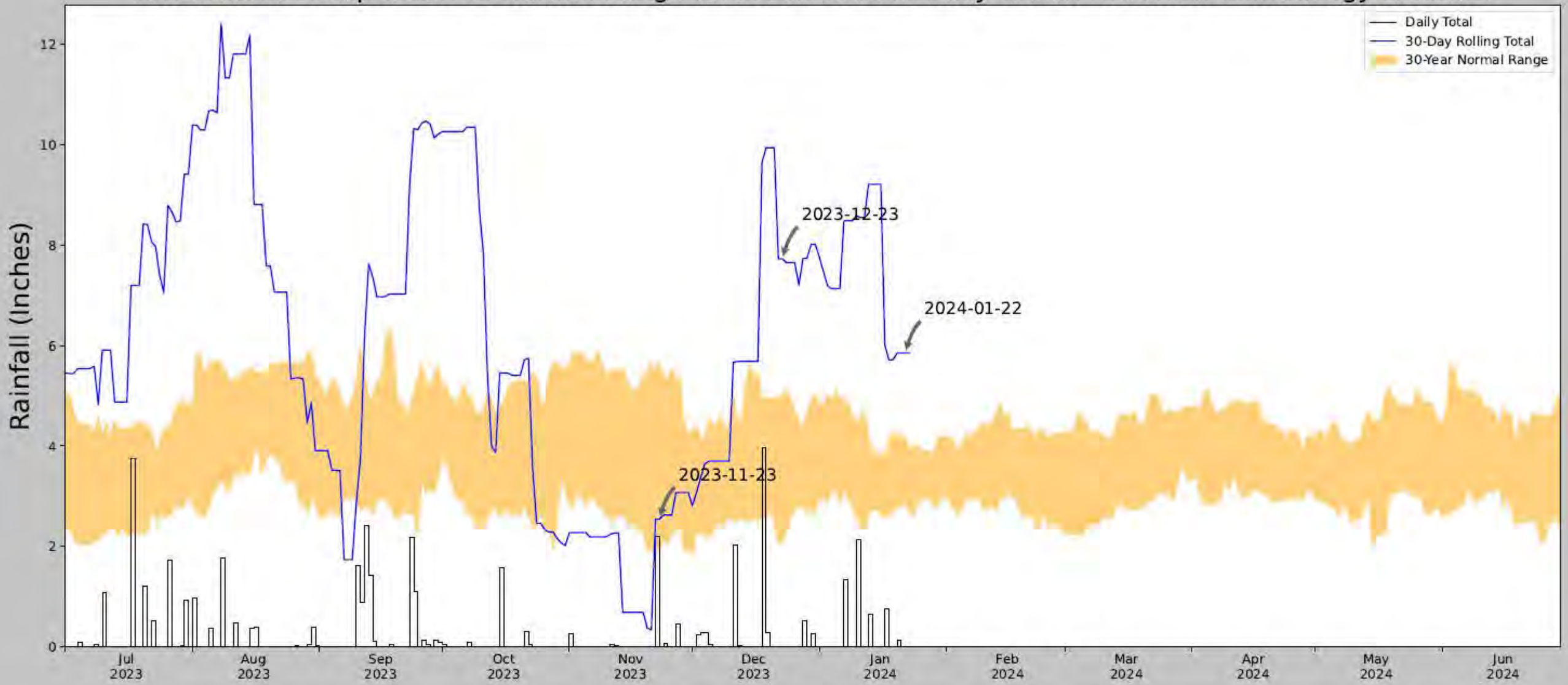
View looking west at intermittent ditch at the northwestern boundary of the property.

Intermittent ditch draining northerly, off-site.

# Appendices

Collins Property
Wetland Delineation Map
Legend
Flag ID#
Property Boundary
Waters
Wetlands
Barrington Pkwy N
Barrington Pkwy N
Barrington Pkwy N
Burbage Rd
Burbage Rd
Burbage Rd
Burbage Rd
Google Earth
Image © 2024 Airbus
N
200 ft

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

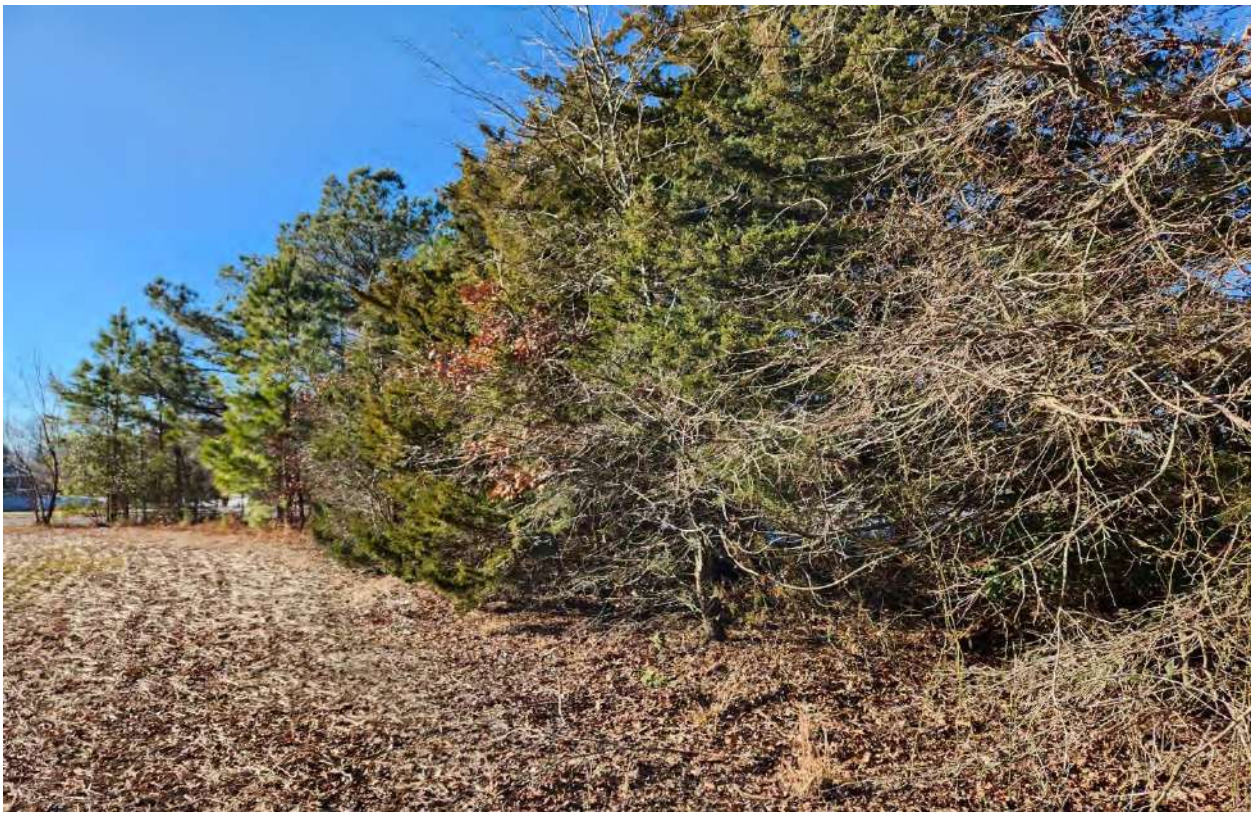
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

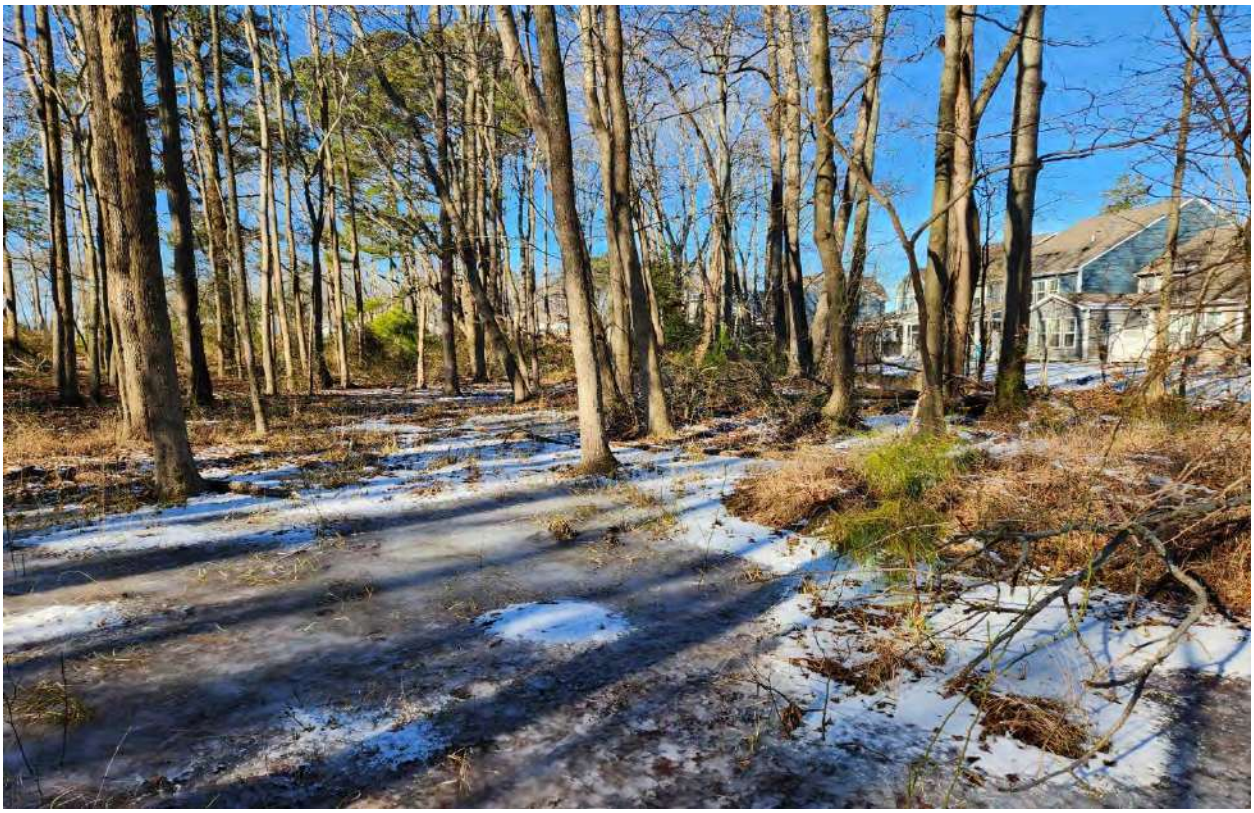
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

NRCS

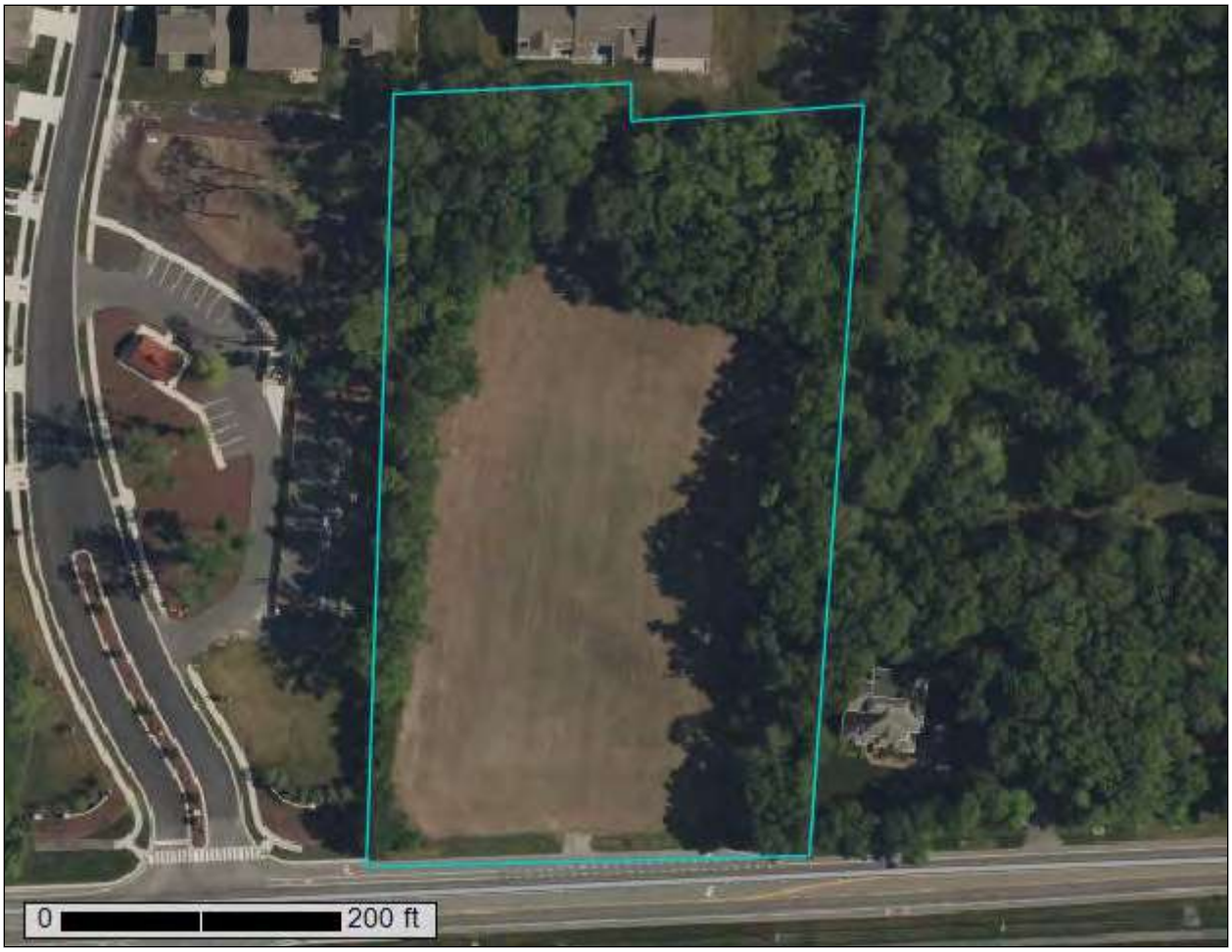
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

Map Scale: 1:993 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

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# DRAINAGE ASSESSMENT REPORT

FOR

# GLEN COVE

**BALTIMORE HUNDRED**
**SUSSEX COUNTY**
**DELAWARE**

PREPARED BY:

**CIVIL ENGINEERING ASSOCIATES, LLC**

55 West Main Street
Middletown, DE 19709
(302) 376-8833

DATE:
January 2025

_____
Seal

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## A. EXECUTIVE SUMMARY

Sussex County Code Section 115-193-F specifically states, “If a resource buffer abuts or contains features such as ephemeral, intermittent or perennial streams which are not part of an established tax ditch and which convey drainage from or through a site proposed for development, a drainage assessment report shall be prepared by a registered Delaware Professional Engineer.” The wetland resource buffer directly abuts the Derickson Canal Tax Ditch system. Therefore, it is our opinion that the Drainage Assessment Report is not required due to the resource buffer’s proximity to the tax ditch.

However, we are providing this Drainage Assessment Report on a voluntary basis for Sussex County’s use. This Drainage Assessment Report has been prepared in accordance with Sussex County Code Section 115-193-F and the county provided checklist.

## B. PROJECT NARRATIVE

### Introduction:

The proposed Glen Cove project will include forty-nine (49) single family condominiums located on the formerly approved subdivision known as Glen Cove (TP#'s 134-12.00-374.01, 134-12.00-3445.00 through 134-12,00-3460.00) and the adjacent property known as the OT Collins property (TP# 134-12.00-375.00) on Burbage Road in Sussex County, Delaware. The Applicant proposes to re-zone the properties from AR-1 to MR and a conditional use for the development of 49 multi-family units.

The project will involve typical construction activities associated with new roads, stormwater management facilities, home construction, and utility installation. The utilities for the site will consist of electric, telecommunications, sewer, and water services to each home. Stormwater management for the site will be provided by one (1) stormwater management area (Wet detention pond).

### Existing Conditions:

The existing properties are located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The property is bound by existing single-family homes on the north, south, and east, and the Bishops Landing Community to the west. The project consists of approximately 12.32 acres and is primarily woodlands with some grassed areas. The existing woodlands are not mature, as referenced in the Forest Stand History section below. There are existing wetlands to the northwest and tax ditches located along the perimeter of the site. The tax ditches outfall west offsite to the Derrickson Ditch via offsite tax ditches.

### Field Investigations and Findings

Field investigations were performed by Watershed Eco, LLC. in September 2021 on the Glen Cove parcel. The site is surrounded by the Derrickson Canal Tax Ditch which appears to be ephemeral in nature. There are no other wetlands or drainage conveyance features within the subject property. An additional wetland investigation was conducted by Watershed Eco, LLC. on the adjacent Collins property to the west on January 22, 2024. This investigation identified an intermittent ditch and palustrine forested wetlands which drain off-site to the north.

No signs of stream bank erosion, debris, or any impediments to conveyance were observed throughout the surrounding tax ditches. In addition, no sand or gravel deposits were observed. As such, no remedial action is necessary regarding the structural integrity of the surrounding tax ditch system. State and federal permitting may be required for the ditch crossing for the connector

road to the west. See Section C. regarding documentation of the investigations.

## C. SITE INVESTIGATION AND DOCUMENTATION

### Photographs:

Photographs of the site are provided in Appendix A.

### Channel Cross-Sections:

Cross-sections of the surrounding tax ditch are provided in Appendix B.

## D. ENVIRONMENTAL CONDITIONS AND HABITAT ASSESSMENT REPORT

### Land Types:

Active Agricultural Fields, hedgerows, drainage ditches, and mixed deciduous/coniferous forest.

### Period of Investigation:

Glen Cove: Wetland Investigation-September 20, 2021

Collins Property: Wetland Investigation-January 22, 2024

### Soil Conditions:

According to the USDA Soil Survey, the majority of the subject property is underlain with well drained Rosedale loamy sand (RoA) with lesser areas of poorly drained Mullica-Berryland complex (MuA) and Klej loamy sand (KsA) in the western portion of the property. The perimeter ditches were likely excavated to facilitate drainage of the property.

Additional Geo-technical borings were conducted by Hardin Kight Associates, Inc. in 2021. Based on the soil boring logs, the site consists of loamy sand soils with seasonal high groundwater ranging from 4.7 to 6.2 feet below the existing surface. The geotechnical investigation report is provided in Appendix D.

### Forest Stand History:

The Glen Cove parcel is predominantly wooded with mixed deciduous/coniferous forest cover. Based on aerial imagery the western portion of the property was cleared around 2012 and now consists of sapling loblolly pine and sweetgum. The eastern portion of the property is dominated by (12-24"DBH) northern red oak, southern red oak, and white oak with red maple, sassafras, and American holly in the understory. Shrub/herbaceous species consisted of highbush blueberry, sweet pepperbush, lowbush blueberry, Virginia creeper, and common greenbrier. A small, wooded area was observed in the northern portion of the Collins property. This area was dominated by 12-18" DBH loblolly pine and sweetgum. The understory consisted of red maple and black gum. Common shrub species observed included lowbush blueberry, common greenbrier, sweet pepperbush, and loblolly pine saplings.

Based on historical aerial imagery, neither parcel is part of a larger contiguous forested area. The on-site forest would not qualify as Forest Interior Dwelling Bird Habitat and would not be classified as mature or old growth. Aerial imagery is provided in Appendix E.

## Wetland Identification:

As stated above, there is evidence of wetlands existing on the project site. Watershed Eco, LLC. identified and flagged a palustrine forested wetland on the Collins property during the January 2025 field investigation. The area of wetlands is approximately 0.20 acres. The wetland directly abuts an intermittent ditch and drains off-site to the north.

Per Sussex County Code, the wetland area will be protected by a future Resource Buffer. Access to the resource buffer and wetland area will be available at the end of Private Drive 1 for future maintenance as illustrated on the Preliminary Plans. A Resource Buffer Management Report has been created to establish the protocol for protection of the resource.

Please see Appendix G for the Wetland Delineation – Collins Property and Appendix H for the Wetland Investigation Summary Letter performed by Watershed Eco, LLC.

## Endangered Species:

A U.S. Fish & Wildlife Service IPAC dated January 9, 2025 indicates there are no critical habitats within the subject property. A copy of the IPAC is provided in Appendix F.

## E. EXISTING CONDITIONS MAPPING

Please see Appendix C for Existing Conditions Mapping.

# APPENDIX A

## SITE PHOTOGRAPHS

GLEN COVE PROPERTY

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

Photo 3: Man-made drainage ditch along southern property boundary, facing east.

Photo 4: Man-made drainage ditch along southern property boundary, facing west.

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.

Photo 10: Upland forest cover in the northeastern portion of the property.

OT COLLINS PROPERTY

PHOTO 1: View looking east at southern portion of the property bordering Burbage Road.

PHOTO 2: View looking west at mowed field area in the southern portion of the property.

PHOTO 3: View looking north across mowed field in the central portion of the property.

PHOTO 4: View looking southeast across mowed field from the northwestern portion of the property.

PHOTO 5: Forest cover in the northwestern portion of the property.

PHOTO 6: Forested wetland in the northeastern portion of the property looking west.

PHOTO 7: Drainage ditch along the eastern boundary of the property.

PHOTO 8: View looking west at drainage ditch along the northern boundary of the property.

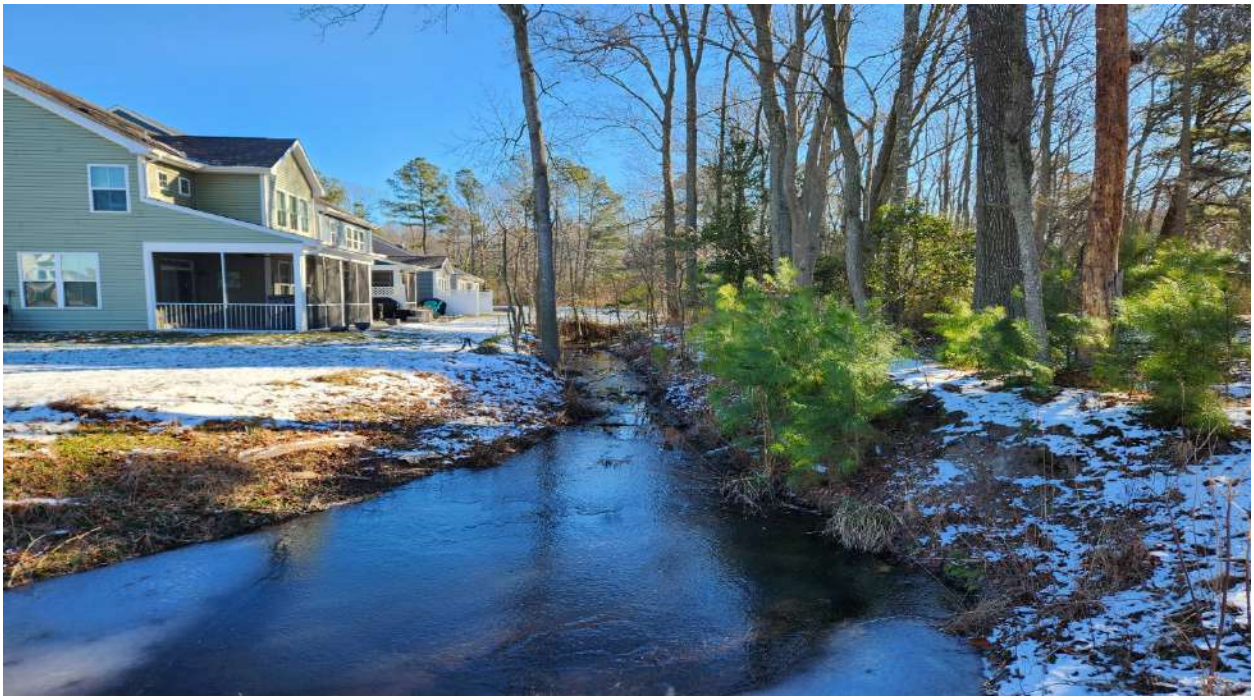

PHOTO 9: Residential properties north of the subject property, looking east.

PHOTO 10: View looking south across mowed field area bordering woodlands along the eastern property boundary.

# APPENDIX B

## DITCH CROSS SECTIONS

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# DITCH CROSS-SECTIONS
## PLAN VIEW
FOR
# GLEN COVE
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

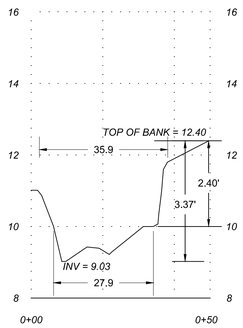
DATE: APRIL 30, 2024

DESIGNED BY:

APPROVED BY: RHS

FILE: P23101 - CONST DITCH

SHEET NO.: **CS-1**

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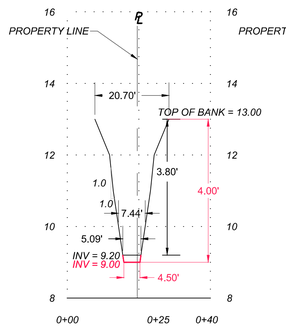


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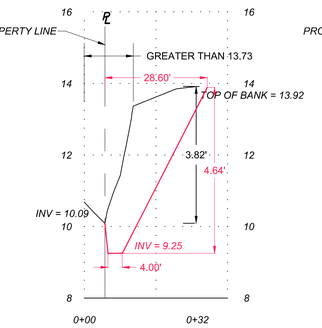


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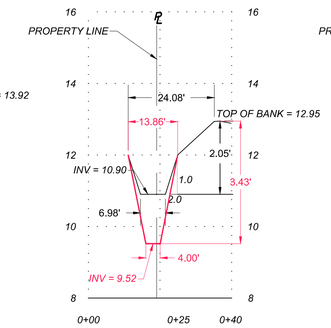


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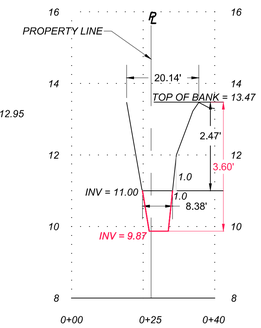


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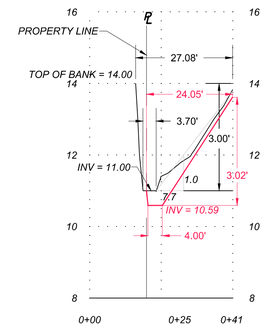


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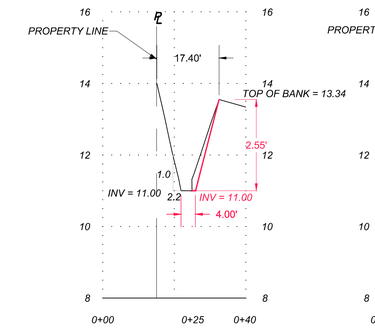


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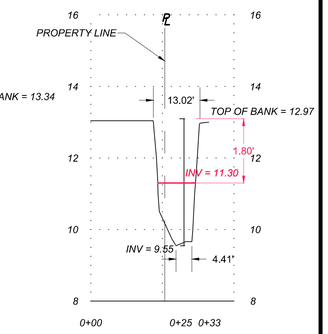


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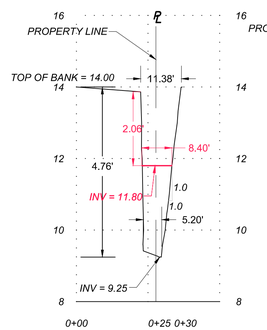


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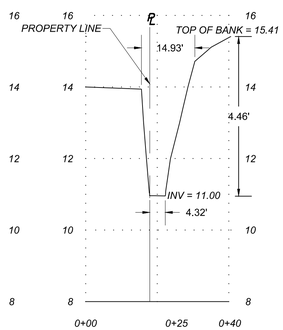


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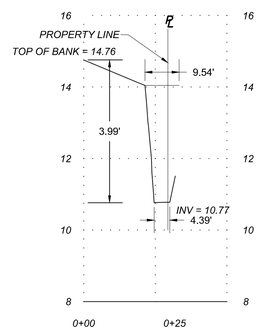


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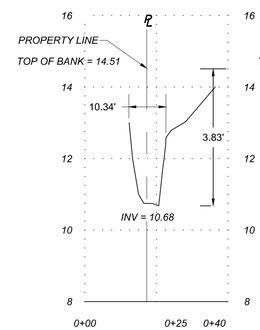


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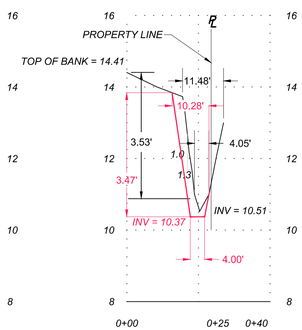


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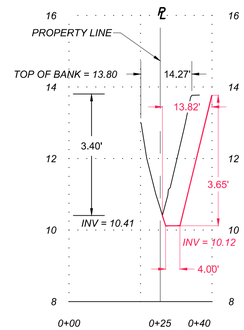


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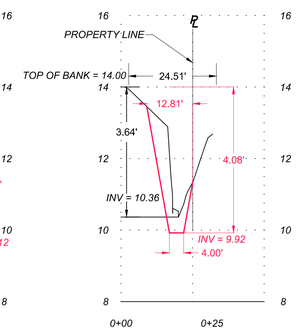


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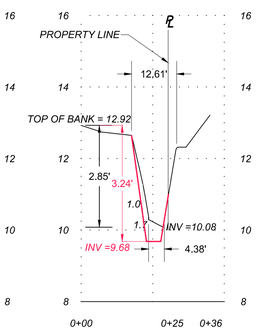


PROFILE
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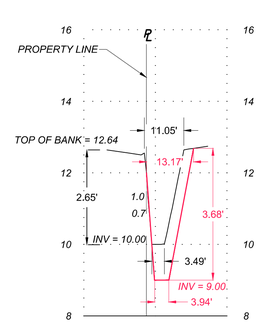
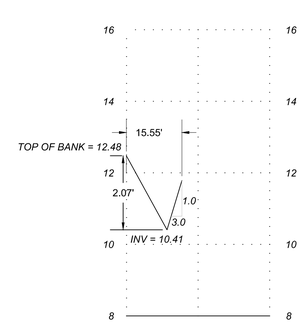
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A17
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'




PROFILE
CROSS SECTION A19
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

REVISIONS

| REVISION | DATE | DESCRIPTION | DATE |
|---|---|---|---|
| | | | |

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CIVIL ENGINEERING ASSOCIATES, LLC
• ENGINEERING • SURVEYING • CONSTRUCTION SERVICES
55 W. MAIN STREET
MIDDLETOWN, DE 19709
PHONE (302) 376-8833
FAX (302) 376-8834
WWW.CEA-DE.COM

# DITCH CROSS-SECTIONS

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024
DESIGNED BY:
APPROVED BY: RHS
FILE: CONST-DITCH
SHEET NO.: CS-2

# APPENDIX C

## EXISTING CONDITIONS MAPPING

## BOUNDARY CURVE TABLE

| CURVE NO. | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 25.00 | 20.19 | 19.64 | N14°59'08"E | 46°15'53" |
| C2 | 25.00 | 13.41 | 13.25 | S23°30'56"E | 30°44'15" |

## LINE TABLE - WETLANDS

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S 08°38'01" E | 30.06' |
| L2 | S 67°05'27" E | 5.42' |
| L3 | N 58°03'49" E | 13.92' |
| L4 | S 25°39'57" E | 12.43' |
| L5 | S 82°47'15" E | 20.53' |
| L6 | S 21°59'01" E | 16.69' |
| L7 | S 04°40'51" W | 42.25' |
| L8 | S 68°27'03" W | 38.86' |
| L9 | N 81°41'08" W | 59.18' |
| L10 | N 06°35'12" E | 15.84' |
| L11 | N 68°13'40" W | 29.03' |
| L12 | N 14°49'50" W | 30.20' |
| L13 | N 30°58'04" E | 22.71' |
| L14 | S 76°10'32" E | 33.19' |
| L15 | N 80°22'08" E | 28.89' |
| L16 | N 02°24'41" E | 28.47' |
| L17 | N 75°58'06" E | 4.23' |

DATE

REVISIONS

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

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55 W. MAIN STREET
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FAX (302) 376-8834
WWW.CEA-DE.COM

# EXISTING CONDITIONS PLAN

FOR

# GLEN COVE

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

DATE: APRIL 30, 2024

DESIGNED BY: SPR

APPROVED BY: RHS

FILE: P23101-PRELIM PLAN\EX

SHEET NO.: **EX-1**

# APPENDIX D

## GEOTECHNICAL INVESTIGATION LETTER

HARDIN
KIGHT
ASSOCIATES,
INC.

December 30, 2021 Our Job Number: 21855

**GULFSTREAM DEVELOPMENT, LLC**
**27 Atlantic Avenue**
**Ocean View, Delaware 19970**

Attention: Mr. Bob Harris

Reference: Glen Cove II
SWM Geotechnical Investigation
Sussex County – Millville, Delaware

Dear Mr. Harris:

As requested by Mr. Al Ruble, we have completed a limited subsurface investigation of the soil and groundwater conditions for the stormwater management (SWM) pond proposed for construction in the Glen II Community, planned for development in Millville, Delaware. This investigation was performed to determine the depth to estimated seasonal high groundwater (SHG) and analyze the characteristics of the underlying soils with respect to the design of the stormwater management pond. This investigation included drilling five (5) hand auger probes, and review of available geological and soil survey literature for the subject site. Our findings and analysis are presented herein.

For this investigation we were provided with an electronic copy of a site plan entitled *Soil Testing Locations for Glen Cove II*, prepared by Civil Engineering Associates (CEA), dated November 1, 2021. The site plan illustrates the layout of the proposed development and roadways, the location of the SWM Pond, and includes existing and proposed grades. The site plan was used in preparation of this report.

## SITE DESCRIPTION

The site is located on the north side of Burbage Road, at the intersection with Windmill Drive, in Millville, Delaware. The site consists of approximately 10 acres, most of which is wooded and contains light underbrush. The property is bound by existing single-family homes on the north, south and east, and the Bishops Landing Community to the west. The SWM Pond is proposed in the northwest corner of the site.

From review of the ground surface elevations provided, topographically, the site is relatively flat in surface elevation, at approximately 13 feet above Mean Sea Level (MSL). The natural site surface drainage is generally from south to north. At the time of this investigation, the ground surface was dry and stable.

12515 Caterpillar Lane • Bishopville, MD 21813 • 410-352-5001 • FAX 410-352-3228 • www.hardin-kightassociates.com

## PROPOSED CONSTRUCITON

One SWM Pond is proposed. The pond is proposed as a wet pond, with a top of berm at El. 13 and a pond bottom at El. 6. The pond will receive water from 2 stormwater pipes, and includes an outfall, discharging into an existing drainage ditch located along the west property boundary. From review of the proposed grades shown on the previously referenced site plan, excavations of approximately 7 to 8 feet will be required for pond construction.

## INVESTIGATION

In order to evaluate the soil and groundwater conditions in the area of the pond, five (5) hand-auger probes were drilled. The auger probes were advanced within the proposed SWM ponds at locations established by survey, provided by CEA. The auger probes are labeled as Auger Probes T-1 through T-5. Ground surface elevations were provided by CEA at each staked location. The auger probes were drilled to depths ranging from 6.5 to 8 feet below the existing ground surface. The soil conditions encountered were visually identified in general accordance with the Unified Soil Classification System (USCS), and United States Department of Agriculture (USDA) classification system. The locations of the auger probes are shown on the attached Auger Probe Location Plan, labeled as Figure 1, which is an altered version of the previously referenced site plan prepared by CEA.

Additionally, we have reviewed the monthly depth to groundwater readings for Monitoring Well Qi31-03, taken from the *Delaware Geological Survey* website. The depth to groundwater was at the normal seasonal high in January 2021. The depth to groundwater at Well Qi31-01, located approximately 5 miles west of the site, was approximately 5 feet below the normal SHG in September 2021. The monthly well report is attached for your reference.

## GEOLOGY

Based on the *Geologic Map of the Bethany Beach and Assawoman Bay Quadrangles GM-18* (Ramsey and Tomlinson, 2012), the the geologic unit underlying the site at the surface is the Ironshire Formation.

The Ironshire Formation is described as pale yellow to light gray, fine to very coarse sand. Very coarse sand to fine gravel are a common constituent of the unit, especially near its base. Thin, light gray, silty clay beds occur but are not present at all localities. Based on the profile provided in the above referenced map, it unconformably overlies the Omar Formation. Where the Ironshire Formation overlies the Omar Formation, the boundary is not always clear, but is commonly marked by a coarse sand or pebbly sand at the base of the Ironshire Formation. The estimated thickness at the site location is about 20 feet thick.

The top of the Omar formation is described as a gray to pale yellow, fine to very fine, clean to slightly silty Sand, with rare very fine beds of silt. These silty sands are underlain by a gray to light greenish gray, silty clay to silty fine sand with scattered thin beds of oyster shells. In places, there is a 2- to 10-foot thick bed of medium to coarse, relatively clean sand

underlying the shelly, silty clay. Underlying the shelly, silty clay or the medium to coarse sand, where present, in the areas where the Omar is thickest, there is a 10- to 40-foot-thick layer of greenish-gray, compact, silty clay to clayey silt. Beneath this silty clay, if present, is a 3- to 5-foot-thick bed of very dark-gray to black, organic-rich, sandy silt to silty clay. The bottom, up to 5 feet of the unit, normally consists of 1 to 3 feet of gray to very dark-gray fine to coarse silty sand with scattered laminae, to thin beds of peat composed of sand to gravel-size plant fragments, overlying light to dark gray, coarse to very coarse, sand.

## SOIL SURVEY

The information in this section is from the *Web Soil Survey* which was accessed on December 29, 2021. Soil Survey information can be used for general planning, onsite investigation is needed to supplement this information. Soil Survey information is limited to the upper most 6 feet in any given location.

Based on the Sussex County, Delaware survey the soils units on site are:

- The Klej loamy sand, 0 to 2 percent slopes (KsA) has one major component, the Klej component which makes up 70 percent of the unit. The minor components in the Klej loamy sand are the: Galloway (10%), Berryland, drained (5%), Hammonton (5%), Hurlock, drained (5%), and Runclint (5%). This soil does not meet hydric criteria.

- The Mullica-Berryland complex, 0 to 2 percent slopes (MuA) has four major components: the Mullica, drained (26%), the Mullica, undrained (16%), the Berryland, drained (24%), and the Berryland, undrained (14%). The minor components are: Klej (10%), Askecksy, drained (5%), and Galloway (5%). This soil meets hydric criteria.

- Rosedale loamy sand, 0 to 2 percent slopes, (RoA). It has one major component, the Rosedale (75%). The minor components include: Evesboro (10%), Klej (5%), Hambrook (5%), and Galloway (5%). This soil does not meet hydric criteria.

The following descriptions, properties, and limitations are based on Sussex County, Delaware survey area data, Version 22, August 26, 2021, with aerial images photographed between November 21, 2018 and March 12, 2019. The major components (greater than 10%) are described below. The minor components are not addressed in this report.

The Klej component parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. The natural drainage class is described as somewhat poorly drained with water movement in the most restrictive layer being moderately high. It has an apparent water table that exists at 12 inches during February. This soil typically does not flood or pond. The normal upper limit of the water table from June through October is greater than 6.0 feet. It typically has a seasonal upper limit of water saturation between 0.8 to 1.7 feet from December to April. The pH is typically between 4.3 and 5.5, and the organic matter content in the surface horizon is about 0 percent.

The Mullica parent material consists of sandy and loamy fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content in the surface horizon is about 16 percent. The pH is typically between 4.0 and 6.5. The shrink-swell potential is low. The potential for frost action is low.

The drained component has rare ponding events throughout the year. It typically has a seasonal zone of water saturation from January through March between 0 and 8 inches. The undrained component has frequent ponding events for long periods during January through April, and occasionally during the remaining part of the year. It typically has a seasonal zone of water saturation from December through April, between 0 and 8 inches. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 66 percent.

The Berryland, parent material consists of sandy eolian deposits and/or fluviomarine sediments. The undisturbed hydrologic soil group is A/D. It has negligible surface runoff. The natural drainage class is described as very poorly drained. Water movement in the most restrictive layer is high. This unit is typically not flooded. The normal upper limit of the water table from July through October is between 3.3 to greater than 6.0 feet. The organic matter content of the surface horizon is about 11 percent. The pH is typically between 4.3 and 6.5. The shrink-swell potential is low as is the potential for frost action.

The drained component has rare ponding events during November through May. It typically has a seasonal zone of water saturation between 0 and 8-inches during January, February, and March. The undrained component has frequent ponding events for long periods during January through April, and occasionally for the remaining part of the year. It typically has a seasonal zone of water saturation between 0 and 8 inches, from December through May. The undrained component has a thin layer of organic matter on top of the surface horizon with an organic matter content of about 68 percent.

The Rosedale parent material consists of sandy eolian deposits over fluviomarine sediments. The undisturbed hydrologic soil group is A. The natural drainage class is described as well drained. Water movement in the most restrictive layer is moderately high. This unit is typically not flooded, nor does it pond. The upper limit of the water table is greater than 6 feet, and typically has a seasonal upper limit of water saturation between 3.3 to 6.0 feet during January, February, March, and April. The pH is typically between 4.3 and 6.5. Organic matter content in the surface horizon is about 1 percent.

The following limitations and restrictions described below may be mitigated by following the recommendations provided in this report and our recommendations during construction.

| Limitations for | Klej | Mullica | Berryland | Rosedale |
|---|---|---|---|---|
| Infiltration Systems | Severely Limited<br>Wetness<br>adsorptive capacity | Severely Limited<br>wetness<br>water movement | Severely Limited<br>wetness<br>water movement | Deep -Severely<br>Shallow – Somewhat<br>wetness<br>water movement<br>adsorptive capacity |
| Unlined Retention Systems | Somewhat Limited<br>water movement<br>wetness interfering with installation | Somewhat Limited<br>wetness interferes with installation<br>water movement | Somewhat Limited<br>water movement<br>wetness interferes with installation | Somewhat Limited<br>wetness interferes with installation<br>insufficient groundwater<br>water movement |
| Lined Retention Systems | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface,<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement | Somewhat Limited<br>water spreading surface<br>water movement<br>insufficient groundwater |
| Embankments | Very Limited<br>depth to saturated zone<br>piping<br>seepage | Very Limited<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Very Limited<br>piping<br>depth to saturated zone<br>seepage<br>Undrained areas are also subject to ponding. | Somewhat Limited<br>Seepage<br>depth to saturated zone |
| Aquafer Fed Excavated Ponds | Very Limited<br>Unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls | Very Limited<br>unstable excavation walls<br>Depth to saturated zone |
| Pond Reservoir Areas | Very Limited<br>seepage | Very Limited<br>Seepage | Very Limited<br>seepage | Very Limited<br>seepage |
| Shallow Excavations | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls | Very Limited<br>depth to saturated zone<br>unstable excavation walls<br>Undrained areas are subject to ponding. | Very Limited<br>depth to saturated zone | Somewhat Limited<br>depth to saturated zone<br>unstable excavation walls |
| Shrink-swell Potential | Low | Low | Low | Low |
| Frost Action Potential | Low | Low | Low | Low |
| Corrosion Risk Uncoated Steel | High | High | High | Moderate |
| Corrosion Risk Concrete | High | High | High | High |

## FINDINGS

The findings at the auger probes are consistent with the geology and soil survey as described above. Approximately 3 to 20 inches of topsoil was present at the existing ground surface. Below the topsoil, the soil conditions consist of sand with varying amounts of silt. The soils generally consist of material visually classified as predominately Poorly-graded Sand with Trace Silt (USCS SP/SM; USDA Loamy Sand), Poorly-graded Sand with Silt (USCS SM; USDA Sandy Loam), Silt (USCS ML; USDA Silt Loam), and Poorly-graded Sand (USCS SP;

USDA Sand). Detailed descriptions of the soil conditions encountered can be found on the attached auger probe logs.

At the time of drilling the probes, water was encountered at a depth ranging from approximately 5 to 6 feet below the existing ground surface. Subsequent groundwater readings were taken after 7 days, with groundwater recorded at depths of 4.7 to 6.2 feet below the existing site surface, corresponding to elevations ranging from 7.5 to 8.4 feet above MSL.

**ANALYSIS / DISCUSSION**

Based on our findings, the seasonal high groundwater (SHG) is estimated to be approximately 2.7 to 4.5 feet below the existing site surface, corresponding to approximately elevation 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Our estimate of the SHG at the auger probe locations are based on the field measurements of the depth to groundwater, soil coloring and mottling, and should be considered approximate. The results of the groundwater readings and Hardin-Kight Associates professional opinion of the estimated SHG depth are summarized as follows:

| Auger Probe Number | Existing Surface Elevation (MSL) | Depth To Water Below Surface At Completion (Ft.) | Depth To Water Below Surface After 7 Days (Ft. - MSL) | Estimated Depth Below Surface to SHG (Ft. - MSL) | Estimated Depth Below Surface To Normal Water (Ft. – MSL) |
|---|---|---|---|---|---|
| T-1 | 13.32 | 6.25 | 5.71 – 7.61 | 3.3 – 10.0 | 4.0 – 9.3 |
| T-2 | 12.59 | 5.00 | 4.75 – 7.84 | 3.0 – 9.6 | 3.5 – 9.1 |
| T-3 | 12.76 | 5.50 | 5.26 – 7.50 | 2.7 – 10.0 | 3.5 – 9.3 |
| T-4 | 12.85 | 5.75 | 5.30 – 7.55 | 3.0 – 9.8 | 4.5 – 8.9 |
| T-5 | 14.64 | 5.25 | 6.19 – 8.45 | 4.5 – 10.1 | 5.0 – 9.6 |

Considering that the normal SHG is estimated to be within a few feet of the existing site surface, wet pond construction is feasible. Based on our findings, we do not anticipate that an impervious liner will be required to maintain water within a few feet of the existing surface. Although, seasonal groundwater variations of approximately 2 feet should be anticipated between the traditional wet and dry seasons.

From our analysis, and assuming wet pond construction, the groundwater levels found on this site will likely be above the pond bottom during construction. The contractor should be prepared to control groundwater during pond excavation. Cut subgrades below the groundwater will be susceptible to instability and softening. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

**PRELIMINARY RECOMMENDATIONS**

In consideration of the above data, we have prepared the following preliminary recommendations for your review and consideration. These recommendations are considered preliminary, pending our review of the final grading plans and construction drawings. Once the grading plans and construction drawings are finalized, our office should be contacted for additional review and comment.

1. We recommend that wet pond storage practices be used for stormwater collection on this site.

2. We recommend that the SWM ponds be designed and constructed in accordance with the *Delaware Conservation Practice Pond Code 378*, latest editions, and the *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

3. We recommend that both permanent fill and cut slopes be constructed on a maximum gradient of 3:1 (horizontal to vertical). Flatter slopes are suggested where possible to aid in the establishment of vegetative cover, reduce the potential for erosion, and facilitate maintenance.

4. We recommend that the contractor be prepared to control groundwater during pond basin excavation.

5. We recommend that the SWM pond excavation be monitored by Hardin-Kight Associates, Inc. (HKA) for slope seepage and stability. If slope seepage resulting in slope instability is observed, supplemental stabilization practices (ie; underdrains, drainage blankets, and rip-rap) may be required. HKA will provide recommendations and details during construction, as needed.

6. We recommend that the material proposed for use backfill placed around stormwater inflow and outfall pipes, meet the USC classification of SP, SM SP/SM, SC, CL, CL/ML or CH, be free of deleterious materials, and be approved by Hardin-Kight Associates, Inc. (HKA).

7. We recommend that the pipe trench backfill be placed in uniform 8-inch thick layers and be compacted to a minimum of 95% of the maximum dry density as determined in accordance with the standard moisture density relationship test (ASTM D-698/AASHTO T99).

8. We recommend that each layer of trench backfill, be tested and approved prior to placement of the succeeding layer. We recommend that fill which fails to meet the minimum compaction requirements be compacted and reworked, until satisfactory compaction is obtained.

9. We recommend that the construction of the SWM Ponds be monitored by HKA.

## CONCLUSIONS

Based on our findings, the SHG at the auger probe locations is estimated to be at an elevation of approximately 9.6 to 10.1 feet above MSL. From our experience the groundwater levels can be expected to fluctuate with seasonal changes, precipitation, development activity and other factors, and should be considered approximate.

Groundwater will likely be encountered above the pond bottom during construction. The contractor should be prepared to control groundwater during pond basin excavation. All SWM pond construction should be accomplished in accordance with the *Delaware Conservation Practice Pond Code 378,* latest editions.

## LIMITATIONS

This preliminary report was prepared in accordance with generally accepted practice for geotechnical engineering in this area. It is intended for the use of the client for the specific site, as shown on the Auger Probe Location Plan.

The soil and water conditions discussed herein represent the conditions encountered at the locations of the exploratory auger probes as shown on the Auger Probe Location Plan. Variations in the soils and groundwater between the auger probe locations, and below the depths explored, should be anticipated.

A copy of the auger probe logs and location plan are enclosed for your reference. If you have any questions concerning this report, or if we can be of any further assistance at this time, please feel free to contact us.

Very truly yours,

**HARDIN-KIGHT ASSOCIATES, INC**

Paul M. Till

Justin A. Frizzell, P.E.

JUSTIN AMASA FRIZZELL
LICENSE
No. 16715
DELAWARE
PROFESSIONAL ENGINEER

Cc: Al Ruble – Awruble@aol.com
Ron Sutton - CEA

# APPENDIX E

## FOREST STAND AERIAL IMAGERY

1937 Aerial Photograph.

1954 Aerial Photograph.

1968 Aerial Photograph.

1992 Aerial Photograph.

1997 Aerial Photograph.

2002 Aerial Photograph.

Glen Cove

Sussex County, DE

2012 Aerial Photograph

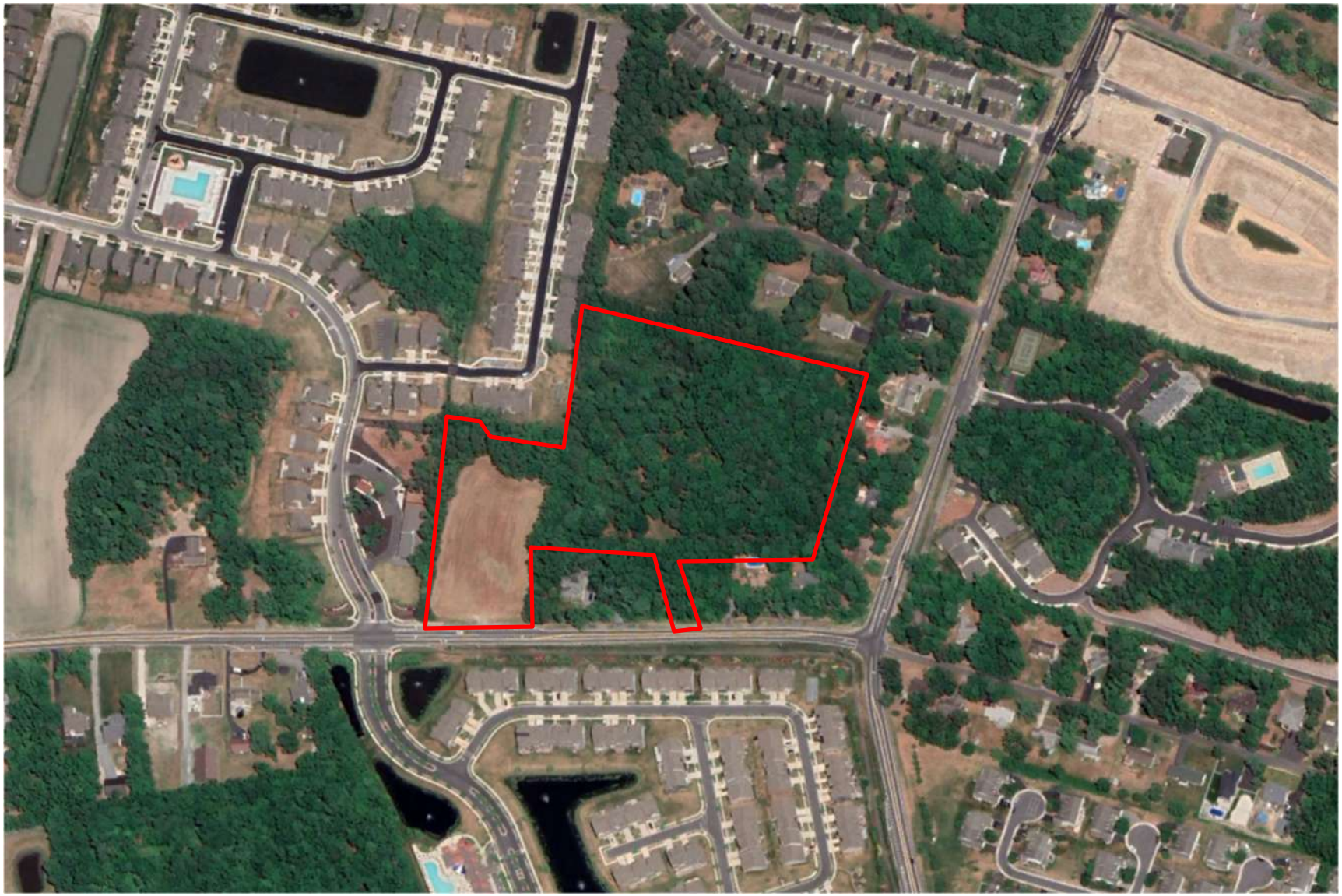
Glen Cove

Sussex County, DE

2017 Aerial Photograph

Glen Cove

Sussex County, DE



2021 Aerial Photograph

Glen Cove

Sussex County, DE

2024 Aerial Photograph

# APPENDIX F

## IPAC LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/09/2025 13:07:16 UTC
Project Code: 2025-0039321
Project Name: Glen Cove

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0039321
Project Name: Glen Cove
Project Type: New Constr - Above Ground
Project Description: Residential Subdivision
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5416035,-75.11978858134606,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

OTHER

- Pf

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Bd

RIVERINE

- R4SBAx

# IPAC USER CONTACT INFORMATION

Agency: Watershed Eco
Name: James McCulley
Address: 100 Biddle Avenue
City: Newark
State: DE
Zip: 19702
Email jim@watershedeco.com
Phone: 3027506595

# APPENDIX G

## WETLAND DELINEATION – COLLINS PROPERTY

# Wetland Delineation – Collins Property, Frankford, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
January 30, 2024
Jim@WatershedEco.com

## Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Collins Property and determined that palustrine forested wetlands were present in the northeastern portion of the property abutting an unnamed tributary to White Creek. These wetlands were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern portion of the property. These wetlands abut an intermittent drainage ditch which drains off-site to the north into White Creek, a tributary to Indian River Bay, a Traditional Navigable Waterway. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to White Creek and Indian River and would be regulated by the U.S. Army Corps of Engineers and Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Army Corps of Engineers Philadelphia District and DNREC should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 36084 Burbage Road in Frankford, Kent County, Delaware. The Subject Property is located at Latitude and Longitude 38.541006 and -75.121094 and is identified as Sussex County Tax Parcel No. 134-12.00-375.00 consisting of approximately 3.54 Acres.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern portion of the property. These wetlands abut an unnamed intermittent drainage ditch which drains northerly off-site to White Creek.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northern portion of the subject property. These wetlands abut a blue-line stream feature along the northeastern and northern property boundary. A small palustrine farmed wetland area is mapped in the agricultural field in the south.

The USGS Mapping (Figure 3) depicts a blue-line stream in the northeastern portion of the subject property. The subject property is relatively flat and gently to the north with elevations above and below the 15-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts ditches along the northeastern and northern portions of the property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands along the western property boundary. A ditch is apparent along the northern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts a dwelling in the southwestern portion of the property. The northern portion of the property has been left fallow with pioneering woody vegetation. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts some of the wooded areas within the property have been cleared and in agricultural use with woodlands in the north and east. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the property primarily in agricultural use. The dwelling in the southwest has been removed and woodlands remain in the north and east Residential structures are apparent on adjacent properties to the south, west, and east.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the south.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2012 imagery. A residential subdivision has been constructed on the adjacent property to the north and west.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with somewhat poorly drained Klej loamy sand (KsA) in the central and south with very poorly drained Mullica-Berryland complex (MuA) in the north.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on January 22, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

## Results

Palustrine forested wetlands were observed in the northeastern portion of the subject property. These wetlands abut an intermittent ditch along the northeastern and northern property boundary which drains off-site to the north to White Creek. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a mowed field with woodlands in the north. Hedgerows form the eastern and western property boundaries.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern portion of the subject property. These wetlands and waters have a direct surface connection to an unnamed tributary to White Creek and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed intermittent ditch along the northeastern and northern property boundary would qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

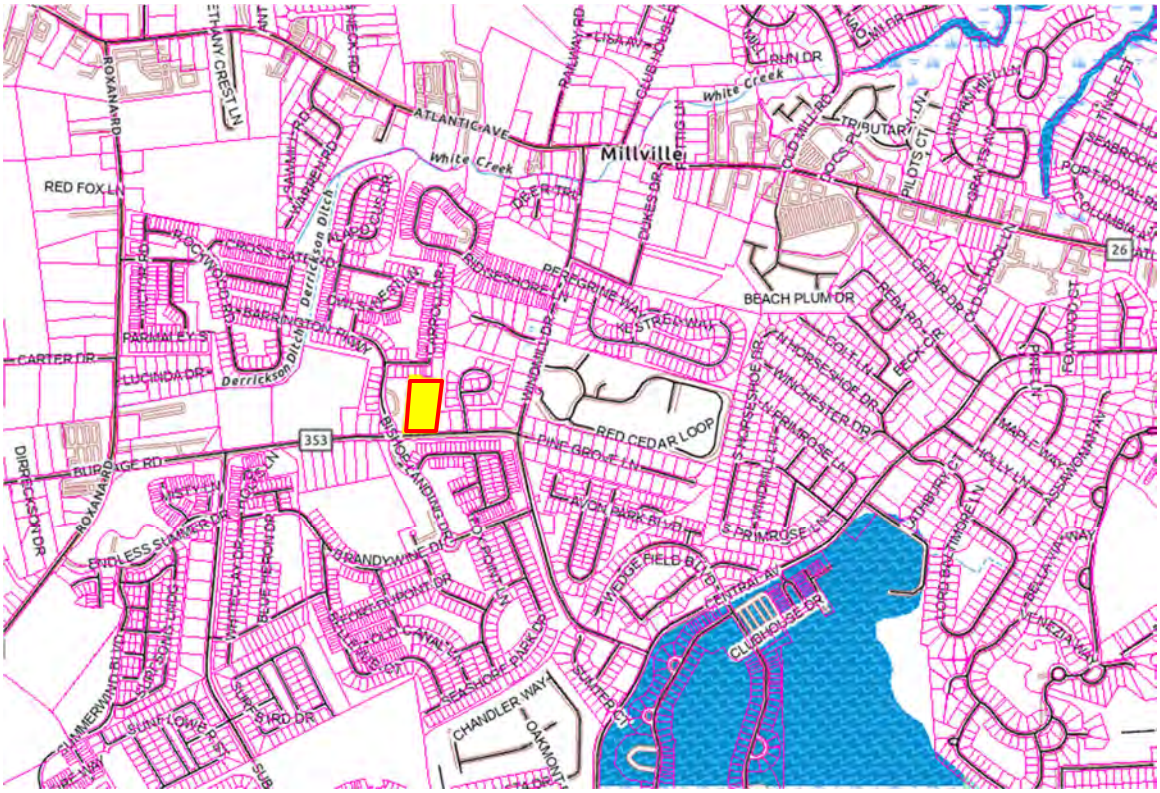



Figure 1: Location Map

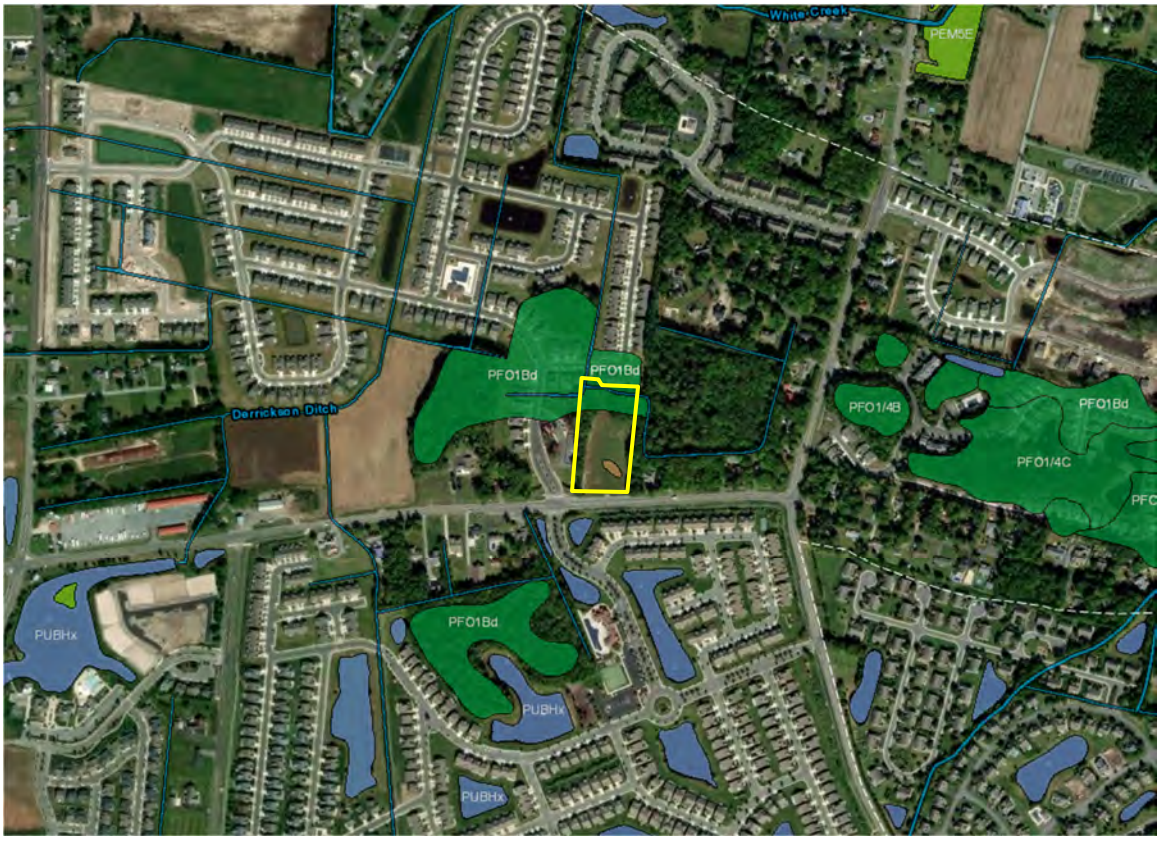



Figure 2: National Wetland Inventory Map.

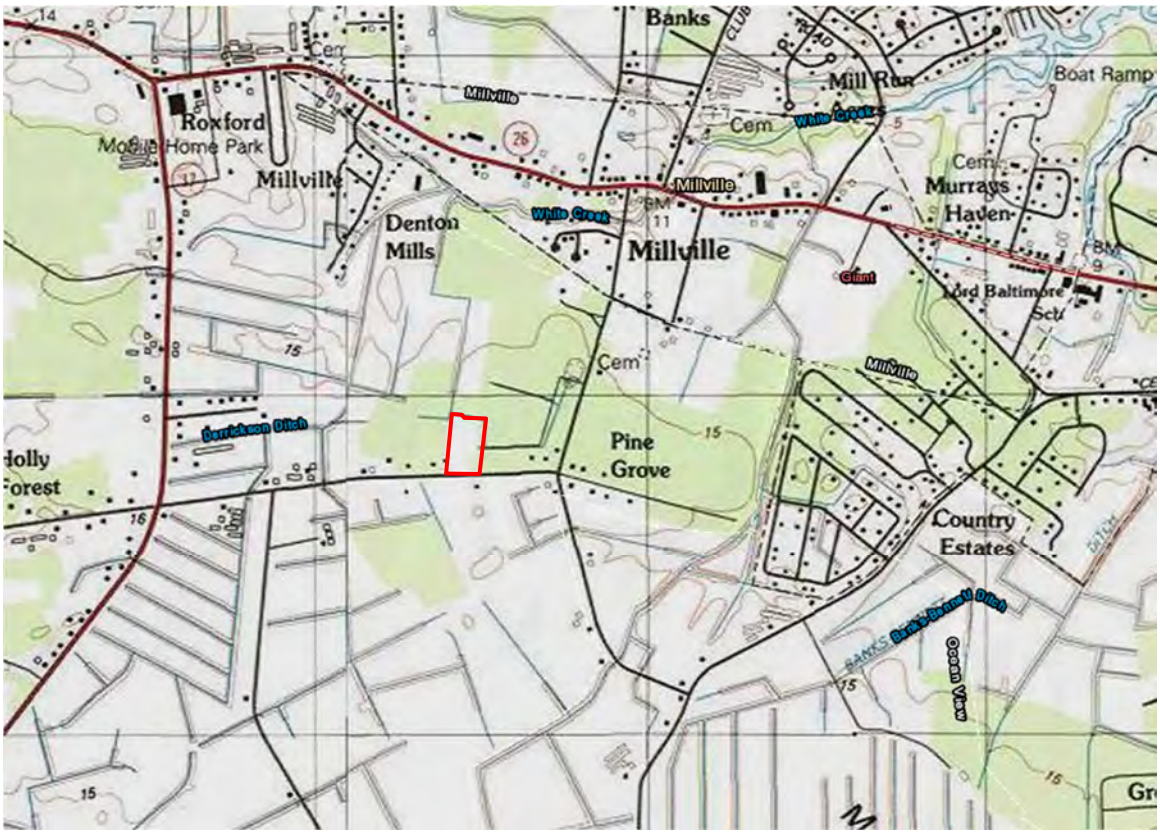



Figure 3: USGS Mapping.

Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

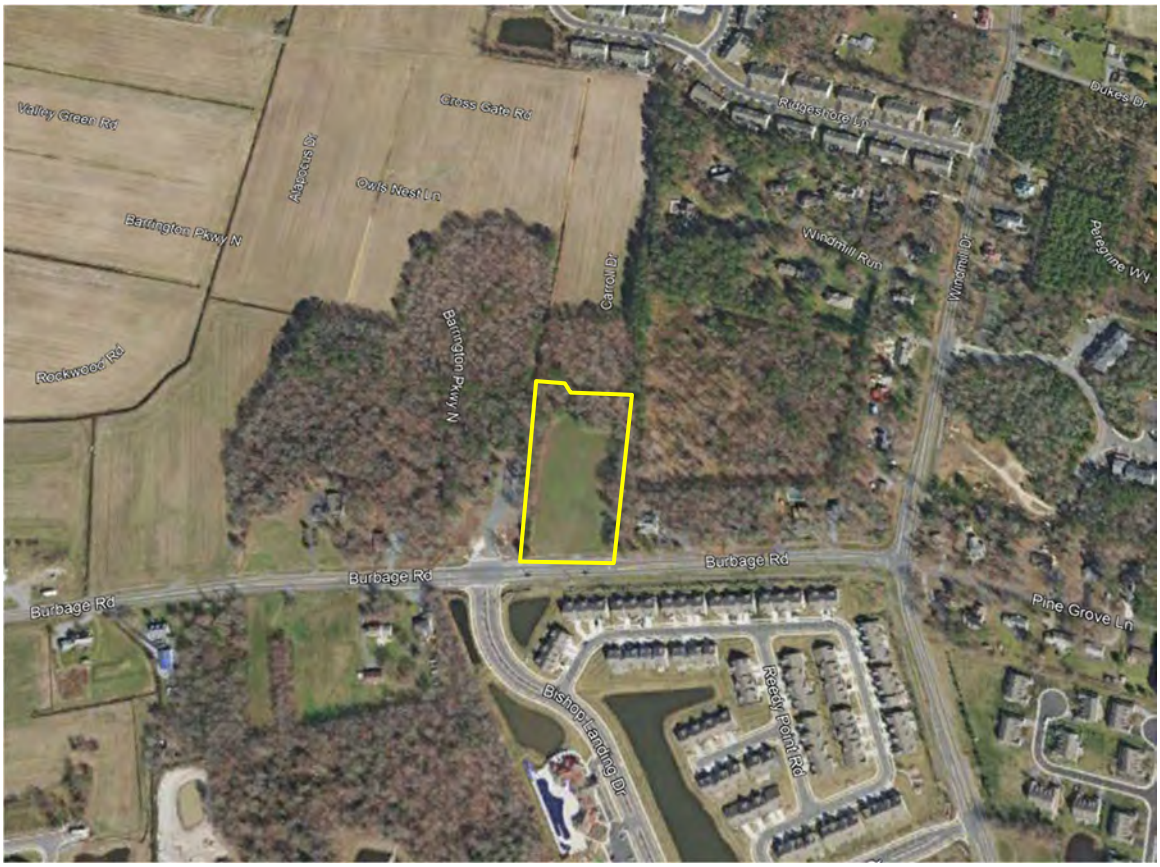



Figure 10: 2017 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

View looking east at southern portion of the property bordering Burbage Road.

View looking west at mowed field area in the southern portion of the property.

View looking north across mowed field in the central portion of the property.

View looking southeast across mowed field from the northwestern portion of the property.

Upland forest area in the northwestern portion of the property.

Forested wetland in the northeastern portion of the property looking west.

Drainage ditch along the eastern boundary of the property.

View looking west at drainage ditch along the northern boundary of the property.

View looking west at intermittent ditch at the northwestern boundary of the property.

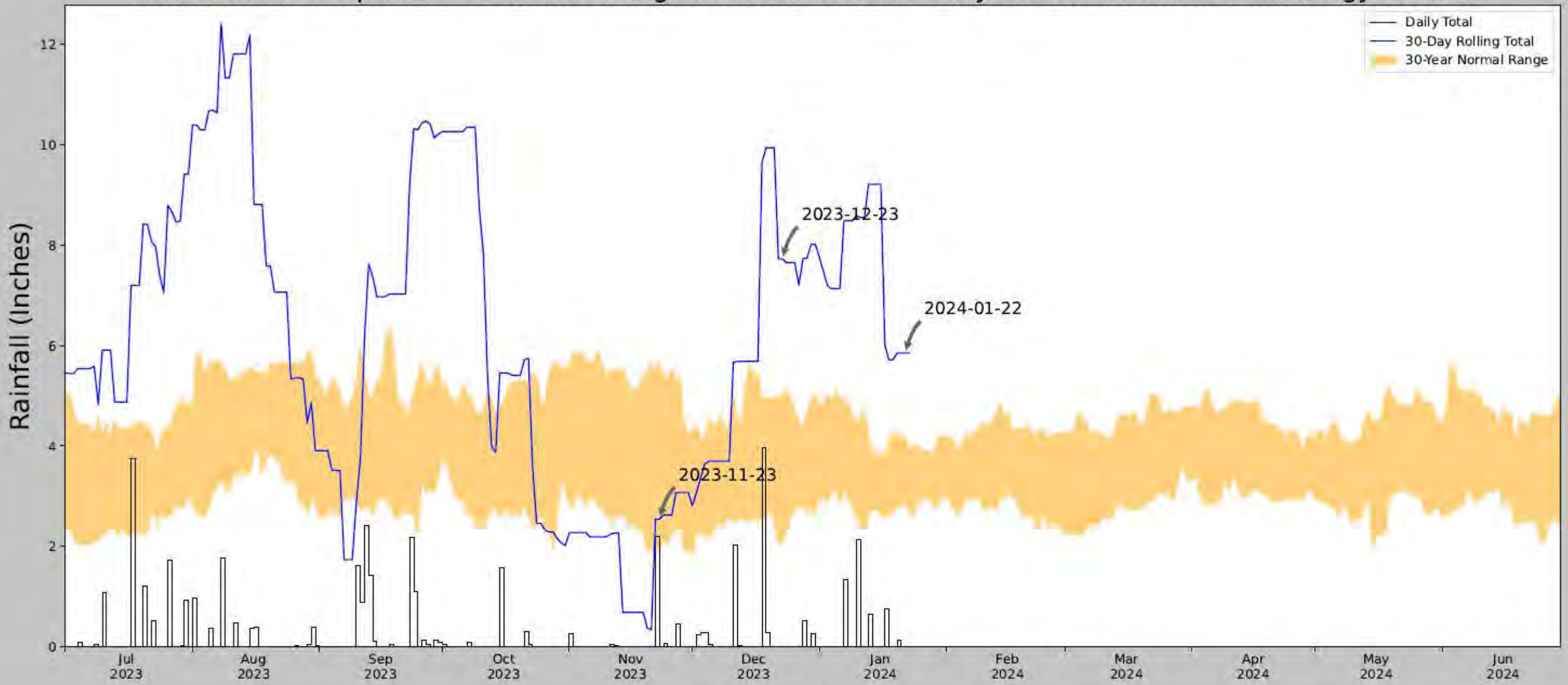
Intermittent ditch draining northerly, off-site.

# Appendices

# Collins Property

Wetland Delineation Map

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.541006, -75.121094 |
| Observation Date | 2024-01-22 |
| Elevation (ft) | 14.453 |
| Drought Index (PDSI) | Not available |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2024-01-22 | 2.875591 | 4.171654 | 5.850394 | Wet | 3 | 3 | 9 |
| 2023-12-23 | 2.076772 | 5.027559 | 7.72441 | Wet | 3 | 2 | 6 |
| 2023-11-23 | 1.959843 | 5.659843 | 2.547244 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Wetter than Normal - 17 |

Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| BISHOPVILLE 3.1 E | 38.4466, -75.134 | 2.953 | 6.56 | 11.5 | 3.027 | 5913 | 90 |
| SELBYVILLE 7.1 E | 38.4612, -75.0893 | 0.984 | 2.621 | 1.969 | 1.185 | 22 | 0 |
| BERLIN 5.9 NNE | 38.3971, -75.161 | 17.06 | 3.719 | 14.107 | 1.726 | 1 | 0 |
| OCEAN CITY MUNI AP | 38.3092, -75.1233 | 5.906 | 9.511 | 2.953 | 4.308 | 2845 | 0 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 19.814 | 26.903 | 9.449 | 2571 | 0 |

# Collins Property

Data Point Location Map

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.540774 Long: -75.121462 Datum: NAD 83

Soil Map Unit Name: Klej loamy sand (KsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 20 | yes | FAC |
| 2. *Juniperus virginiana* | 15 | yes | FACU |
| 3. *Quercus phellos* | 5 | no | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Quercus falcata* | 5 | yes | FACU |
| 2. *Pinus taeda* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Prunus serotina* | 5 | yes | FACU |
| 2. *Ilex opaca* | 5 | yes | FAC |
| 3. *Smilax rotundofolia* | 10 | yes | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Andropogon virginicus* | 5 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 5 = Total Cover | | |
| 50% of total cover: 2.5 | 20% of total cover: 1 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-20 | 10YR 4/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

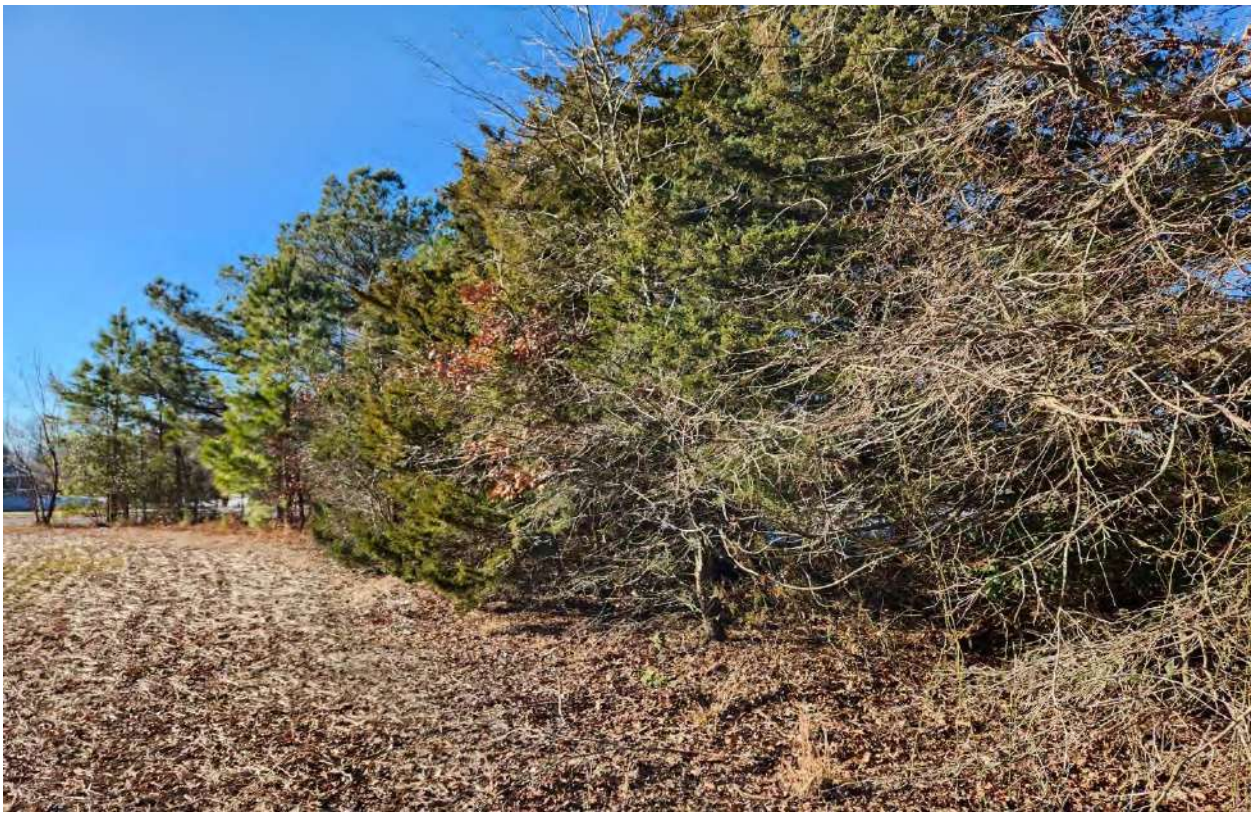
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:



Hedgerow along western property boundary at data point UPL-1.

Soil boring at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541688 Long: -75.121318 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the northwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 35 | yes | FAC |
| 2. *Pinus taeda* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 65 = Total Cover | | |
| 50% of total cover: 32.5 | 20% of total cover: 13 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 5 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 10 | yes | FAC |
| 2. *Clethra alnifolia* | 10 | yes | FACW |
| 3. *Smilax rotundofolia* | 5 | no | FAC |
| 4. *Vaccinium angustifolium* | 5 | no | FACU |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 4/2 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Wooded upland in the northwestern portion of the property at data point UPL-2.

Soil boring at UPL-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Collins Property City/County: Frankford, Sussex Sampling Date: 1/22/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541653 Long: -75.120482 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the norheastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1 |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): -2 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area drains gently to intermittent drainage ditch to the north.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liquidambar styraciflua* | 40 | yes | FAC |
| 2. *Acer rubrum* | 30 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Acer rubrum* | 10 | yes | FAC |
| 2. *Liquidambar styraciflua* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Smilax rotundofolia* | 10 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Panicum virgatum* | 20 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | sandy loam | saturated |
| 4-8 | 10YR 5/1 | 100 | | | | | sandy loam | saturated |
| 8-20 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | sandy loam | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

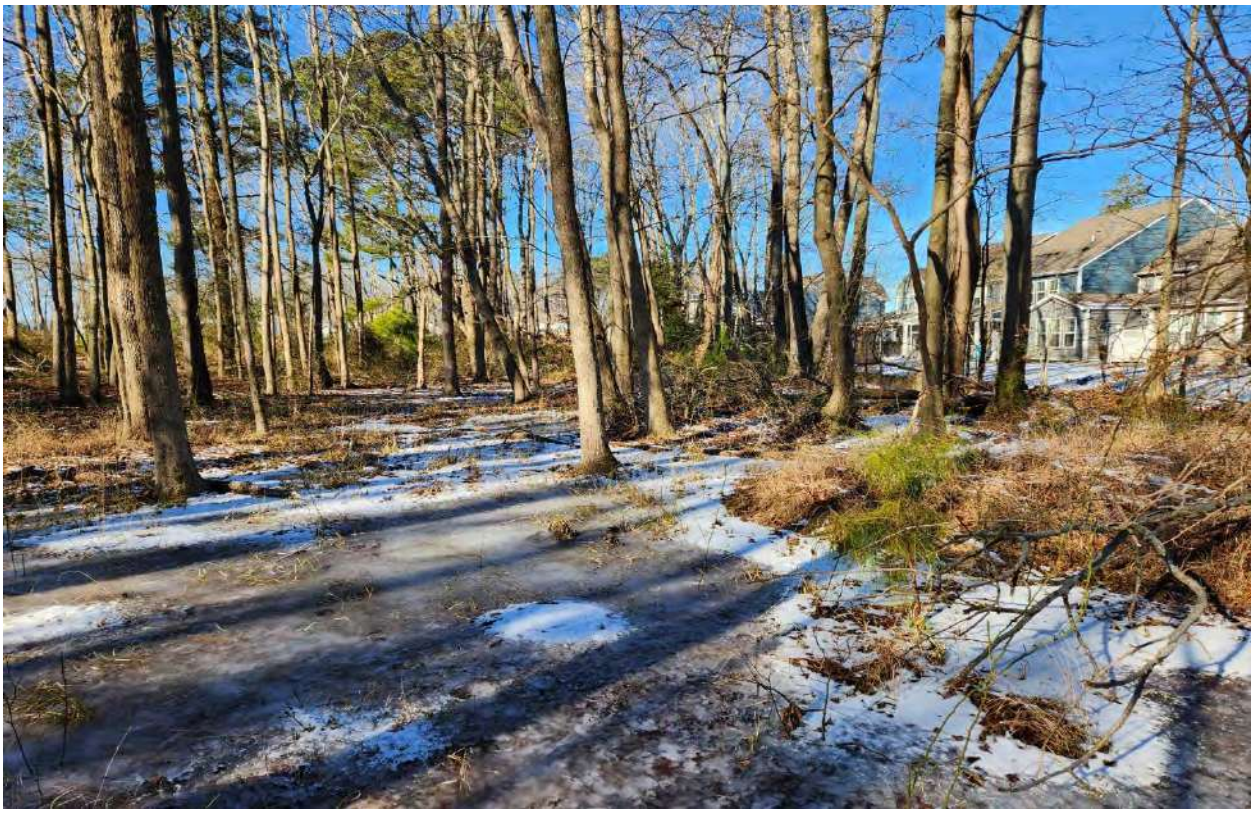
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at data point WET-1.

Hydric soils at WET-1.

United States Department of Agriculture

NRCS

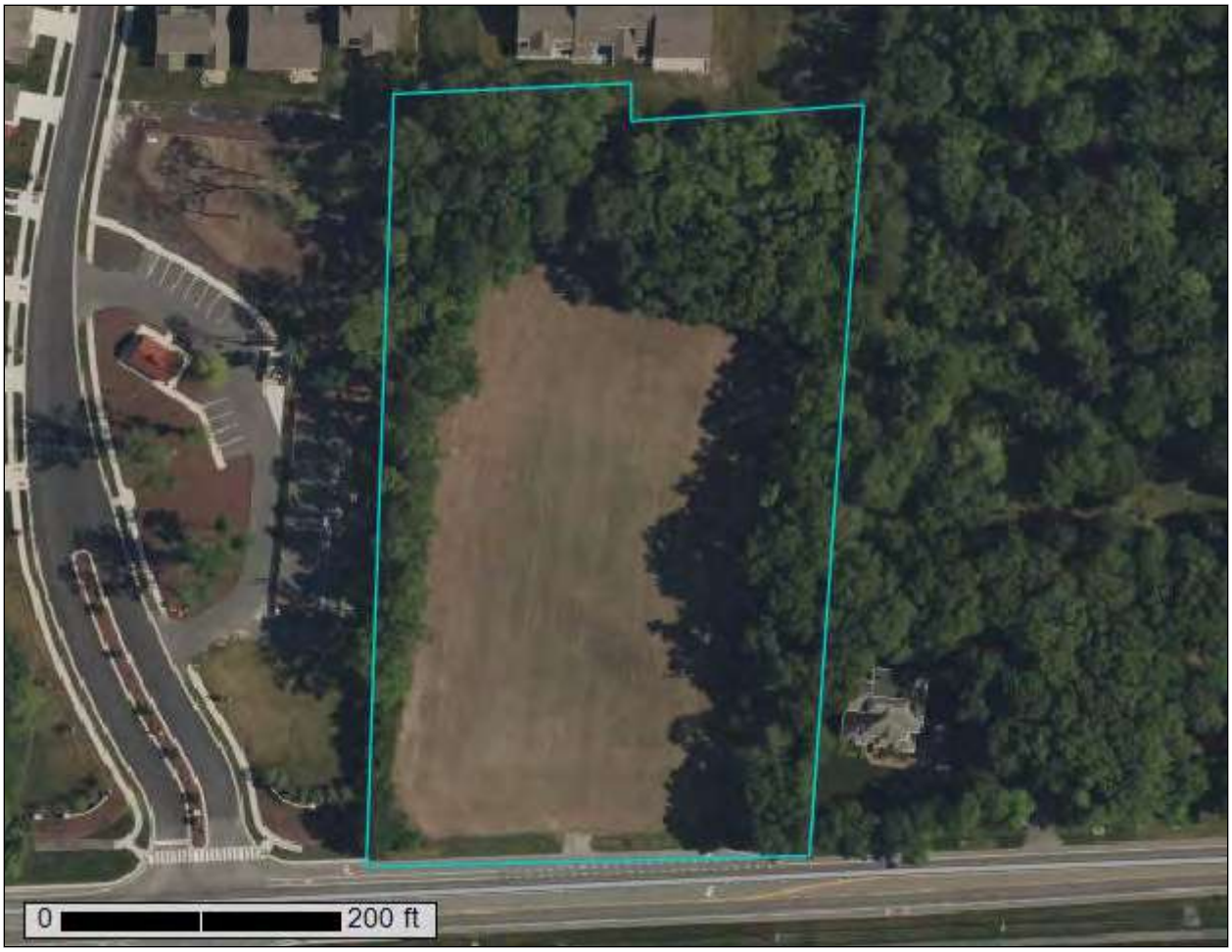
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Collins Property




November 17, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 24, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 3.0 | 75.3% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 1.0 | 24.7% |
| **Totals for Area of Interest** | | **4.0** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, dunes, fluviomarine terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Ecological site:* F153DY170NJ - Sandy, Excessively Drained Upland
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F149AY130NJ - Moist Loamy Upland
*Hydric soil rating:* No

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

**Map Unit Composition**

*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Mullica, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

**Typical profile**

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Description of Berryland, Drained**

**Setting**

*Landform:* Swales, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

### Setting

*Landform:* Swales, drainageways, depressions, flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Ecological site:* F153DY120NJ - Sandy, Spodic Coastal Plain Swamp
*Hydric soil rating:* Yes

## Minor Components

### Klej

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

### Askecksy, drained

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY130MD - Sandy Coastal Plain Swamp
*Hydric soil rating:* Yes

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions

*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153DY150NJ - Moist Sandy Upland
*Hydric soil rating:* No

# References

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# APPENDIX H

## WETLAND INVESTIGATION SUMMARY LETTER

*www.WatershedEco.com*
*Creating Value*

September 23, 2021

Gulfstream Glen Cove, LLC.
27 Atlantic Avenue
Ocean View, DE 19970

Attention: Mr. Robert Harris

Subject: Wetland Investigation Summary Letter
Glen Cove
36199 Burbage Road, Ocean View, DE 19970
Tax Parcel: 134-12.00-374.01

Dear Bob:

Watershed Eco, LLC. investigated the above referenced property on September 20, 2021 for the purpose of conducting a wetland delineation within the 3.88 acres subject property. The wetland delineation followed the criteria in the 1987 Corps Delineation Manual (Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Additionally, I have reviewed the National Wetland Inventory Map, National Hydrographic Dataset, U.S. Geological Survey mapping, and USDA Soil Survey mapping.

The field investigation and review of mapping confirmed that the site is entirely wooded with a man-made ditch excavated around the perimeter of the property as depicted on the National Hydrography Dataset, NWI and USGS maps (Figures 2-4). This ditch network drains westerly off-site then north to White Creek, a tributary of Indian River Bay. No wetland features were observed within the boundaries of the subject property.

*302-464-0831*
*Jim@WatershedEco.com*

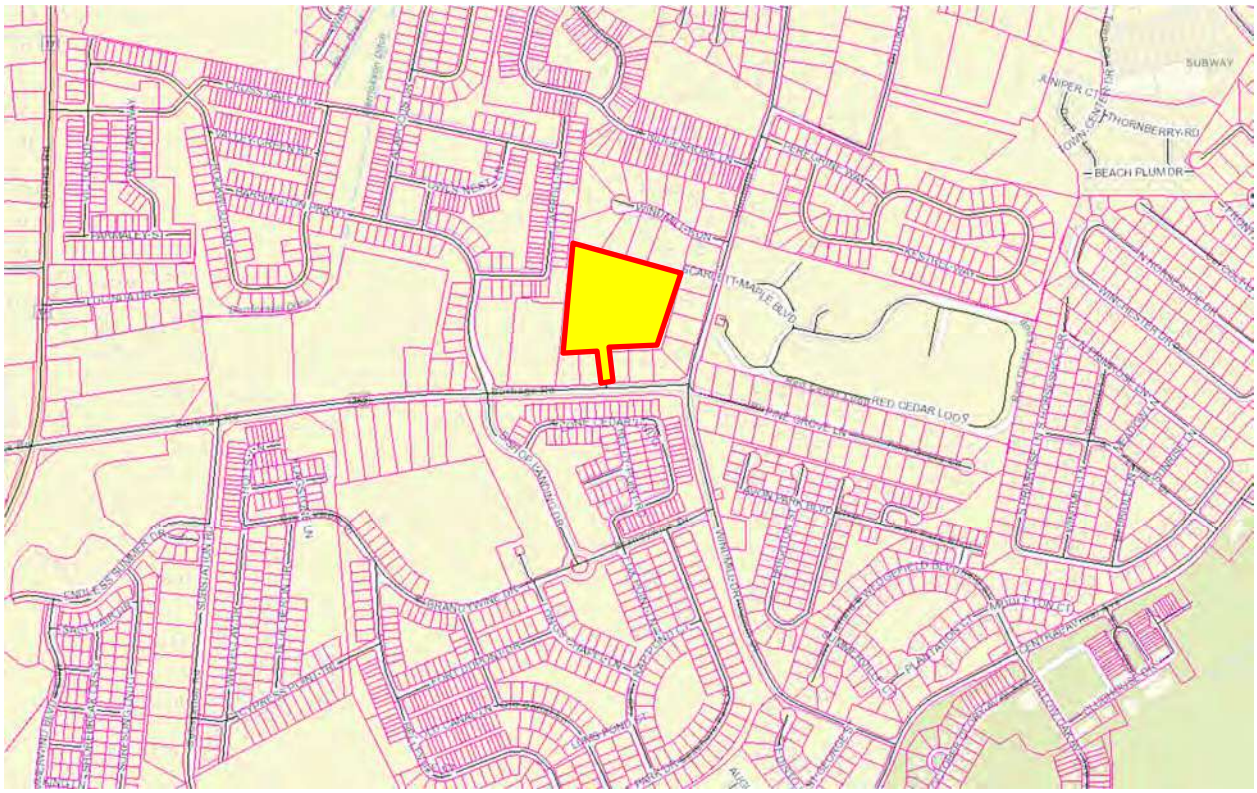



**Figure 1: Location Map.**

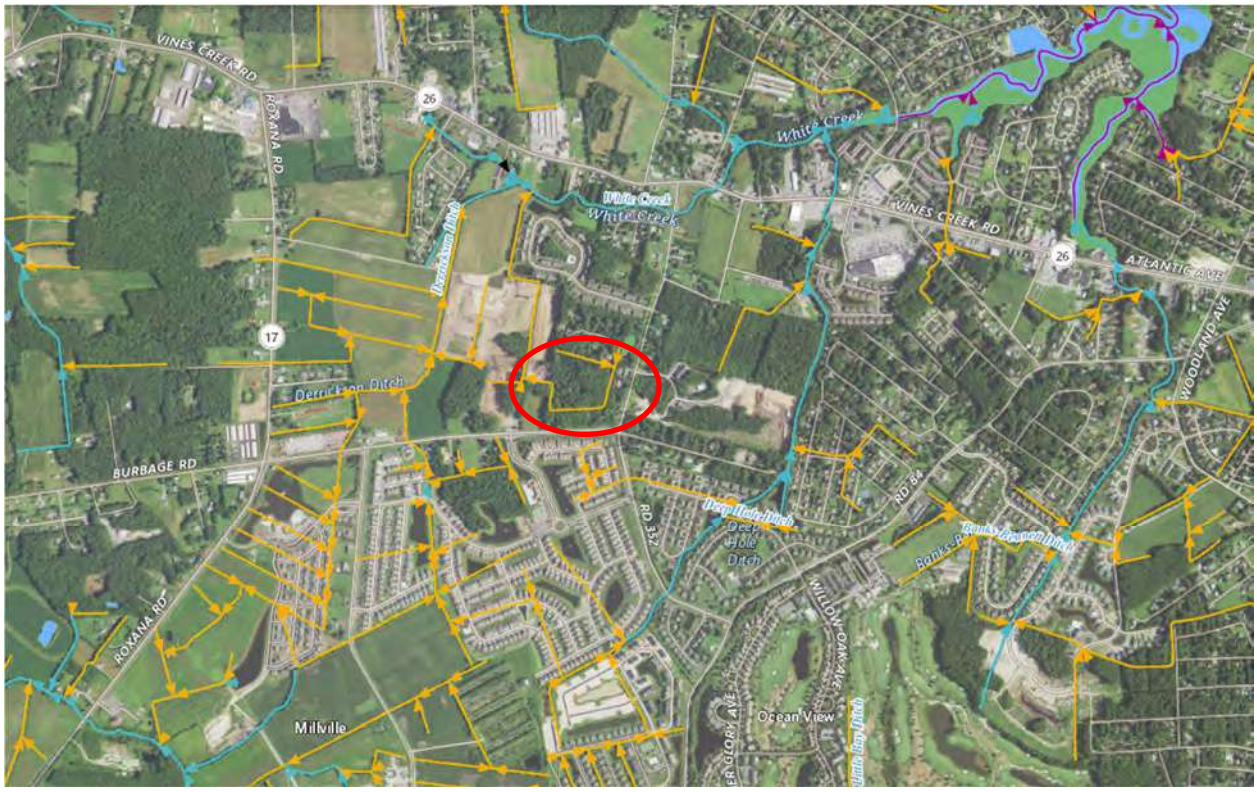



**Figure 2: National Hydrography Dataset Map.**

The National Wetland Inventory Map depicts a blue-line drainage feature along the northern, eastern, southern and southwestern property boundaries. This ditch extends off-site to the west, then drains north to White Creek.

Figure 3: NWI Map

The USGS topo map depicts a similar ditch network to the NWI and NHD map.

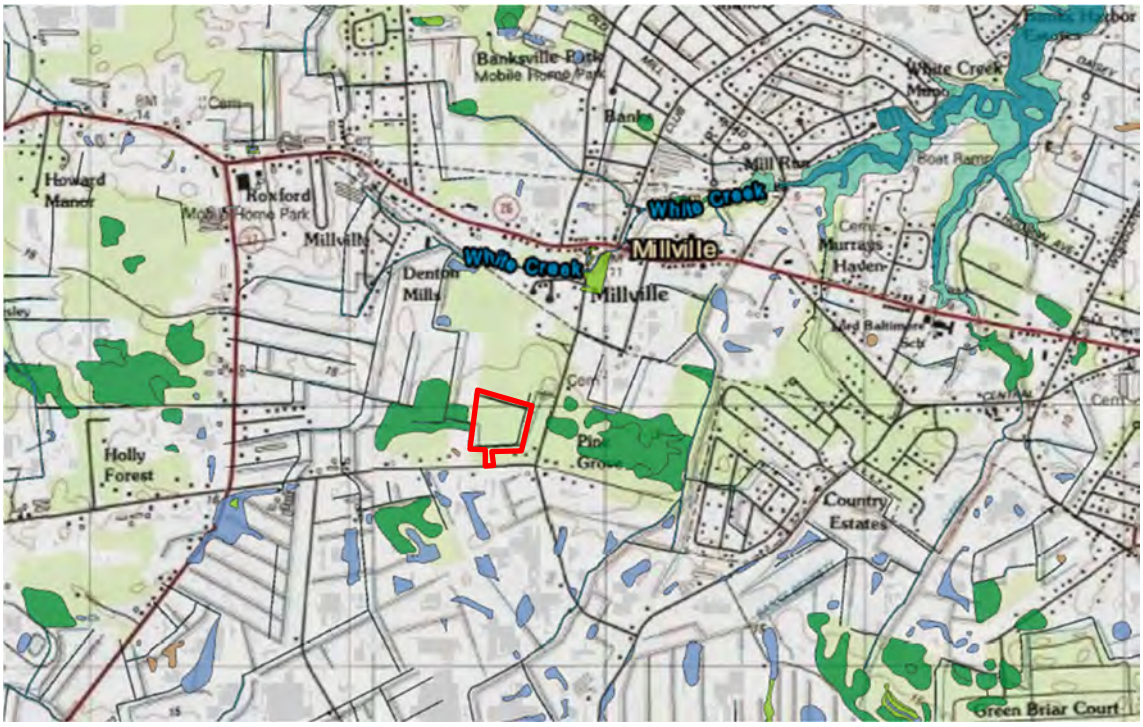



Figure 4: Topo Map

The current USDA Soil Survey Mapping (Figure 5) depicts the majority of the site is underlain with well-drained Rosedale loamy sand (RoA). Areas of very poorly-drained Mullica-Berryland complex (MuA) are identified in the northwestern and southern portions of the property and a small area of Klej loamy sand in the southwest.

**Figure 5: Soil Map**

Figure 6: Aerial Photograph

The subject property was dominated by a mixture of upland and facultative tree species consisting of northern red oak, southern red oak, white oak, and lobolly pine. Understory species observed included sweetgum, red maple, sassafras, and American holly. Common shrub-herbaceous species included sweet pepperbush, American holly, highbush blueberry, lowbush blueberry, and Virginia Creeper.

No visible indicators of standing water or saturated soil conditions were observed within the majority of the subject property. Standing water was limited to the man-made ditch in the south-central portion of the property.

The man-made drainage ditches observed within the property were constructed in uplands and no available mapping indicates these features were ever associated with a tributary stream. In addition, these ditches appear to be ephemeral in nature. No base flow of water was observed within any of the ditches at the time of the site investigation. Standing water was observed within the ditch in the south-central portion of the property. According to the U.S. Army Corps of Engineers Antecedent Precipitation Tool data, normal hydrological conditions were present at the time of the site investigation. Based on observations during the field investigation it

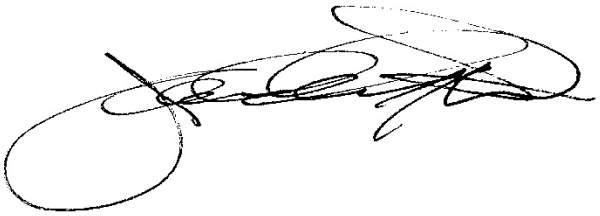
appears that the drainage ditches have silted in over time and no longer provide positive drainage off-site.

In conclusion and based on all of the evidence above and attached, Watershed Eco, LLC. has determined the no areas meeting the three wetland criteria were located within the subject property boundaries. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule which stated that ephemeral and man-made drainage features were not federally jurisdictional. At the present time there is no clear guidance from the Corps on ephemeral drainage features and the Corps is currently not issuing approved jurisdictional determinations. The U.S. Army Corps of Engineers Dover Field Office should be consulted prior to any impacts to the man-made ditches to avoid potential violations.

It is the professional opinion of Watershed Eco, LLC. that the man-made drainage ditches around the perimeter of the property are ephemeral in nature and would not be regulated by Delaware Department of Natural Resources and Environmental Control as Subaqueous Lands.

If you have any questions or concerns, please feel free to give me a call.

Sincerely,



James C. McCulley IV, PWS (#000471)
Environmental Scientist

## Site Photographs:

**Photo 1: Typical upland forest cover in the west-central portion of the property.**

**Photo 2: Access road from Burbage road, looking north.**

**Photo 3: Man-made drainage ditch along southern property boundary, facing east.**

**Photo 4: Man-made drainage ditch along southern property boundary, facing west.**

**Photo 5: Man-made drainage ditch along the southwestern property boundary, facing north.**

**Photo 6: Man-made drainage ditch along the northwestern property boundary, facing north.**

**Photo 7: Man-made drainage ditch along the northern portion of the property, facing east.**

**Photo 8: Young forest cover in the northwestern portion of the property.**

**Photo 9: Man-made drainage ditch along the eastern property boundary, facing north.**

**Photo 10: Upland forest cover in the northeastern portion of the property.**

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-NWI

August 19, 2021

**Wetlands**

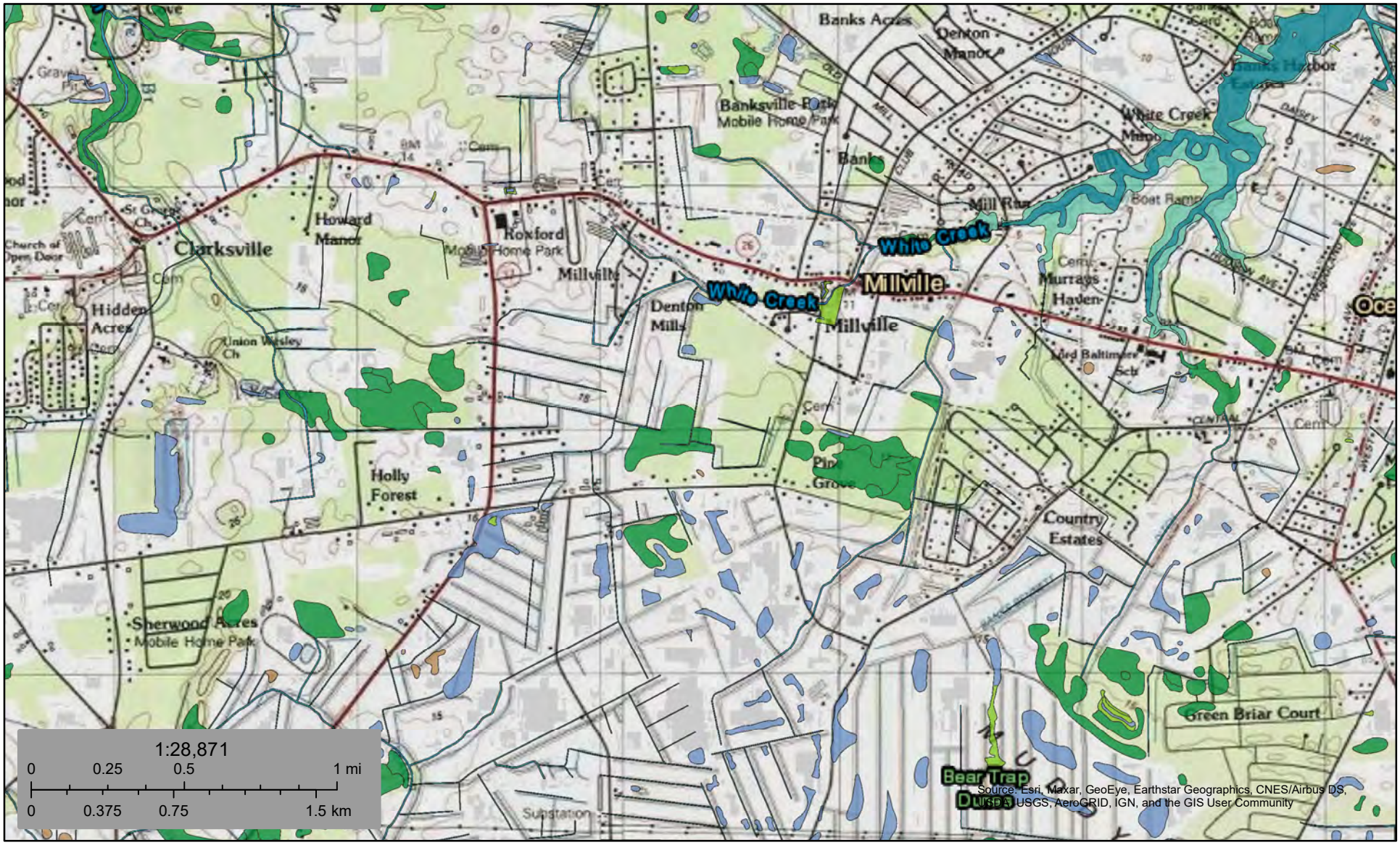
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Glen Cove 2-USGS




August 19, 2021

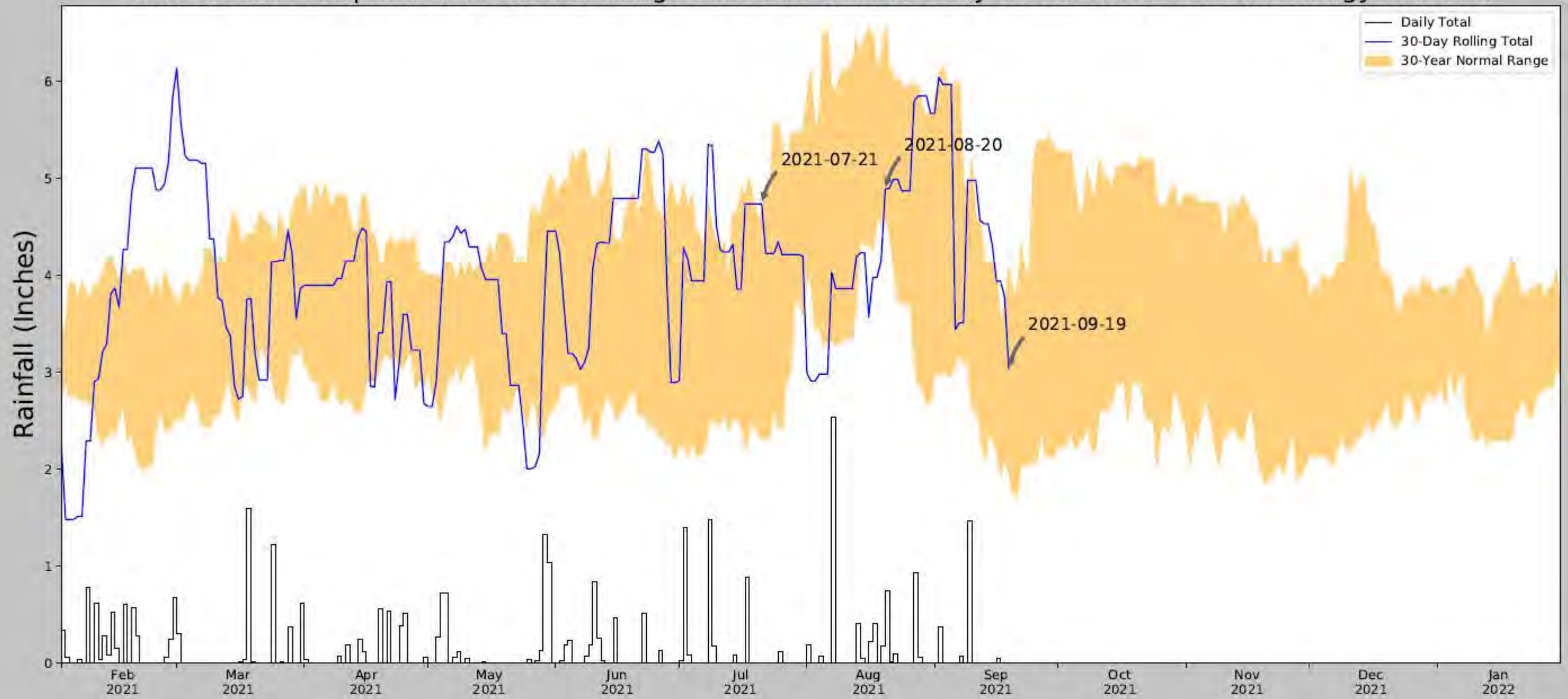
**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.166922, -75.351506 |
| Observation Date | 2021-09-19 |
| Elevation (ft) | 21.42 |
| Drought Index (PDSI) | Mild wetness (2021-08) |
| WebWIMP $H_2O$ Balance | Dry Season |

| 30 Days Ending | $30^{th}$ %ile (in) | $70^{th}$ %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2021-09-19 | 1.959843 | 4.075591 | 3.031496 | Normal | 2 | 3 | 6 |
| 2021-08-20 | 4.583071 | 6.590945 | 4.889764 | Normal | 2 | 2 | 4 |
| 2021-07-21 | 2.323622 | 4.638189 | 4.740158 | Wet | 3 | 1 | 3 |
| Result | | | | | | | Normal Conditions - 13 |

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days (Normal) | Days (Antecedent) |
|---|---|---|---|---|---|---|---|
| SALISBURY WICOMICO RGNL AP | 38.3406, -75.5103 | 47.9 | 14.773 | 26.48 | 7.039 | 11350 | 83 |
| SNOW HILL 0.4 S | 38.167, -75.3921 | 20.997 | 2.205 | 0.423 | 0.993 | 0 | 7 |
| SNOW HILL 4 N | 38.2317, -75.3761 | 29.856 | 4.671 | 8.436 | 2.141 | 3 | 0 |

# Glen Cove

Datapoint Location Map

©2021 Google

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.542413 Long: -75.119833 Datum: NAD 83

Soil Map Unit Name: Mullica-Berryland complex (MuA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Young forested upland in the northwestern portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | yes | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Pinus taeda* | 20 | yes | FAC |
| 2. *Liquidambar styraciflua* | 80 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Phytolacca americana* | 5 | yes | FACU |
| 2. *Parthenocissus quinquefolia* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 4-12 | 10YR 5/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 3/2 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Young forest at Datapoint UPL-1.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glen Cove City/County: Ocean View, Sussex County Sampling Date: 9/20/2021

Applicant/Owner: Gulfstream Glen Cove, LLC. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.541774 Long: -75.119214 Datum: NAD 83

Soil Map Unit Name: Rosedale loamy sand (RoA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the central portion of the property.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology. Ditch surrounds the perimeter of the property to improve drainage of the site.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus rubra* | 30 | yes | FACU |
| 2. *Quercus falcata* | 20 | yes | FACU |
| 3. *Quercus alba* | 20 | yes | FACU |
| 4. *Sassafras albidum* | 20 | yes | FACU |
| 5. *Acer rubrum* | 10 | no | FAC |
| 6. | | | |
| | 100 = Total Cover | | |
| 50% of total cover: 50 | 20% of total cover: 20 | | |
| **Sapling Stratum (Plot size: 30 ft)** | | | |
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 5 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |
| **Shrub Stratum (Plot size: 30 ft)** | | | |
| 1. *Clethra alnifolia* | 10 | yes | FACW |
| 2. *Vaccinium corymbosum* | 5 | no | FACW |
| 3. *Vaccinium angustifolia* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 15 | 20% of total cover: 6 | | |
| **Herb Stratum (Plot size: 30 ft)** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |
| **Woody Vine Stratum (Plot size: 30 ft)** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 5-12 | 10YR 4/4 | 100 | | | | | sandy loam | |
| 13-20 | 10YR 4/6 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at UPL-2 in the central portion of the property.

Non-hydric soils at UPL-2.

United States Department of Agriculture

NRCS

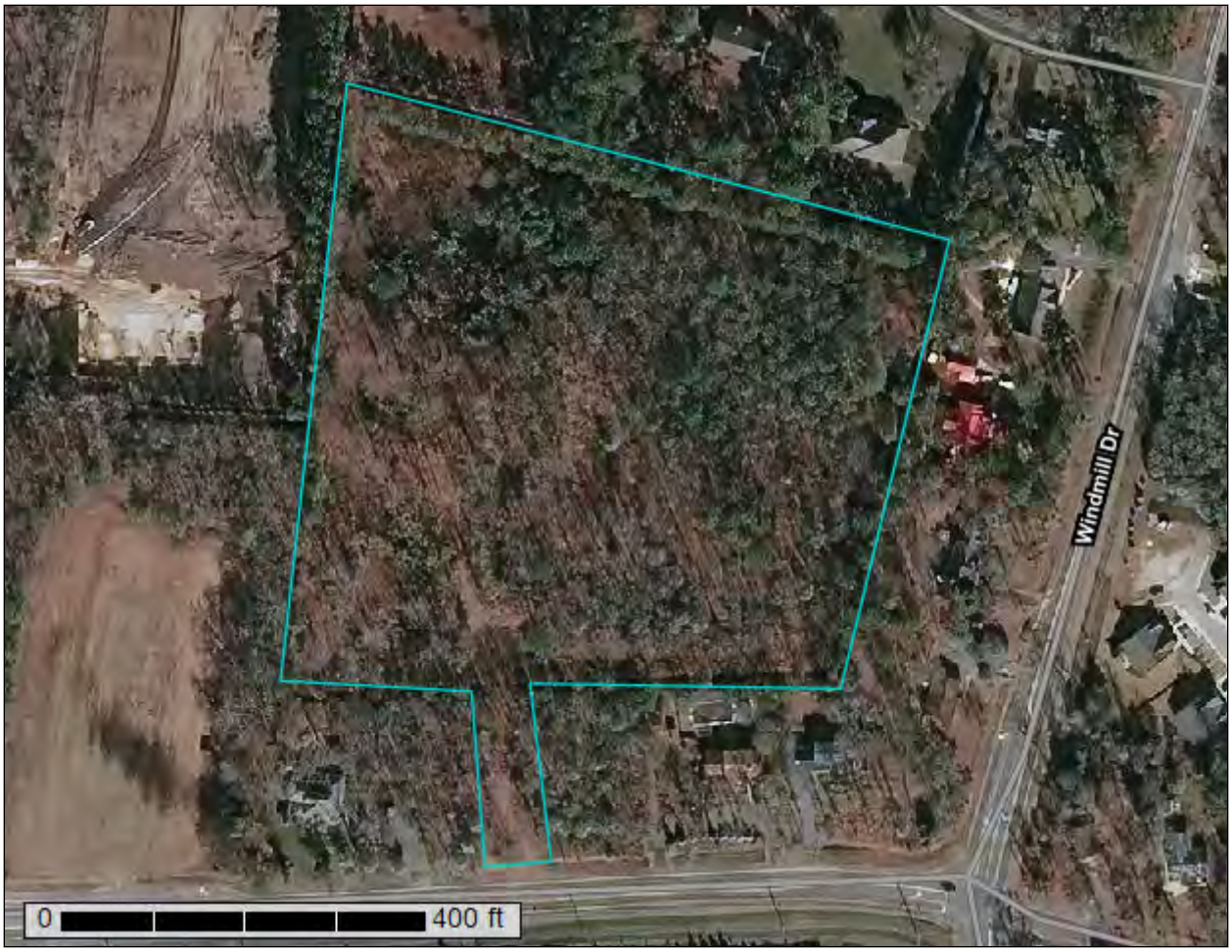
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Glen Cove 2




August 19, 2021

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Mar 12, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| KsA | Klej loamy sand, 0 to 2 percent slopes | 0.2 | 1.9% |
| MuA | Mullica-Berryland complex, 0 to 2 percent slopes | 2.5 | 28.0% |
| RoA | Rosedale loamy sand, 0 to 2 percent slopes | 6.3 | 70.1% |
| **Totals for Area of Interest** | | **8.9** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## KsA—Klej loamy sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qthw
*Elevation:* 0 to 200 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Klej and similar soils:* 70 percent
*Minor components:* 30 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Klej

#### Setting

*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*A - 0 to 7 inches:* loamy sand
*E - 7 to 14 inches:* loamy sand
*Bw - 14 to 20 inches:* loamy sand
*C - 20 to 62 inches:* loamy sand
*Cg - 62 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.57 to 19.98 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* No

### Minor Components

#### Galloway

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hammonton**
*Percent of map unit:* 5 percent
*Landform:* Flats, depressions, drainageways
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Runclint**
*Percent of map unit:* 5 percent
*Landform:* Knolls, flats, fluviomarine terraces, dunes
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Hydric soil rating:* No

**Berryland, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* Yes

**Hurlock, drained**
*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

## MuA—Mullica-Berryland complex, 0 to 2 percent slopes

### Map Unit Setting
*National map unit symbol:* 1qtjb
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if drained

### Map Unit Composition
*Mullica, drained, and similar soils:* 26 percent
*Berryland, drained, and similar soils:* 24 percent
*Mullica, undrained, and similar soils:* 16 percent
*Berryland, undrained, and similar soils:* 14 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mullica, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear

#### Typical profile

*Ap - 0 to 10 inches:* mucky sandy loam
*A - 10 to 14 inches:* mucky sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

### Description of Berryland, Drained

#### Setting

*Landform:* Flats, depressions, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

#### Typical profile

*Ap - 0 to 10 inches:* mucky loamy sand
*A - 10 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare

*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Mullica, Undrained

**Setting**

*Landform:* Drainageways, swales, flats, depressions
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy fluviomarine sediments

**Typical profile**

*Oe - 0 to 3 inches:* moderately decomposed plant material
*A - 3 to 10 inches:* mucky sandy loam
*Eg - 10 to 14 inches:* sandy loam
*Bg - 14 to 24 inches:* sandy loam
*Cg - 24 to 65 inches:* sand
*2Ab - 65 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Berryland, Undrained

**Setting**

*Landform:* Flats, depressions, drainageways, swales
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits and/or fluviomarine sediments

**Typical profile**

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A1 - 2 to 14 inches:* mucky loamy sand
*A2 - 14 to 17 inches:* loamy sand
*Bh - 17 to 24 inches:* loamy sand
*C - 24 to 70 inches:* sand
*2Ab - 70 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

**Minor Components**

**Klej**

*Percent of map unit:* 10 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Askecksy, drained**

*Percent of map unit:* 5 percent
*Landform:* Swales, flats, depressions
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Hydric soil rating:* Yes

## RoA—Rosedale loamy sand, 0 to 2 percent slopes

**Map Unit Setting**

*National map unit symbol:* 1qtjx
*Elevation:* 0 to 120 feet

*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rosedale**

**Setting**

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

**Typical profile**

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2s
*Land capability classification (nonirrigated):* 2s
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

**Minor Components**

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Fluviomarine terraces, flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

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# GLEN COVE
## SUSSEX COUNTY
## DESIGN CONSIDERATIONS
## (SECTION 99-9.C)

### INTEGRATION OF THE PROPOSED SUBDIVISION INTO EXISTING TERRAIN AND SURROUNDING LANDSCAPE

The proposed project consists of 49 single family condominiums surrounded by existing landscaping/woods that will be maintained. Furthermore, landscape buffers will be provided to supplement the surrounding woods.

### MINIMAL USE OF WETLANDS AND FLOODPLAINS

There is a small portion of wetlands on the project property, no impact to the wetlands is anticipated.

### PRESERVATION OF NATURAL AND HISTORICAL FEATURES

There are no existing natural or historical features on site.

### PRESERVATION OF OPEN SPACE AND SCENIC VIEWS

The project is surrounded by existing developments and residential areas, there are no existing scenic views from the property. Proposed open space will exceed the 30% requirement.

### MINIMIZATION OF TREE, VEGETATION AND SOIL REMOVAL AND GRADE CHANGES

During construction activities, care will be taken to preserve as many of the large trees surrounding the property as well as any vegetation not impinging on the development. Proposed grades will closely match existing to tie-in to the surrounding developed areas.

### SCREENING OF OBJECTIONABLE FEATURES FROM NEIGHBORING PROPERTIES AND ROADWAYS

As stated above, the property is surrounded by existing woods which will be maintained and supplemented with additional landscaping.

### PROVISION FOR WATER SUPPLY

Water will be provided by Tidewater Utilities.

## PROVISION FOR SEWAGE DISPOSAL

Water will be provided by Sussex County.

## PREVENTION OF POLLUTION OF SURFACE AND GROUNDWATER

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## MINIMIZATION OF EROSION AND SEDIMENTATION, MINIMIZATION OF CHANGES IN GROUNDWATER LEVELS, MINIMIZATION OF INCREASED RATES OF RUNOFF, MINIMIZATION OF POTENTIAL FOR FLOODING AND DESIGN OF DRAINAGE SO THAT GROUNDWATER RECHARGE IS MAXIMIZED

Surface and groundwater pollution will be prevented with the onsite stormwater management system. All surface runoff will be conveyed into the centrally located stormwater management pond. Discharge from the stormwater pond will be into the surrounding existing tax ditch system. All stormwater design will be reviewed and approved by Sussex Conservation District.

## PROVISION FOR SAFE VEHICULAR AND PEDESTRIAN MOVEMENT WITHIN THE SITE AND ADJACENT WAYS

The proposed layout of the road consists of twelve (12) foot travel lanes with curbing as well as five (5) foot sidewalks on one side of the road. The site entrance will be located off of Burbage Road within a 50-foot right-of-way through the Windmill Subdivision. A ten (10) foot wide shared use path is also proposed along a portion of the frontage for connection to adjacent ways.

13641 #02482 2125

Tax Parcel 1-34-12.00-4.00
1-34-11.00-176.00
1-34-12.00-1.00
1-34-12.00-375.00
1-34-13.00-68.00
REVERSE TO GRANTEE
Prepared by: David N. Baker, Esq., P.A.
P O Box 551, 109 S. Race St.
Georgetown, Delaware 19947

NO TITLE OR LIEN SEARCH
PERFORMED - NONE REQUESTED

# This Deed, made this 5th day of May

in the year of our Lord Two Thousand.

BETWEEN OMEDA T. COLLINS, TRUSTEE OF THE OMEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, of Rt. 2, Box 23, Clarksville, Delaware 19970, party the first part,

-and-

O. T. COLLINS FAMILY LIMITED PARTNERSHIP, a limited partnership organized and existing under the laws of the State of Delaware, with offices at Rt. 2, Box 23, Clarksville, Delaware 19970, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of One Dollar ($1.00) and other valuable consideration, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, its Successors and Assigns,

Parcel No. 1: 1-34 12.00 4.00

Tract No. 1:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in

Consideration : 0 0.00 Exempt Code: A

| County | State | Total |
|---|---|---|
| 0.00 | 0.00 | 0.00 |
| Grantor | Date: 05/05/2000 | |

Baltimore Hundred, Sussex County, Delaware, lying on the north side of the State Highway leading from Clarksville to Bethany Beach adjoining lands now or formerly of Charles Aydelotte, Manaen Robinson and Roland West, bounded and described as follows, to wit:

BEGINNING at a fence post at the edge of the aforesaid highway; thence running with the same 88-3/4° West 4.12 chains to the center of the outlet road; thence with same North 4-1/4° East 14.50 chains to a post; thence South 85-3/4° East 4.61 chains to a stake in line of a row of cedars; thence with same South 6° West 12 chains to a post; thence South 17-3/4° West 1.64 chains; thence South 7-1/2° West 65 links or 52 feet home to the place of beginning, containing six acres and 97 square perches more or less.

Tract No. 2:

ALL her one-half tenant-in-common interest in that certain tract, piece and parcel of land, situate, lying and being in Baltimore Hundred, Sussex County and State of Delaware and being on the North side of Stone Road leading from Millville to Clarksville, bounded and described as follows, to wit:

BEGINNING at an iron bolt, driven at right of way of said stone road, and corner of lands formerly owned by Edward Hammonds thence running with said lines N. 8-1/2° East 52 feet, N. 17-3/4° E. 108-1/4 feet to a stake in line with row of cedars, thence N. 6° 55' E. 792 feet N. 85° W. 303-3/5 ft. to center of an outlet road thence down said Road N. 5° 10' E. 365 feet to lands now or formerly of Manehn Robinson thence with same down center of Ditch S. 80-3/4° E. 557 feet to land formerly owned by Frank Howard, thence with said Howard line S. 2-3/4° E. 1268 feet to the aforesaid stone road right of way, thence with said right of way 339 feet home to the place of beginning, containing 10-1/2 acres more or less.

Parcel No. 2: 1-34 11.00 176.00

ALL that certain piece, parcel or tract of land lying and being situate in Baltimore Hundred, Sussex County, and State of Delaware, joining lands now or formerly of Smith Murray, Manaen Robinson, Loving Aydelotte and Elmer Murray, bounded and described as follows to wit:

BEGINNING at stone in middle of county road leading from Millville to Clarksville running N. 7 1/2 degrees E. 17.08 chs. to stake; thence S. 85 E. 7.47 chains to cedar stake; thence S. 8 degrees W. 10.14 chs. to stake and lands now or formerly of Elmer Murray; thence with same S.82 degrees E. 3.28 chains to cedar

post and Graveyard lot; thence with said lot S. 5 degrees E. 1.00 ch. to small pine; thence S 88 1/2 W. 1.61 chs. to stake corner of said graveyard; thence S. 4 degrees W. 1.54 chs. to stake; thence S. 84-5/8 degrees E. 1.39 chs. to outlet road; thence with same S. 7-2/5 degrees W. 9.20 chs. to middle of aforesaid county road; thence down same N. 46 1/2 degrees W. 5.03 chs. to stone, home place of beginning, containing ten acres and one hundred and twenty square perches be the same more or less, said outlet road to graveyard is ten feet wide.

WITH THE EXCEPTION of 2.47 acres of land which was conveyed by Herbert Williams and wife to William Clifford Wilson by indenture dated the 18th day of March, 1952, and of record in the aforesaid Office in Deed Record No. 409, Page 347

Parcel No. 3: 1-34 12.00 1.00

ALL that certain triangular lot, piece or parcel of land, situate, lying and being near Clarksville, Baltimore Hundred, Sussex County, Delaware, more particularly bounded and described as follows, to-wit:

BEGINNING at a concrete marker found near the intersection of two ditches; thence, by and with other lands now or formerly of Harold H. Collins and wife, North 11° 00' 55" East, 266.00 feet to a point; thence, by a new line through the lands now or formerly of Calvin C. McComrick and wife, South 35° 12' 33" East, 368.06 feet to a point in the center of a ditch, a corner for this land and other lands now or formerly of Harold H. Collins and wife; thence, by and with the line of the ditch and lands of Harold H. Collins and wife, North 81° 26' West, 266.00 feet, home to the point and place of beginning, containing 35,346.875 square feet of land, more or less. The foregoing description is taken from a survey made by C. Kenneth Carter & Associates, Professional Land Surveyors, dated December 28, 1983, a copy of which survey is of record in the aforesaid Office in Plot Book 27, Page 901.

Parcel No. 4: 1-34 12.00 375.00

ALL that certain lot, piece, parcel or tract of land, lying and being situate in Baltimore Hundred, Sussex County, State of Delaware, bounded as follows: On the North by lands now or formerly of Harry N. Dukes, Jr., on the East by lands now or formerly of Jack Tubbs, on the South by a 30 foot County Road that leads from the Clarksville to Selbyville Road to Millville, on the West by lands now or formerly of the aforementioned Dukes and being more particularly described as follows to wit:

BEGINNING at an oak hub in the Northern right-of-way line of the said County Road, a corner for these lands and lands now or

formerly of Jack Tubbs; thence with the Tubbs line along and with a ditch, North 15° 50' East 506 feet to where a cross ditch intersects the line; thence with the cross ditch, a new division line, 3 courses; North 79° 15' West 213 feet, North 3° 45' East 23 feet, North 81° 45' West 87 feet to where a small ditch intersects the cross ditch, a new corner now established between these lands and lands now or formerly of the aforementioned Dukes; thence with a new division line now established, South 14° 10' West 549 feet to an oak hub in the Northern right-of-way line of the line of the said 30 foot County Road; thence with the Northern right-of-way line, South 84° 15' East 287.9 feet, home to the place of beginning and containing 3.57 acres, be the same more or less.

Parcel No. 5: 1-34 13.00 68.00

ALL that certain piece, parcel or lot of land, lying and being situate in Cedar Neck, Baltimore Hundred, Sussex County, State of Delaware and lying on the westerly side of the slag road leading from Ocean View to Cedar Grove, bounded and described as follows, to-wit:

BEGINNING at a bounder settled on westerly edge of aforesaid slag road right-of-way and corner for land now or formerly of Harry H. Dukes, Jr.; thence with land now or formerly of said Dukes, westerly 345-3/4 feet to a bounder corner for said Dukes, and said described land, thence, with said Dukes land northerly 97-1/3 feet to an iron bolt corner for land now or formerly of Peter Cunningham, thence, with land now or formerly of said Cunningham easterly 345-3/4 feet to an iron bolt driven on westerly side of said slag road right-of-way; thence, with westerly side of said slag road right-of-way southerly 129 feet to Beginning.

BEING a part of the lands conveyed unto Omeda T. Collins, Trustee of the Omeda T. Collins Revocable Trust by deed of Omeda T. Collins dated April 23, 1993 and filed of record in the Office of the Recorder of Deeds, in and for Sussex County, State of Delaware, in Deed Book 1908 at page 335.

#02482 #129

IN WITNESS WHEREOF, the party of the first part has hereunto set her Hand and Seal the day and year first above written.

Witness

Witness

Oneda T. Collins (Seal)
ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 5th day of May, A.D. 2000, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, ONEDA T. COLLINS, TRUSTEE OF THE ONEDA T. COLLINS REVOCABLE TRUST DATED 12/22/92, party to this indenture, known to be personally to be such, and acknowledged this Indenture to be her act and deed.

GIVEN under my Hand and Seal of Office, the day and year aforesaid.

DAVID W. BAKER
ATTORNEY AT LAW
NOTARY PUBLIC STATE OF DELAWARE
MY COMMISSION HAS NO EXPIRATION DATE
29 Del.C § 4323 (a) (3)

Notary Public (SEAL)

Received
MAY 0 8 2000
ASSESSMENT DIVISION
OF SUSSEX CTY

RECORDER OF DEEDS
RICHARD H. BELL, II
00 MAY -5 PM 2:42
SUSSEX COUNTY
DOC. SURCHARGE PAID

5/30/00

**CIVIL ENGINEERING ASSOCIATES**
● ENGINEERS ● SURVEYORS ● CONSTRUCTION SERVICES

55 W. Main Street
Middletown, DE 19709

Web: www.cea-de.com

Phone: 302-376-8833
Fax: 302-376-8834

**Legal Description**
**Glen Cove Subdivision**

All that certain parcel of land being Lots 1 through 16, Open Space, and Winfield Lane (50.00 foot private right-of-way), situate in Baltimore Hundred, according to the Record Plan for Glen Cove Subdivision, recorded in the office of the Recorder of Deeds in and for Sussex County, State of Delaware at Plot Book 219, Page 93, prepared by Civil Engineering Associates LLC, dated June 23, 2015, as follows to wit:

BEGINNING at a point located along the northerly right-of-way line of SHR 353 a.k.a. Burbage Road (at varying widths), a common corner for the herein described parcel and lot # 3 of Windmill Subdivision Phase I, being first mentioned POINT AND PLACE OF BEGINNING, THENCE,

Continuing along said northerly right-of-way line of Burbage Road, and with the southerly side of a 5 feet wide DelDOT permanent easement, South 86 degrees, 15 minutes, 19 seconds West, 61.40 feet to a point of curvature, a common corner for the herein described parcel and lot # 2 of Windmill Phase I, THENCE, along the division line for the herein described parcel and lot # 2, the following two (2) described courses and distances:

1. Crossing said DelDOT easement, along the arc of a circle curving left, described by a radius of 25.00 feet, an arc distance of 20.19 feet to a point of tangency, THENCE,
2. North 08 degrees, 08 minutes, 49 seconds West, 173.37 feet to a point located along the center of a prong of the Derrickson Canal Tax Ditch, THENCE,

Continuing along or near the center of said tax ditch, and with lot # 1 and 2 of Windmill Phase 1, South 87 degrees, 33 minutes, 54 seconds West, crossing over said tax ditch at 205.64 feet, more or less, a total distance of 231.92 feet to an iron pin in line of lands now or formerly of O.T. Collins Family LP, THENCE, with said lands of Collins, in part, and lands now or formerly of Dove Barrington Development, LLC, in part, North 06 degrees, 57 minutes, 37 seconds East, crossing a prong of the Derrickson Canal tax ditch at 303.73 feet, more or less, and continuing along or near the center of said tax ditch, a total distance of 679.87 feet to a point, a common corner for the herein described parcel and lot # 16 of Windmill Subdivision Phase II, THENCE, along the division line for the herein described parcel and lots 16, 15, 14, and 13 of Windmill Phase II, still along or near the centerline of said tax ditch, South 74 degrees, 52 minutes, 04 seconds East, 689.04 feet to a point, a common corner for the herein described parcel and in line of lands of lot # 9 of Windmill Phase I, THENCE, with lots # 9, 8, 7, 6, 5, 4, and 3, and still along or near the center of a prong of the Derrickson Canal tax ditch, the following two (2) described courses and distances:

1. South 87 degrees, 33 minutes, 49 seconds West, 485.40 feet to a point, THENCE,
2. South 15 degrees, 07 minutes, 56 seconds West, 339.23 feet to a point, a common corner for the herein described lot and said lot # 3 of Windmill Phase I, THENCE,

Along the division line for the herein described parcel and lot # 3 of Windmill Phase I the following two (2) described courses and distances:

1. South 08 degrees, 08 minutes, 49 seconds West, 178.38 feet to a point of curvature, THENCE,
2. Along the arc of a circle curving to the left, described by a radius of 25.00 feet, re-crossing said 5 feet wide DelDOT easement, an arc distance of 13.41 feet to a point, said point being first mentioned POINT AND PLACE OF BEGINNING.

Containing within the said described metes and bounds 385,257 square feet (8.84 acres) of land be the same more or less. Subject to all restrictions and easements as noted or shown in Plot Book 219, Page 93, prepared by Civil Engineering Associates LLC, dated June 23, 2015.

**PLANNING & ZONING COMMISSION**
ROBERT C. WHEATLEY, CHAIRMAN
HOLLY J. WINGATE, VICE-CHAIRMAN
SCOTT COLLINS
J. BRUCE MEARS
BRIAN BUTLER

Sussex County
DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, MRTPI, AICP
DIRECTOR OF PLANNING & ZONING

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: March 19th, 2025
Sussex County Council Public Hearing Date: May 20th, 2025

| | |
|---|---|
| Application: | C/Z 2001 Belmead Farm LLC |
| Applicant: | Belmead Farm LLC<br>105 Foulk road<br>Wilmington, DE 19803 |
| Owner: | Belmead Farm LLC<br>105 Foulk road<br>Wilmington, DE 19803 |
| Site Location: | Located on east side of John J. Williams Highway (Rt. 24) approximately 0.31 mile southwest of Mulberry Knoll Road (S.C.R. 284) |
| Current Zoning: | Agricultural Residential (AR-1) Zoning District |
| Proposed Zoning: | Planned Commercial (C-4) Zoning District |
| TID: | Parcel is within the Henlopen Transportation Improvement District |
| Comprehensive Land Use Plan Reference: | Commercial Area & Coastal Area (p/o) |
| Councilmanic District: | Ms. Gruenebaum |
| School District: | Cape Henlopen School District |
| Fire District: | Rehoboth Beach Fire Co. |
| Sewer: | Public (Sussex County) |
| Water: | Private (Tidewater) |
| Site Area: | 39.22 |
| Tax Map ID.: | 334-18.00-40.01 & 40.06 |

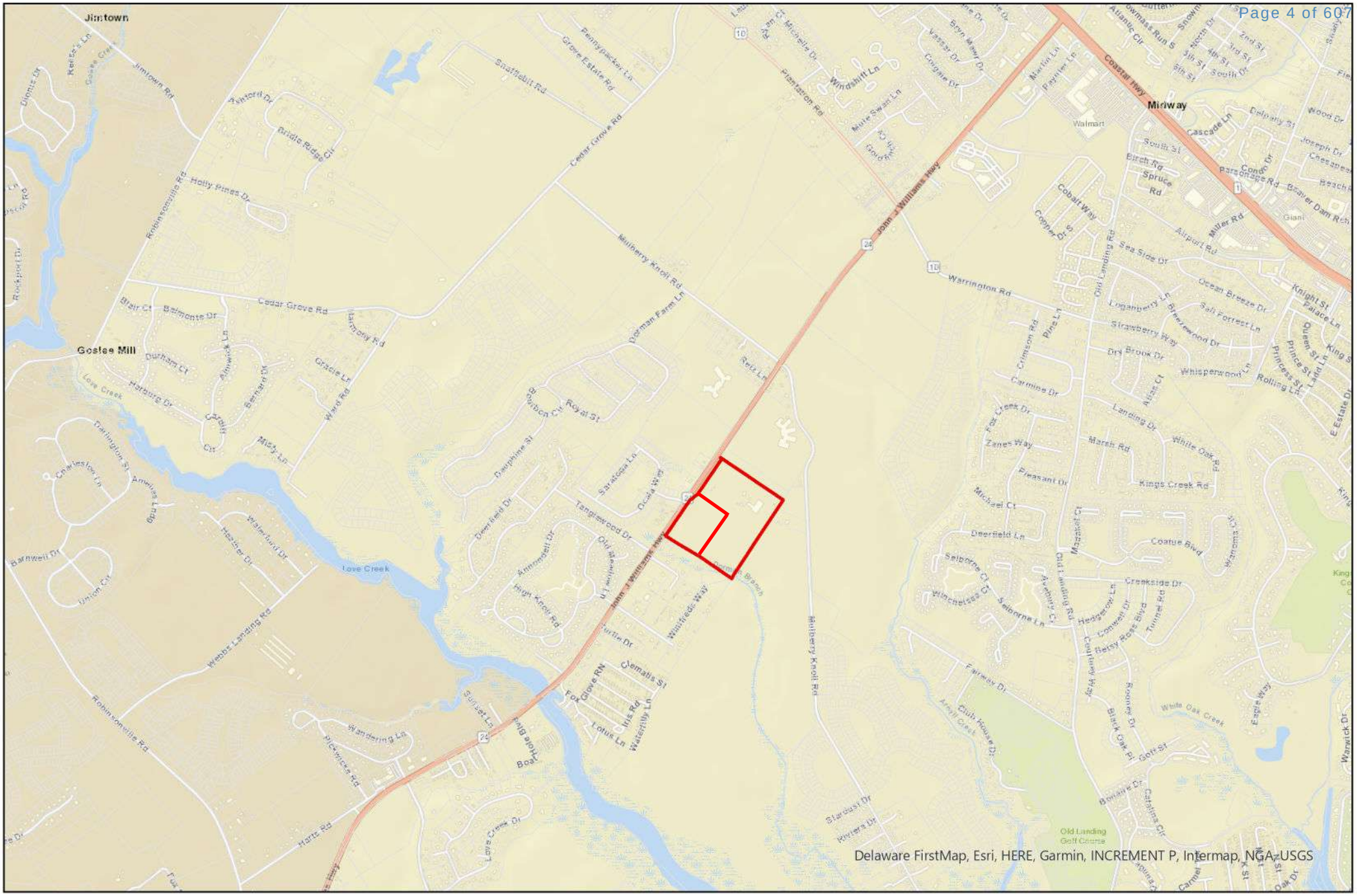
**CZ 2001 Belmead Farm LLC**
**Aerial Map**
**TM#s 334-18.00-40.01**
**334 - 18.00-40.06**

**CZ 2001 Belmead Farm**

N

Feet
0 250 500

© All EagleView Technolog




**CZ 2001 Belmead Farm LLC**
**Streets Map**
**TM#s 334-18.00-40.01**
**334-18.00-40.06**

**CZ 2001 Belmead Farm**

N

Miles
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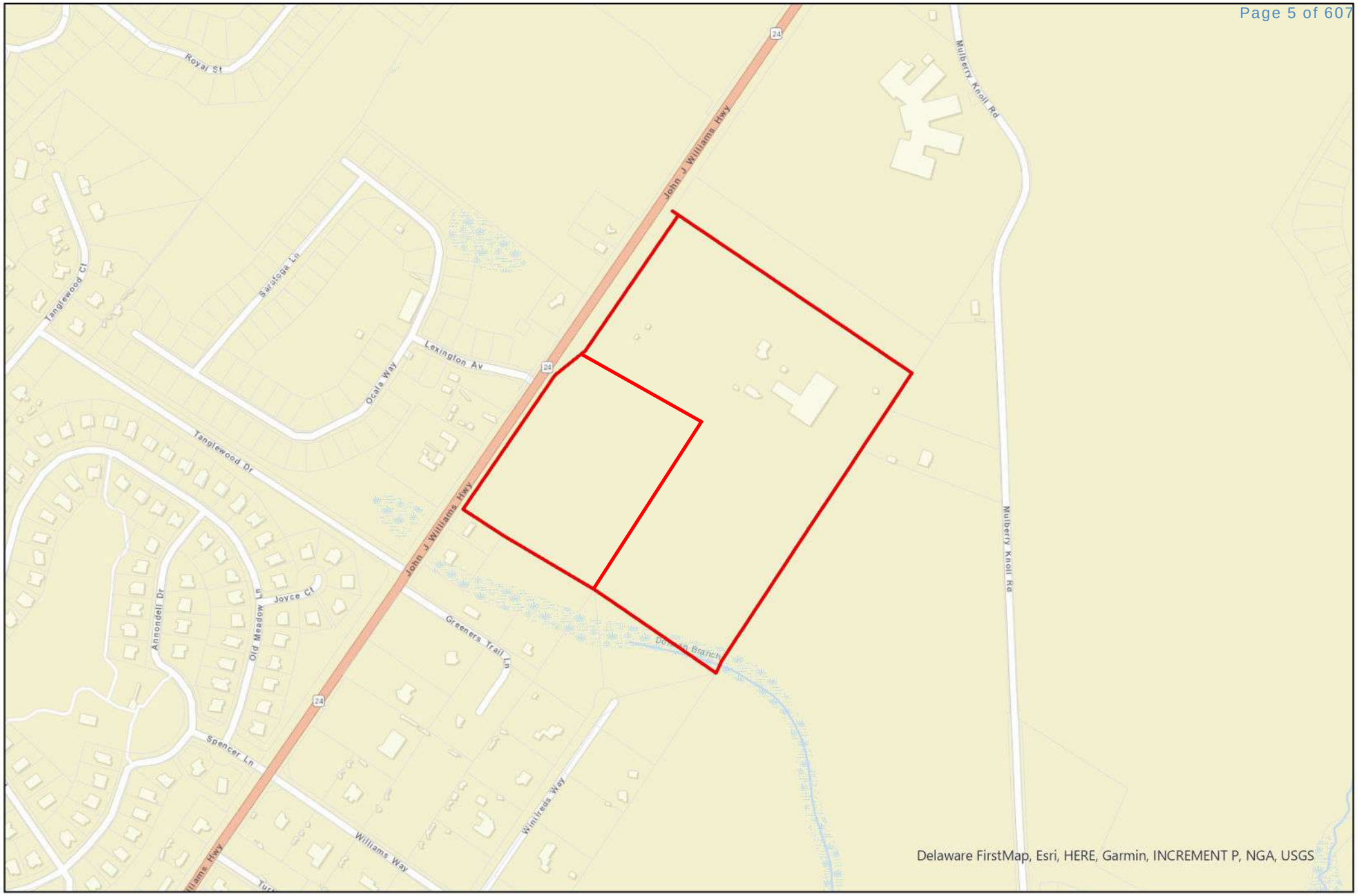


**CZ 2001 Belmead Farm LLC**
**Streets Map**
**TM#s 334-18.00-40.01**
**334-18.00-40.06**

**CZ 2001 Belmead Farm**

N

Feet
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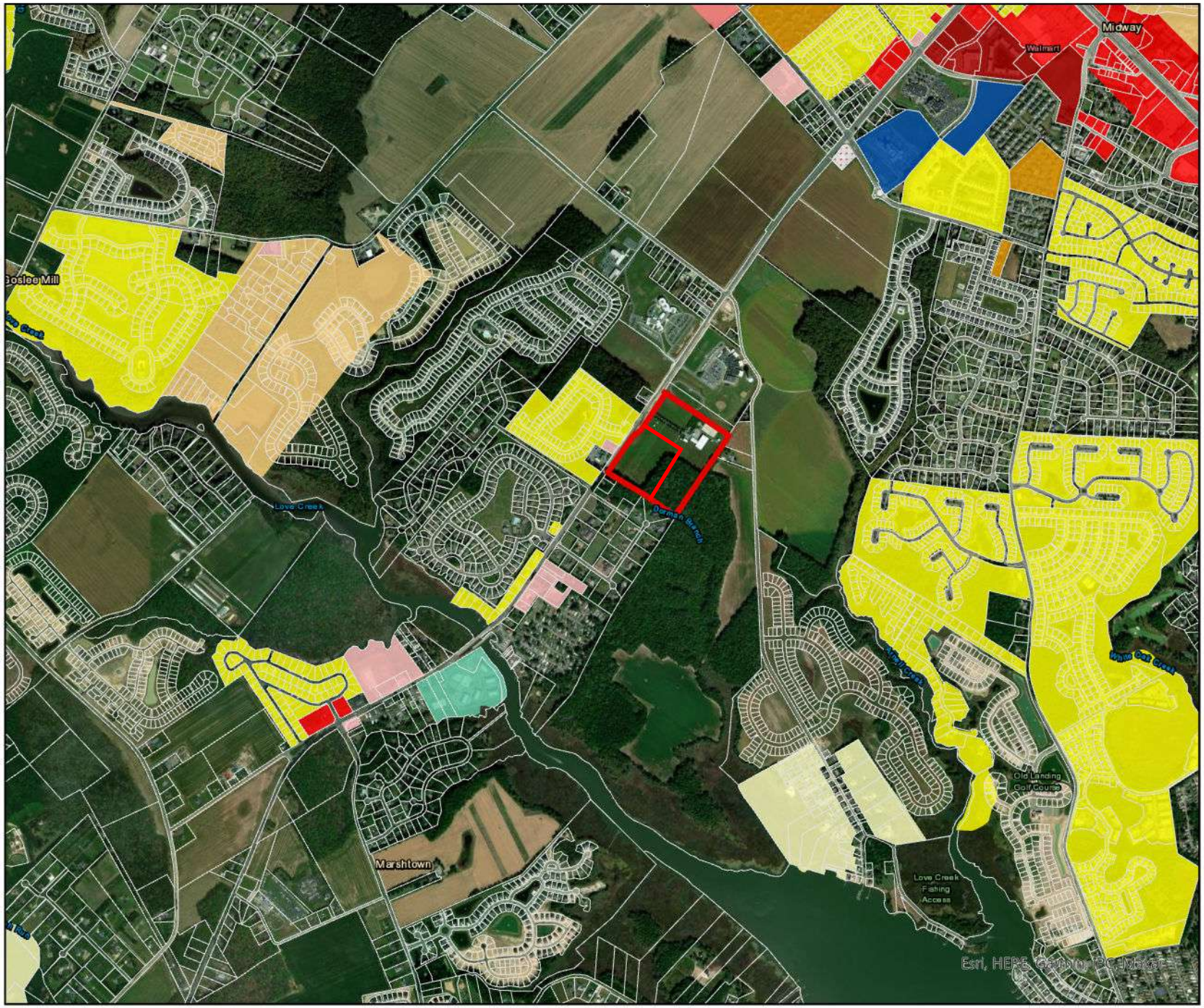



## Zoning

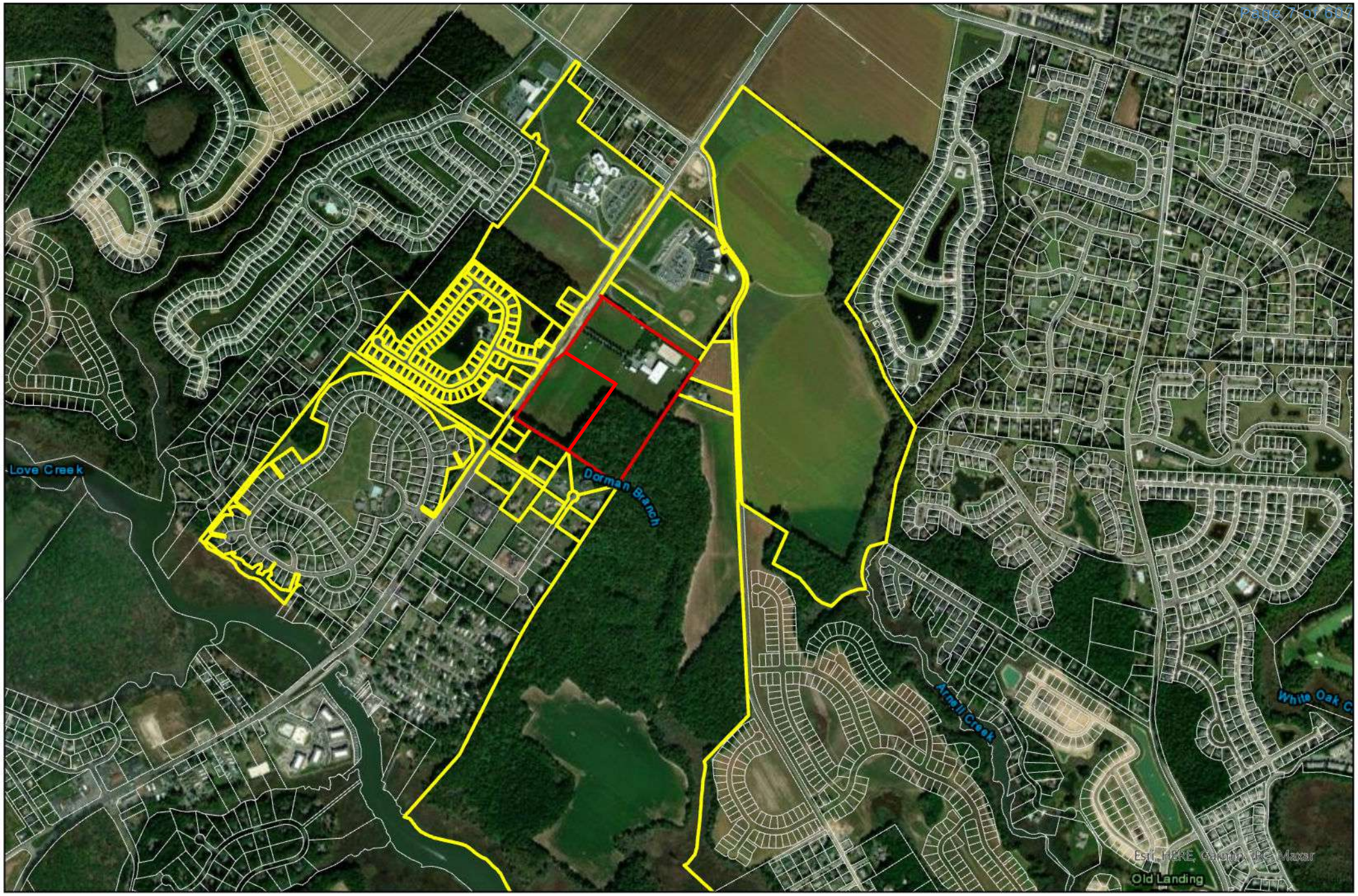
- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

**CZ 2001 Belmead Farm LLC**
**Zoning Map**
**TM#s 334-18.00-40.01**
**334-18.00-40.06**

CZ 2001 Belmead Farm

N

0 0.25 0.5 1 Miles




**CZ 2001 Belmead Farm LLC**
**Mailing Map**
**TM#s 334-18.00-40.01**
**334-18.00-40.06**

CZ 2001 Mailing List Parcels

CZ 2001 Belmead Farm

N

0 0.25 0.5 Miles

File #: CZ 2001

2022 17041

# Planning & Zoning Commission Application
## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

NOV 28 2022
SUSSEX COUNTY
PLANNING & ZONING

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

33
20044(+/-) John J Williams Hwy - Belle Mead Farm - Route 24

**Type of Conditional Use Requested:**

**Tax Map #:** 334-18.00-40.01 **Size of Parcel(s):** 39.19 AC +/-

**Current Zoning:** AR-1 **Proposed Zoning:** C4 **Size of Building:** TBD

**Land Use Classification:** COMMERCIAL

**Water Provider:** TIDEWATER **Sewer Provider:** SUSSEX COUNTY

**Applicant Information**

Applicant Name: BELMEAD FARM LLC
Applicant Address: 105 FOULK ROAD
City: WILMINGTON State: DE ZipCode: 19803
Phone #: 429-8700 E-mail:

**Owner Information**

Owner Name: BELMEAD FARM LLC
Owner Address: 105 FOULK ROAD
City: WILMINGTON State: DE Zip Code: 19803
Phone #: 429-8700 E-mail:

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: BECKER MORGAN GROUP, INC
Agent/Attorney/Engineer Address: 309 S. GOVERNORS AVE
City: DOVER State: DE Zip Code: 19904
Phone #: 734-7950 E-mail: MRIEMANN@BECKERMORGAN.COM

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

X **Completed Application**

___ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

X **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

X **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney*** _____ Date: 11/22/22

***Signature of Owner*** _____ Date: 11/14/2022

*For office use only:*

Date Submitted: 11/23/22 Fee: Check #: _____

Staff accepting application: _____ Application & Case #: 2022-7041

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

DelDOT

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm
cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

**STATE OF DELAWARE**
**OFFICE OF MANAGEMENT AND BUDGET**
**OFFICE OF STATE PLANNING COORDINATION**

February 20, 2025

Jon Falkowski
Becker Morgan Group, Inc.
309 S. Governors Ave.
Dover, DE 19904

RE: PLUS review – 2025-01-06; Belle Mead

Dear Mr. Falkowski:

Thank you for meeting with State agency planners on January 22, 2025, to discuss Belle Mead C4 Master Plan. According to the information received, you are seeking review of a proposed rezoning and site plan for a mixed-use development on 40 acres, featuring 480 multifamily rental units and 125,000 square feet of commercial development. The property is currently zoned AR-1 (Agricultural Residential District), with a proposed rezoning to C-4 (Planned Commercial District), and is primarily classified as State Strategies Level 2, with Levels 3-5 in the back corner of the site.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

## Strategies for State Policies and Spending

This project is located primarily in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. There is also some level 3, 4, and Out of Play on the site; however, from the application and site plan it does not appear that you will disturb the areas in levels 4 and 5. This site is also located in the Coastal area of the Sussex County comp plan and within the Henlopen TID

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this master plan provided it meets the relevant codes and ordinances of the county.

122 Martin Luther King Jr. Blvd. South – Haslet Armory · Third Floor · Dover, DE 19901
Phone (302)739-3090 · Fax (302) 739-5661 · www. stateplanning.delaware.gov

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Section 1.7 of the Development Coordination Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis, based on the expected trip generation this project will require a Traffic Impact Study (TIS). This process was completed on June 6, 2024 and will direct site access and any necessary off-site improvements.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage. By this regulation, this dedication is to provide a minimum of 50 feet of right-of-way from the physical centerline of Rt. 24. The following right-of-way dedication note is required, "**An X-foot wide strip of right-of-way from the centerline is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.

    - Depiction of all existing entrances within 300 feet of the proposed entrances on John J. Williams Highway (Rt. 24).

- Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 50 feet from the ultimate State right-of-way along all State maintained roads.

- Section 3.5.4.2 of the Development Coordination Manual addresses requirements for Shared Use Paths (SUP) and sidewalks. For projects in Level 1 and 2 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is required. DelDOT anticipates requiring a SUP along the site frontage on Burbage Road.

- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Development Coordination Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

DART First State – Contact Jared Kauffman 302-576-6062

- Improve the soon to be implemented northbound stop (ID 4166) to a shelter pad

- It is recommended to place bicycle parking throughout the commercial area and free covered bicycle parking for the apartment residents.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Stormwater Management**
The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, (select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Hydrologic Soils Group**
Hydrologic Soil Group D, poorly drained soils, have been identified in the south corner of the site. These soil types could worsen existing drainage issues if present and are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins. These practices must meet minimum infiltration requirements.

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation.

Contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Wastewater Disposal Systems – Small Systems (Septic)**
An expired permit (permit # 219467) exists for this site in the Small System Branch database. The On Site Regulations are listed within Section 5 (Small Systems) or Section 6 (Large Systems) of the Regulations Governing the Design, Installation and Operation of the On-site Wastewater Treatment and Disposal Systems at: https://documents.dnrec.delaware.gov/Water/Septics/delaware-on-site-regulations-with-exhibits.pdf. A list of licensed Class D soil scientists can be found at the following website: https://data.delaware.gov/Energy-and-Environment/Class-D-Site-Evaluator-Licensees-Based-on-Licensed/s3gu-gt88/data_preview

- The applicant must follow current regulations to properly abandon these systems.
- Contact the DNREC Commercial and Government Services Section to discuss requirements for properly abandoning these systems.

Contact: DNREC Commercial and Government Services Section at (302) 739-9947.
Website: https://dnrec.delaware.gov/water/residential/septic-systems/

**Wastewater Disposal Systems – Large Systems**
For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

**Wetlands and Waterways**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the south corner of the site, as well as a potential blue line stream (Dorman Branch) located in the south corner. The application indicates that wetlands have been delineated. The application states that the project does not propose direct impacts to the wetlands/waterways.

State Requirements:

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.
- Include all streams and waterways on site plans.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

**Special Flood Hazard Area**
According to the newest Flood Insurance Rate Maps (FIRM), a portion of this parcel is situated within a Special Flood Hazard Area, specifically within the mapped 100-year floodplain (1% annual chance of flooding). The Special Flood Hazard Area identified on the site lies within zone AE. In lands contained within the 100-year floodplain, the National Flood Insurance Program's floodplain management regulations must be enforced through the local floodplain ordinance, which can have higher standards. Although rental units are proposed outside of the Special Flood Hazard Area (SFHA), the property owner may still be required by lenders to purchase flood insurance, based on the proximity to the SFHA. Additionally, because this property will offer rentals, the property manager may require tenants to obtain flood insurance policies.

- The applicant must comply with the local floodplain ordinance and regulations applicable to development or construction within the 100-year floodplain. In determining the boundary of the floodplain, use the most recent FIRM maps available, which can be found at https://floodplanning.dnrec.delaware.gov/

Contact: DNREC Shoreline and Waterway Management Section at (302) 608-5500.
Website: https://dnrec.delaware.gov/watershed-stewardship/waterways/floodplains/

**Electric Vehicle Charging Requirements**
Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or

2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.

Multi-family Dwellings, effective 2025:

- The developer of a multi-family residential dwelling shall install electric vehicle parking spaces, where at least 5% of the total parking spaces for the multi-family residential dwelling must be electric vehicle capable parking spaces.

- In addition, a developer of a multi-family residential dwelling shall provide at least one electric vehicle charging infrastructure parking space in an area available for use by all residents of the multi-family residential dwelling (example: community centers).

- Construction documents must indicate the location of proposed electric vehicle charging infrastructure parking spaces and electric vehicle capable parking spaces.

- Parking space dimensions must comply with the county or municipal building code applicable to the multi-family residential dwelling.

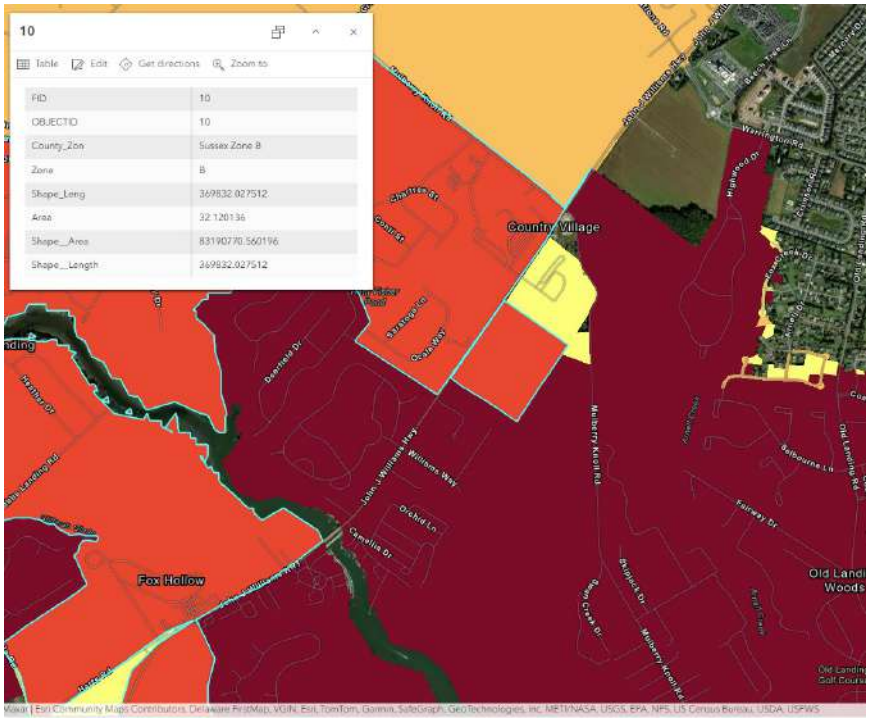
<u>Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325</u>

**Proposed Project Parcel Flood Concern**

- The majority of this parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**. However, there is a 100-year flood zone located to along the southern portions of the parcel. According to the submitted sketch, no facilities are being constructed within a flood zone.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within Sussex County's Evacuation Zone B.




**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

<u>State Historic Preservation Office – Contact Carlton Hall 302-736-7400</u>

- Nearest water source is the edge of Dorman Branch. According to the plans provided the construction is avoiding the out-of-play zone. Soils are well drained. There is a

historic archaeological site on the northern adjacent parcel. There are precontact archaeological sites further down the branch in similar contexts.

- The Delaware State Historic Preservation Office recommends an archaeological survey prior to any ground disturbing activities at least in the southern half of the parcel.

  If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394
This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)

- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.

- Buildings greater than 10,000 sq. ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.

- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from John J Williams Highway must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

**Required Notes**:

- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations.”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Mature Forest withing Key Wildlife Habitat and Delaware Ecological Network**
The preliminary plan proposes the elimination of approximately 5 of 10 acres of forest on the site. An analysis of historical data indicates that the forest area located on the southern portion of the site has likely maintained some degree of forest cover since 1937 and could be considered mature forest. Mature forests possess the potential for rare, threatened, or endangered species that rely on this type of habitat. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

The forested wetlands on this property are mapped as a Key Wildlife Habitat in the Delaware Wildlife Action Plan because it is part of a large wetland complex/large forest block that can support an array of plant and animal species across the landscape.

- Removing forested areas for development, especially mature forests, should be avoided to the greatest extent possible.

- The forested area on this site occurs within the Delaware Ecological Network, a statewide network of interconnected lands having significant ecological value. Avoid disturbance within

these habitats.

- In general, contiguous forest and connected areas of natural habitat are more beneficial to wildlife, allowing for safer movement from one area to another while reducing roadway mortality.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

**Vegetated Buffer Zones**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of forested wetlands on the south corner of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb forested wetlands. Maintain an upland buffer of at least 100 feet along all wetlands, waterways, and sensitive habitats, including those containing existing forest or natural vegetative cover.

- Maintain habitat connections to undeveloped open space, which are especially important for species movement across the landscape.

- Vegetated buffer zones should be identified outside of the Limit of Disturbance on the engineering plans.

- Maintain vegetated buffer zones as native species meadows or forest.

- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/conservation/

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Drainage**

- All existing drainage ditches on the property should be evaluated for function and cleaned, if needed, prior to the construction of the project.

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/

**Water Quality**

This site lies within the Rehoboth Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Implement vegetated buffers with a width of at least 100 feet around all water features on or adjacent to the site.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable. Break up large parking lots with planted islands.

- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.

- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. https://dnrec.alpha.delaware.gov/watershed-stewardship/

**Sea Level Rise and Flooding**

The south corner of this site is vulnerable to permanent inundation from sea level rise. By 2050, mean sea levels are projected to rise by 0.7 – 1.9 feet; by end of century sea levels are projected to increase by 1.7 – 5.0 feet. In addition to permanent inundation, as mean sea levels rise, the frequency and severity of tidal flooding events is expected to increase.

- In areas within 5 feet of expected sea level rise, avoid construction of permanent structures and infrastructure. If this is not possible, the developer should consider designing structures to a higher standard to avoid potential future flood damage and loss.

- All infrastructure and structures on the site should incorporate the effects of sea level rise through the expected lifespan of the structures. This may include increasing freeboard of structures, ensuring that critical infrastructure is elevated to withstand future sea level rise, construction of flood control measures, and incorporating green infrastructure for flood control.

Contact: DNREC Climate and Sustainability Section at (302) 735-3480.
Website: https://dnrec.delaware.gov/coastal-programs/planning-training/adapting-to-sea-level-rise/

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks and covered bike storage where feasible to help facilitate non-vehicular travel modes.

- Use renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an

increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 202, though, with development, this will undoubtedly change. The 12 adjacent blocks aggregated bring the area to a total population of 1197.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.

Expected Annual Loss
× Social Vulnerability
÷ Community Resilience
= Risk Index

- According to FEMA's National Risk Index, the parcel **is** considered **relatively low** for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated as **relatively moderate** whereas its social vulnerability is rated as **very low.**

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes **electricity** as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

<u>Delaware State Housing Authority - Contact Rachel Alfano 302-739-4263</u>

- DSHA supports this proposal for 480 multi-family residential units as well as commercial space on 40.01 acres located on Route 4 in Sussex County. This proposal is consistent with State Strategy Investment levels 2-5.

- According to DSHA's Housing Reform Map, this project is in an Area of Opportunity where diverse housing types should be supported. This means the area has high-quality schools, supportive infrastructure, and the capacity to support diverse and affordable housing types. This is a high-density project for market-rate units that should continue to support the balance of housing type and affordability.

If you have questions or would like more information on the above recommendations, please feel free to e-mail at Rachel.Alfano@Delaware.gov.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394
Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason, therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

David L. Edgell, AICP
Director, Office of State Planning Coordination

Attachments:

- Sussex County Community Development & Housing Comments

BRANDY BENNETT NAUMAN
DIRECTOR OF COMMUNITY
DEVELOPMENT & HOUSING
(302) 855-7777 T
(302) 854-5397 F
bnauman@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

January 30, 2025

Mr. Jon Falkowski
Becker Morgan Group, Inc.
309 S. Governors Ave.
Dover, DE 19904

RE: PLUS Review (PLUS 2025-01-06) – Belle Mead

Dear Mr. Falkowski,

Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations.

For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: www.sussexcountyde.gov/affordable-and-fair-housing-resource-center. The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County.

The Community Development  Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state, and county sources, as well as private funding sources that also promote affordable housing in Sussex County. **Please visit www.sussexcountyde.gov/housing-trust-fund for information on the County's Housing Trust Fund.**

**Further, the County's newly approved Work Force Housing Zoning Ordinance permits up to 12 units per acre, by right, in eligible areas for projects that set aside 25% of the total units for affordable rentals. For more information on eligibility and design criteria, please review the Ordinance at www.sussexcountyde.gov/affordably-priced-rental-units . The application can be found on the Planning & Zoning website at https://sussexcountyde.gov/sites/default/files/forms/SussexCountyRentalProgram_Application.pdf .**

Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes.

On behalf of Sussex County, we look forward to cooperating with you and your project as it moves forward.

Thank you,

Brandy B. Nauman
*Director*

## Michael Lowrey

**From:** Valerie Thompson
**Sent:** Tuesday, February 18, 2025 1:53 PM
**To:** Michael Lowrey
**Cc:** Lauren DeVore; Christin Scott; Ann Lepore; Susan Isaacs
**Subject:** RE: CZ 2001 Belmead Farm LLC

Good afternoon Michael,

I have completed my review of the Belmead Farm LLC DAR prepared by Becker Morgan. The report complies with Sussex County Code Section 115-193-F(2).

**Valerie Thompson**
**Sediment and Stormwater Designer**

Sussex County Engineering
2 The Circle, Georgetown DE 19947
Office: 302-855-7790
Cell: 443-783-8063
Email: valerie.thompson@sussexcountyde.gov

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**From:** Michael Lowrey <michael.lowrey@sussexcountyde.gov>
**Sent:** Friday, February 14, 2025 4:27 PM
**To:** Valerie Thompson <valerie.thompson@sussexcountyde.gov>
**Cc:** Lauren DeVore <lauren.devore@sussexcountyde.gov>; Christin Scott <christin.scott@sussexcountyde.gov>; Ann Lepore <ann.lepore@sussexcountyde.gov>; Susan Isaacs <sisaacs@sussexcountyde.gov>
**Subject:** CZ 2001 Belmead Farm LLC

RE: CZ 2001
Belmead Farm LLC
TM# 334-18.00-40.01

Valerie,

Good afternoon.

I have another DAR that just arrived. I have attached all materials submitted by the Applicant as part of the submission.
It is my understanding that the Public Hearing for this Application is tentatively scheduled for 3/19/2025.

Feel free to reach out if there are any questions.
I'll wish you a good weekend, ...again.

Mike

Michael Lowrey
Planner III
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878
michael.lowrey@sussexcountyde.gov

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf
Much of the County's Planning and Zoning Information can be found online at:
https://sussexcountyde.gov/sussex-county-mapping-applications
Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

June 4, 2024

Christopher Duke, P.E.
Becker Morgan Group, Inc.
100 Discovery Blvd, Suite 102
Newark, DE 19713

Dear Mr. Duke:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Belle Meade** (Tax Parcel: 334-18.00-40.01) multi-use development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. DelDOT accepts this letter and concurs with the recommendations. If you have any questions concerning this letter or the enclosed review letter, please contact me at Annamaria.Furmato@delaware.gov.

Sincerely,

Annamaria Furmato
TIS Group Project Engineer

AF:km
Enclosures
cc with enclosures: William Krapf, Capano Group, L.P.
David L. Edgell, Office of State Planning Coordination
Jamie Whitehouse, Sussex County Planning & Zoning
Andrew J. Parker, McCormick Taylor, Inc.
Tucker Smith, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT

# DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Deputy Secretary / Director of Transportation Solutions (DOTS)
Mark Luszcz, Deputy Director, DelDOT Traffic, DOTS
Michael Simmons, Assistant Director, Project Development South, DOTS
Peter Haag, Chief Traffic Engineer, DelDOT Traffic, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, DelDOT Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Pamela Steinebach, Director, Planning
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination, Planning
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination, Planning
Sireen Muhtaseb, TIS Group Manager, Development Coordination, Planning
Philip Lindsey, TIS Group Project Engineer, Development Coordination, Planning
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning, Planning
Steve Bayer, Regional Transportation Planner, Statewide & Regional Planning

June 3, 2024

Ms. Annamaria Furmato
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
**Task No. 5A Subtask 08A – Belle Meade**

Dear Ms. Furmato:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Belle Meade development prepared by Becker Morgan Group, Inc. dated February 2024. Becker Morgan Group prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Belle Meade development, along the south side of Delaware Route 24 (Sussex Road 24), approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. The proposed development would consist of 125,00 square feet of retail space and 480 low-rise multi-family houses. One signalized access point is proposed on Delaware Route 24 opposite Lexington Avenue. Construction is anticipated to be completed in 2032.

The subject land is located on an approximately 38.33-acre parcel. The subject land is currently zoned AR-1 (Agricultural Residential) and the developer plans to rezone the land to C-4 (Planned Commercial).

**Relevant and On-Going Projects and Studies**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

McCORMICK TAYLOR

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS and making off-site improvements in accordance with the TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

**Summary of Analysis Results**

Based on our review, we have the following comments and recommendations:

The following intersections exhibit level of service (LOS) deficiencies without the implementation of physical roadway and/or traffic control improvements:

| ***Intersection*** | ***Existing Traffic Control*** | ***Situations for which deficiencies occur*** |
|---|---|---|
| 1. SR 24 / Lexington Avenue / Site Entrance | Unsignalized | 2032 with development AM, PM, SAT (Case 3) |
| 4. SR 24 / Plantation Road / Warrington Road | Signalized | 2032 with development PM (Case 3) |
| 6. SR 24 / Bryn Mawr Drive | Unsignalized | 2032 without development PM and SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 9. Warrington Road / Old Landing Road | Unsignalized | 2022 Existing SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 10. Mulberry Knoll Road / Cedar Grove Road | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development PM and SAT (Case 3) |
| 12. SR 24 / Spencer Lane / Williams Way | Unsignalized | 2022 Existing PM and SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 13. SR 24 / Camp Arrowhead Road | Signalized | 2032 with development SAT (Case 3) |

| | | |
|---|---|---|
| 14. SR 24 / Harts Road | Unsignalized | 2022 Existing PM (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 16. SR 24 / Jolyns Way | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development SAT (Case 3) |

1. SR 24 / Lexington Avenue / Site Entrance (See Recommendations 2 and 3  Table 2, Page 22)
This unsignalized intersection experiences LOS deficiencies during the AM, PM, and Saturday peaks in Case 3. In Case 3 during the PM and Saturday peaks, the northbound and southbound approaches are expected to operate at LOS F with over 2,500 seconds of delay. The developer proposes to construct a traffic signal at this intersection to mitigate the LOS deficiency. A Traffic Signal Justification Study (TSJS) has been prepared by the Department demonstrating that the warrants for a traffic signal are met with Case 3 volumes. If the intersection were signalized with the lane configuration as proposed in the *SR 24, Love Creek to Mulberry Knoll* project, the intersection will still operate at LOS F in the Saturday peak. The Henlopen TID proposes to widen SR 24 through this intersection to provide two through lanes in each direction. With signalization and the TID improvements the intersection is expected to operate at LOS C or better during all three peak periods. It is recommended that the developer widen SR 24 within the limits of their site frontage to increase the capacity and mitigate the LOS deficiency at the proposed signal at the site entrance. The developer will be granted credit against their TID fee for this work.

4. SR 24 / Plantation Road / Warrington Road (See Recommendation 4  Table 5, Page 25)
This signalized intersection experiences LOS deficiencies during the PM peak in Case 3. In Case 3 during the PM peak, the northbound approach is expected to operate at LOS F with 81.7 seconds of delay while the overall intersection will operate at LOS E with 60.8 seconds of delay. Queues on the northbound approach are expected to be over 838 feet long which exceeds the available storage. The Henlopen TID proposes to widen the Plantation Road and Warrington Road approaches to include two left-turn lanes, two through lanes, and one right turn lane. With the TID improvements at this intersection, the intersection is expected to operate at LOS D with 49.5 seconds of delay. It is recommended that the developer pay the Henlopen TID fee.

6. SR 24 / Bryn Mawr Drive (Table 7, Page 27)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peaks in Case 2 and the AM, PM, and Saturday Peaks in Case 3. In Case 3 during the PM peak, the southbound approach is expected to operate at LOS F with 62.5 seconds of delay and queues over 65 feet long. A signal could mitigate the LOS deficiencies at his intersection. However, a signal is not recommended because of the proximity to adjacent signals and the low minor street volumes. Bryn Mawr Drive is a private road and the delay is only experienced on the minor street approach without impact to Delaware Route 24. No mitigating improvements are recommended at this intersection from the Belle Meade developer.

9. Warrington Road / Old Landing Road (See Recommendation 4  Table 10, Page 30)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 during the PM peak, the intersection has failing LOS on three approaches with the overall intersection operating at LOS F with 69 seconds of delay. The Henlopen TID proposes a roundabout at this intersection which will mitigate the LOS deficiency. It is recommended that the developer pay the Henlopen TID fee.

10. Mulberry Knoll Road / Cedar Grove Road (See Recommendation 4  Table 11, Page 31)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 2 and the PM and Saturday peaks in Case 3. In Case 3 during the Saturday peak, the northbound Mulberry Knoll Road approach is expected to operate at LOS F with 837.7 seconds of delay and queues over 753 feet long. The developer recommends the construction of a dedicated eastbound right-turn lane on Cedar Grove Road. However, this improvement fails to fully mitigate the LOS deficiency. The Henlopen TID proposes a roundabout at this intersection. It is recommended that the developer pay the Henlopen TID fee.

12. SR 24 / Spencer Lane / Williams Way (See Recommendation 4  Table 13, Page 33)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peak hours in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3, during the PM peak, the southbound approach is expected to operate at LOS F with 505.6 seconds of delay and queues over 63 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection. With that improvement, the intersection continues to experience LOS deficiencies. It should be noted that the delay is only experienced on the minor street approach, which is a private road. A signal is not recommended at this intersection due to the low minor street volumes. Additionally, the northbound volume during all peak hours is less than 10 vehicles. It is recommended that the developer pay the Henlopen TID fee.

13. SR 24 / Camp Arrowhead Road (See Recommendation 4  Table 14, Page 34)
This signalized intersection experiences LOS deficiencies during the Saturday peak in Case 3. In Case 3 during the Saturday peak, the eastbound approach is expected to operate at LOS F with 95 seconds of delay and queues over 1,573 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection which mitigates the LOS deficiency. It is recommended that the developer pay the Henlopen TID fee.

14. SR 24 / Harts Road (See Recommendation 4  Table 15, Page 35)
This unsignalized intersection experiences LOS deficiencies during the PM peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 in the PM peak hour the southbound Harts Road approach is expected to operate at LOS F with 989.9 seconds of delay. The Henlopen TID proposes the elimination of this intersection. It is recommended that the developer pay the Henlopen TID fee.

16. SR 24 / Jolyns Way (See Recommendation 4  Table 17, Page 37)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Cases 2 and 3. In Case 3 during the Saturday peak, the northbound Jolyns Way approach is expected to

operate at LOS E with 45.3 seconds of delay and queues of less than one vehicle. It should be noted that the forecasted volume on this approach is five (5) vehicles in the Saturday peak hour. The Henlopen TID proposes to signalize this intersection, widen SR 24 to include two through lanes in each direction, and add a northern leg to the intersection that will connect to Robinsonville Road. These improvements will mitigate the LOS deficiencies. It is recommended that the developer pay the Henlopen TID fee.

**Development Improvements**

Should Sussex County choose to approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan by note or illustration. All applicable agreements (i.e., letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development.

1. The developer shall improve the State-maintained Roads on which they front (Delaware Route 24), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

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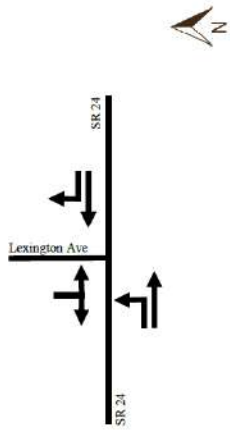
2. The developer should construct the full-movement Site Entrance on Delaware Route 24. The proposed configuration is shown in the table below.

| Approach | Current Configuration | | Approach | Proposed Configuration | |
|---|---|---|---|---|---|
| Eastbound SR 24 | One left turn lane and one through lane |  | Eastbound SR 24 | One left turn lane, two through lanes, and one right turn lane | |
| Westbound SR 24 | One through lane and one right turn lane. | | Westbound SR 24 | One left turn lane, two through lanes, and one right turn lane | |
| Northbound | Approach does not exist. | | Northbound Site Entrance | One shared left / through lane and one right turn lane. | |
| Southbound Lexington Avenue | One shared left / right turn lane. Stop Control. | | Southbound Lexington Avenue | One left turn lane and one shared through / right turn lane. | |

At the proposed Site Entrance intersection, an eastbound right-turn lane is warranted on SR 24 based on DelDOT's Auxiliary Lane Worksheet, Figure 5.2.9.1-b. Initial recommended minimum turn lane length (excluding taper) is a 400-foot right-turn lane on eastbound SR 24. The left turn lane should be designed to accommodate the 95$^{th}$ percentile queues. Initial recommended minimum turn lane length (excluding taper) is a 400-foot left-turn lane on westbound SR 24. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

3. The developer should enter into a traffic signal agreement to design and construct a traffic signal with pedestrian crossings. SR 24 should be widened to include two through lanes in each direction within the extents of the site frontage. At the signalized intersection there should be dedicated left-turn lanes and channelized right turn lanes on each SR 24 approach, on the northbound and southbound approaches there should be a shared left / through lane and a channelized right turn lane. At the signalized intersection the developer should also construct signalized pedestrian crossings on all approaches.

4. The developer shall pay the Henlopen TID fee in place of making physical mitigating improvements at the following intersections.

    a. SR 24 / Plantation Road / Warrington Road

    b. Mulberry Knoll Road / Cedar Grove Road

    c. Warrington Road / Old Landing Road

    d. SR 24 / Spencer Lane / Williams Way

    e. SR 24 / Camp Arrowhead Road

    f. SR 24 / Harts Road

    g. SR 24 / Jolyns Way

5. The following bicycle and pedestrian improvements should be included:

    a. Per the DelDOT Development Coordination Manual section 5.2.9.2, bicycle lanes are required where right-turn lanes are being installed.

    b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.

    c. Utility covers should be made flush with the pavement.

    d. A minimum 15-foot-wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontages along Delaware Route 24. Within the easement, a minimum of a 10-foot wide shared-use path should be constructed. The shared-use path should meet AASHTO and ADA standards and should have a minimum of a five-foot buffer from the roadway. At the property boundaries, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at or before both boundaries of the property.

    e. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.

    f. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These

sidewalks should each be a minimum of five-feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. Internal sidewalks in the development should connect to the proposed shared-use path along the site frontages.

g. Construct a bus stop pad on SR 24 within the site frontage. Bus stop pad should connect to shared use paths and sidewalks along the site frontage. Location, size, and type of bus pad will be determined through coordination with the Delaware Transit Corporation (DTC).

Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines*. These guidelines are available on DelDOT's website at http://deldot.gov/Publications/manuals/de mutcd/index.shtml.

Please note that this review generally focuses on capacity and level of service issues; additional safety and operational issues will be further addressed through DelDOT's site plan review process.

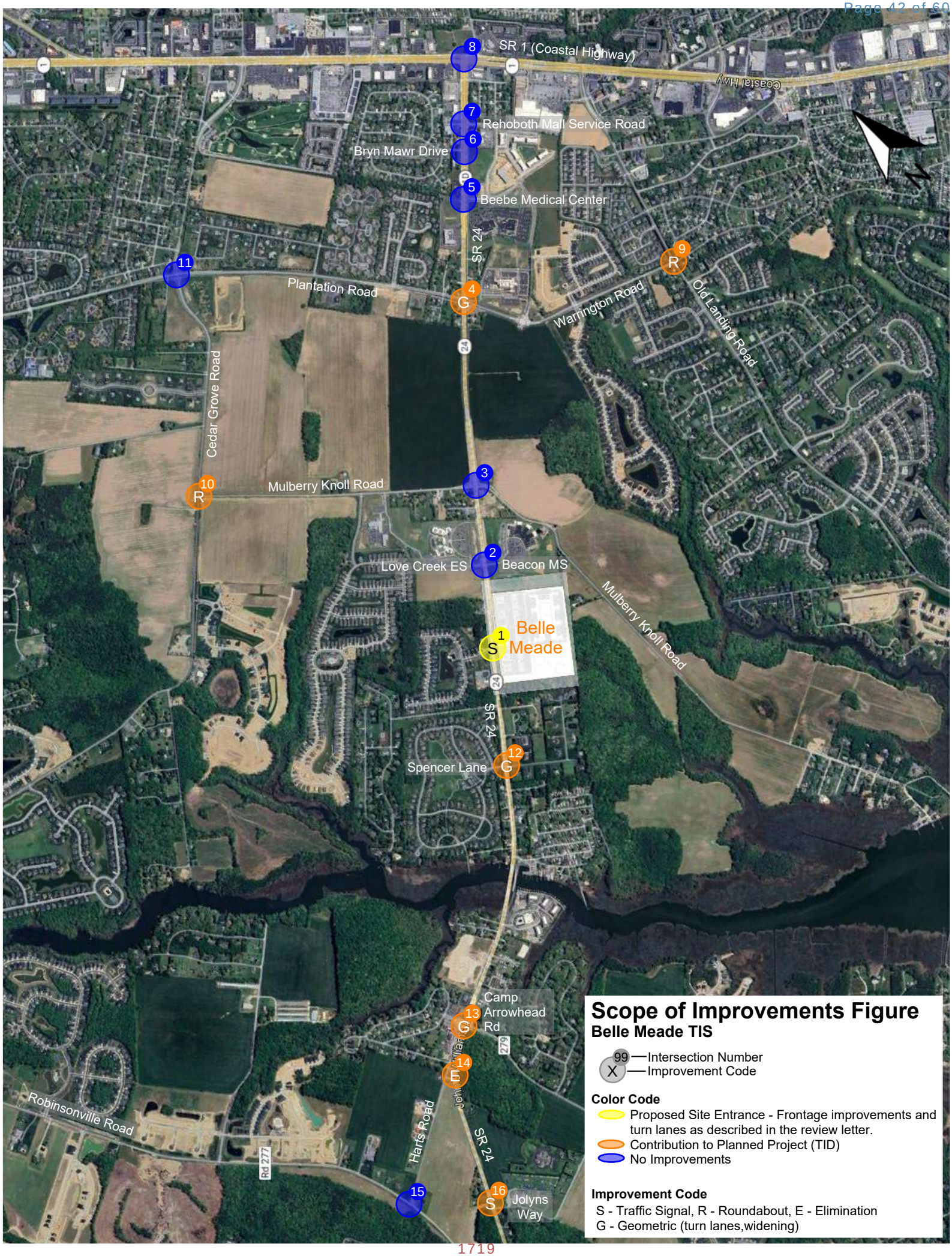
Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

**McCormick Taylor, Inc.**

Andrew J. Parker, PE, PTOE
Project Manager

Enclosure




## Scope of Improvements Figure

**Belle Meade TIS**

99 — Intersection Number
X — Improvement Code

**Color Code**

- Proposed Site Entrance - Frontage improvements and turn lanes as described in the review letter.
- Contribution to Planned Project (TID)
- No Improvements

**Improvement Code**

S - Traffic Signal, R - Roundabout, E - Elimination
G - Geometric (turn lanes,widening)

## General Information

**Report date:** February 2024
**Prepared by:** Becker Morgan Group, Inc
**Prepared for:** Capano Management, Inc.
**Tax parcel:** 334-18.00-40.01
**Generally consistent with DelDOT's Development Coordination Manual:** Yes

## Project Description and Background

**Description:** The proposed Belle Meade development consists of 125,000 square feet of retail space, 480 low-rise multi-family houses.
**Location:** The site is located along the south side of Delaware Route 24, approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. A site location map is included on page 11.
**Amount of land to be developed:** an approximately 38.33-acre parcel.
**Land use approval(s) needed:** The subject land is currently zoned AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial).
**Proposed completion year:** 2032
**Proposed access locations:** One full access point is proposed on Delawar Route 24 opposite Lexington Avenue.
**Average Daily Traffic Volumes (per DelDOT Traffic Summary 2022):**

- Delaware Route 24: 18,591 vehicles/day

Mulberry Knoll Road
SR 24
N
Mulberry Knoll Road
SR 24
Site Location Map
Proposed Entrance

## 2020 Delaware Strategies for State Policies and Spending

**Location with respect to the Strategies for State Policies and Spending Map of Delaware:**
The proposed Belle Meade development is located within Investment Level 2.

*Investment Level 2*
This investment level has many diverse characteristics. These areas can be composed of less developed areas within municipalities, rapidly growing areas in the counties that have or will have public water and wastewater services and utilities, areas that are generally adjacent to or near Investment Level 1 Areas, smaller towns and rural villages that should grow consistently with their historic character, and suburban areas with public water, wastewater, and utility services. These areas have been shown to be the most active portion of Delaware's developed landscape. They serve as transition areas between Level 1 and the more open, less populated areas. They generally contain a limited variety of housing types, predominantly detached single-family dwellings.

In Investment Level 2, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity.

Investments should encourage departure from the typical single-family-dwelling developments and promote a broader mix of housing types and commercial sites encouraging compact, mixed-use development where applicable. Overall, the State's intent is to use spending and management tools to promote well-designed development in these areas. Such development provides for a variety of housing types, user-friendly transportation systems, and provides essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community. Investment Level 2 areas are prime locations for designating "pre-permitted areas."

**Proposed Development's Compatibility with Strategies for State Policies and Spending:**
The proposed Belle Meade development falls within Investment Level 2 and is to be developed as 125,000 square feet of retail space, 480 low-rise multi-family houses. The proposed development is consistent with the character of Investment Level 2. It is therefore concluded that the proposed development appears to generally comply with the policies stated in the 2020 "Strategies for State Policies and Spending."

## Comprehensive Plan

**Sussex County Comprehensive Plan:**
*(Source: Sussex County Comprehensive Plan, March 2019)*

The Sussex County Comprehensive Plan Future Land Use Map indicates that the proposed Belle Meade site is planned for "Commercial" land use. It would appear that the proposed Belle Meade development generally fits within the intended land use for this location.

**Proposed Development's Compatibility with Comprehensive Plan:**
The proposed development appears to comply with the Sussex County Comprehensive Plan. The Belle Meade development is proposed on land that is planned for Commercial use. The land is

zoned as AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial). The proposed development generally aligns with both the Future Land Use Map and the proposed zoning.

**Relevant Projects in the DelDOT Capital Transportation Program**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS and making off-site improvements in accordance with the TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development.

## Trip Generation

Trip generation for the proposed development was computed using comparable land uses and equations contained in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers (ITE). The following land use was utilized to estimate the amount of new traffic generated for this development:

- 480 low-rise multi-family dwelling units (ITE Land Use Code 220)
- 125,000 square-foot Retail Space (ITE Land Use Code 821)

**Table 1**
**Peak Hour Trip Generation**

| Land Use | Phase | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Saturday Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| LUC 220<br>LUC 821 | Gross | 173 | 211 | 384 | 249 | 211 | 460 | 336 | 315 | 651 |
| | Pass-by | 0 | 0 | 0 | 114 | 106 | 220 | 127 | 116 | 243 |
| **Total Trips** | | **173** | **211** | **384** | **363** | **317** | **680** | **463** | **431** | **894** |

## Overview of TIS

**Intersections examined:**

1) Site Entrance / Lexington Avenue / Delaware Route 24
2) Delaware Route 24 / Love Creek Elementary School / Beacon Middle School (backfill)
3) Delaware Route 24 / Mulberry Knoll Road (Sussex Road 284)
4) Delaware Route 24 / Plantations Road / Warrington Road (Sussex Road 275)
5) Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn) (backfill)
6) Delaware Route 24 / Bryn Mawr Drive (backfill)
7) Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way (backfill)
8) Delaware Route 1 / Delaware Route 24
9) Warrington Road / Old Landing Road (Sussex Road 274)
10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)
11) Cedar Grove Road / Plantations Road
12) Delaware Route 24 / Spencer Lane / Williams Way (backfill)
13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)
14) Delaware Route 24 / Harts Road (Sussex Road 277C)
15) Robinsonville Road (Sussex Road 277) / Harts Road
16) Delaware Route 24 / Jolyns Way (Sussex Road 289)

**Conditions examined:**

1) Existing (2022) (Case 1)
2) 2032 without development (Case 2)
3) 2032 with development (Case 3)

**Peak hours evaluated:** Weekday morning and evening and Saturday mid-day peak hours

**Committed developments considered:**

1) Scenic Manor f.k.a. Estates at Mulberry Knoll (320 single-family detached houses)
2) V□M, LLC (5,000 square-foot super convenience store with gas pumps and a 12,000 square-foot office)
3) Belle Terre (269 single-family detached houses)
4) Arbor-Lyn (142 single-family detached houses)
5) Beebe Health Care (100-employee hospital) – might be fully built already; if so, please exclude from study.
6) Seaglass f.k.a. Herola Property (216 apartment units) – might be fully built already: if so, please exclude from study.
7) Osprey Point (217 single-family detached houses)
8) Delaware State Police Troop 7 (25,270 square-foot administrative facility and a 10,115 square-foot maintenance facility) – might be fully built already; if so, please exclude from study.
9) Welshes Pond f.k.a. Fieldstone (247 single-family detached houses)
10) Wellesley (132 single-family detached houses)
11) Centre at Love Creek f.k.a. Pelican Landing (84,576 square-foot shopping center)
12) Rehoboth Point Yacht Club (f.k.a. Love Creek Marina) (180 units of three-story apartments, 5,000 square-foot quality restaurant, and a 500 square-foot retail facility) – might be fully built already; if so, please exclude from study.
13) Henlopen Meadows (f.k.a. Windswept at Lewes) (201 single-family detached houses, 178 townhouses)
14) Marsh Island (139 single-family detached houses)
15) Acadia Landing (f.k.a Insight at Lewes Point) (238 single-family detached houses)
16) Chase Oaks f.k.a. Charter Oak (249 single-family detached houses)
17) Brentwood (f.k.a. Coral Lakes) (198 single-family detached houses)
18) Tanager Woods (f.k.a. Street Property) (173 single-family detached houses)
19) Middle Creek Preserve (313 single-family detached houses)
20) Hailey's Glen (f.k.a. Kielbasa Property) (68 single-family detached houses)
21) Beachtree Preserve (155 single-family detached houses)

**Intersection Descriptions**

1) **Site Entrance/Lexington Avenue & Delaware Route 24**
   **Type of Control:** Currently unsignalized and proposed to be signalized.
   **Eastbound Approach:** (DE 24) existing one through and one left turn lane; proposed two through, one left turn, and one right turn lane.
   **Westbound Approach:** (DE 24) existing one through and one right turn lane; proposed two through, one left turn, and one right turn lane.
   **Northbound Approach:** (Site Entrance) stop-controlled; proposed one shared through-left and one right-turn lane.
   **Southbound Approach:** (Site Entrance) stop-controlled; currently one shared left-right turn lane; proposed one shared through-left and one right-turn lane.

2) **Delaware Route 24 / Love Creek Elementary School / Beacon Middle School**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) existing two through lanes and one exclusive lane for each turning movement.
   **Westbound Approach:** (DE 24) existing two through lanes and one exclusive lane for each turning movement.
   **Northbound Approach:** (Beacon Middle School) existing one shared through-left lane and one right turn lane.
   **Southbound Approach:** (Love Creek Elementary School) existing one shared through-left lane and one right turn lane.

3) **Delaware Route 24 & Mulberry Knoll Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) existing two through lanes and one exclusive lane for each turning movement.
   **Westbound Approach:** (DE 24) existing two through lanes and one exclusive lane for each turning movement.
   **Northbound Approach:** (Mulberry Knoll Road) existing one shared through-left lane and one right turn lane.
   **Southbound Approach:** (Mulberry Knoll Road) existing one shared through-left lane and one right turn lane.

4) **Delaware Route 24 & Plantation Road / Warrington Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) existing one left-turn lane, two through lanes, and one channelized right-turn lane.
   **Westbound Approach:** (DE 24) existing one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Warrington Road) existing one exclusive left-turn lane, one shared through-left lane, one exclusive through lane, and one right-turn lane.
   **Southbound Approach:** (Plantation Road) existing one exclusive left-turn lane, one shared through-left lane, one exclusive through lane, and one right-turn lane.

5) **Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)**
**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) existing one left-turn lane, two through lanes, and one right-turn lane.
**Westbound Approach:** (DE 24) existing one left-turn lane, two through lanes, and one right-turn lane.
**Northbound Approach:** (Beebe Road) existing one exclusive right-turn lane and one shared through-left lane.
**Southbound Approach:** (Entrance to Residence Inn) existing one exclusive right-turn lane and one shared through-left lane.

6) **Delaware Route 24 / Bryn Mawr Drive**
**Type of Control:** three-leg stop controlled intersection.
**Eastbound Approach:** (DE 24) existing one left-turn lane and two through lanes.
**Westbound Approach:** (DE 24) existing one right-turn lane and two through lanes.
**Southbound Approach:** (Bryn Mawr Drive) stop-controlled; existing one shared left-right turn lane.

7) **Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way**
**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) existing one left-turn lane, two through lanes, and one right-turn lane.
**Westbound Approach:** (DE 24) existing one left-turn lane, two through lanes, and one right-turn lane.
**Northbound Approach:** (Rehoboth Mall Service Road) existing one exclusive right-turn lane and one shared through-left lane.
**Southbound Approach:** (Hudson Way) existing one exclusive right-turn lane and one shared through-left lane.

8) **Delaware Route 1 / Delaware Route 24**
**Type of Control:** signalized three-leg intersection.
**Eastbound Approach:** (DE 24) existing three left-turn lanes and two right-turn lanes.
**Northbound Approach:** (DE 1) existing two exclusive left-turn lanes and three through lanes.
**Southbound Approach:** (DE 1) existing two exclusive left-turn lanes, three through lanes, and one U-turn lane.

9) **Warrington Road / Old Landing Road (Sussex Road 274)**
**Type of Control:** all-way stop-controlled four-leg intersection.
**Eastbound Approach:** (Warrington Road) existing one exclusive left-turn lane and one shared through-right lane.
**Westbound Approach:** (Strawberry Road) existing one shared through-left-right lane.
**Northbound Approach:** (Old Landing Road) existing one shared through-left-right lane.
**Southbound Approach:** (Old Landing Road) existing one shared through-left-right lane.

**10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)**

**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) existing one shared through -right lane; proposed to be one through lane and one right-turn (stop-controlled) lane.
**Westbound Approach:** (Cedar Grove Road) existing one shared through-left lane.
**Northbound Approach:** (Mulberry Knoll Road) stop-controlled; existing one shared left-right lane.

**11) Cedar Grove Road / Plantation Road**

**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) existing one through lane, one channelized right-turn lane, and one left-turn lane.
**Westbound Approach:** (Cedar Grove Road) existing one through lane, one channelized right-turn lane, and one left-turn lane.
**Northbound Approach:** (Plantation Road) existing one through lane, one channelized right-turn lane, and one left-turn lane.
**Southbound Approach:** (Plantation Road) existing one through lane, one channelized right-turn lane, and one left-turn lane.

**12) Delaware Route 24 / Spencer Lane / Williams Way**

**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) existing one through lane, one right-turn lane, and one left-turn lane.
**Westbound Approach:** (DE 24) existing one through lane, one right-turn lane, and one left-turn lane.
**Northbound Approach:** (Williams Way) existing one shared through-left-right lane (stop-controlled).
**Southbound Approach:** (Spencer Lane) existing one right-turn lane and one left-turn lane (stop-controlled).

**13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)**

**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) existing one through lane, one channelized right-turn lane, and one left-turn lane.
**Westbound Approach:** (DE 24) existing one through lane, one right-turn lane, and one left-turn lane.
**Northbound Approach:** (Camp Arrowhead Road) existing one through lane, one channelized right-turn lane, and one left-turn lane.
**Southbound Approach:** (Fairfield Road) existing one shared through-right lane and one left-turn lane.

14) **Delaware Route 24 / Harts Road (Sussex Road 277C)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) existing one through lane and one left-turn lane.
**Westbound Approach:** (DE 24) existing one through lane and one right-turn lane.
**Southbound Approach:** (Harts Road) existing one right-turn lane and one left-turn lane (stop-controlled).

15) **Robinsonville Road (Sussex Road 277) / Harts Road**
**Type of Control:** stop-controlled three-leg intersection.
**Westbound Approach:** (Harts Road) existing one shared left-right turn lane (stop-controlled).
**Northbound Approach:** (Robinsonville Road) existing one shared through-right turn lane.
**Southbound Approach:** (Robinsonville Road) existing one shared through-left turn lane.

16) **Delaware Route 24 / Jolyns Way (Sussex Road 289)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) existing one shared through-right turn lane.
**Westbound Approach:** (DE 24) existing one shared through-left turn lane.
**Northbound Approach:** (Jolyns Way) existing one shared left-right turn lane (stop-controlled).

## Safety Evaluation

**Crash Data:** Delaware Crash Analysis Reporting System (CARS) data was provided in the TIS for the three-year period from January 1, 2021, through December 31, 2023. A total of 7 reportable crashes occurred within 0.1 miles of the site access. Three were rear-end, two were sideswipe, one was an angle, and one was a single-vehicle crash. None of the crashes caused any injury or involved pedestrians or bicyclists.

**Sight Distance:** The study area generally consists of relatively flat roadways and there are few visual obstructions. As always adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site accesses.

## Transit, Pedestrian, and Bicycle Facilities

**Existing transit service:** Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates one fixed-route transit bus route in the area of the proposed Belle Meade development. Route 215 Millsboro/Rehoboth runs along DE 24 with the nearest stops located west of the site at the Love Creek Marina and east of the site at Beebe Medical Center.

**Planned transit service:** Delaware Transit Corporation (DTC) has requested that the developer construct a bus stop pad on SR 24 within the site frontage. The location, size, and type of bus pad will be determined through coordination with DTC.

**Existing bicycle and pedestrian facilities**: According to DelDOT's Sussex County Bicycle Map, Delaware Route 24 is designated as a High-Traffic Regional Bicycle Route with a Bikeway. Plantation Road is designated as a High-Traffic Statewide Bicycle Route with a Bikeway. Recent DelDOT projects along SR 24 have or are in the process of adding bicycle lanes along SR 24 between Love Creek and SR 1. The same projects have also added sidewalks or shared use paths along the same segment of SR 24, except for the segment between Mulberry Knoll Road and Plantation Road / Warrington Road.

**Planned bicycle and pedestrian facilities:** The developer should maintain the existing sidewalk or shared use path along the site frontage that was constructed by the "SR 24, Love Creek to Mulberry Knoll" project. In addition, a signalized pedestrian crossing of SR 24 should be included at the proposed signal at the intersection of SR 24 and Lexington Avenue.

**Previous Comments**

The initial scoping memorandum between the developer and DelDOT was dated December 9, 2022.

In a review letter dated October 6, 2023, DelDOT commented on the traffic counts and seasonally adjusted traffic volumes. The developer was asked to include additional committed developments that were originally included in the scoping memorandum. DelDOT also provided additional count data and directed the developer to update the volume figures.

In a second review letter dated October 30, 2023, DelDOT requested additional revisions to the committed development volumes due to construction detours in the area during the traffic counts. The developer was asked to address the noted issues and proceed with the Preliminary TIS.

In a third review letter dated December 28, 2023, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and distribution. The developer was then directed to resubmit the Preliminary TIS.

In a fourth review letter dated January 25, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and then resubmit the Preliminary TIS.

In a fifth review letter dated February 15, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to revise how growth factors were applied to volumes provided by the Henlopen TID and associated volume figures then resubmit the Preliminary TIS.

In a sixth review letter dated February 19, 2024, DelDOT noted that the Preliminary TIS was acceptable as submitted and directed the developer to proceed with the Final TIS.

It appears that all substantive comments from DelDOT's TIS Scoping Memorandum, Traffic Count Review, Preliminary TIS Review, and other correspondence were addressed in the Final TIS submission.

**General HCS Analysis Comments**
*(see table footnotes on the following pages for specific comments)*

1) Both the TIS and McCormick Taylor utilized Highway Capacity Software (HCS) version 2023 to complete the traffic analyses.

2) The TIS and McCormick Taylor generally used heavy vehicle percentages (HV%) from turning movement counts for existing and future conditions (as per DelDOT's Development Coordination Manual section 2.2.8.11.6.H). McCormick Taylor and the TIS assumed 3% HV for future movements and at the proposed site entrance.

3) The TIS and McCormick Taylor determined overall intersection peak hour factors (PHF) for each intersection based on the turning movement counts. Future PHFs were determined as per the DelDOT Development Coordination Manual section 2.2.8.11.6.F where applicable. The application of future PHFs in the TIS was inconsistent between intersections and volume scenarios.

4) For analyses of all intersections, McCormick Taylor and the TIS assumed 0% grade for all movements.

Table 2
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [1] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **1. SR 24 / Lexington Avenue / Site Entrance** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 – Left | A (8.1) | B (10.4) | A (8.7) | A (8.1) | B (10.5) | A (8.8) |
| Southbound Lexington Avenue | D (30.0) | E (42.7) | E (35.7) | D (30.5) | E (43.0) | E (36.3) |
| | | | | | | |
| 2032 No Build (Case 2) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (13.3) | B (10.5) | A (9.0) | B (13.2) | B (10.4) |
| Southbound Lexington Avenue | E (36.8) | F (90.0) | F (53.2) | F (108.0) | F (251.2) | F (150.1) |
| | | | | | | |
| 2032 Build (Case 3) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (12.8) | B (10.1) | A (9.0) | B (12.7) | B (10.1) |
| Westbound SR 24 – Left | B (13.9) | C (17.7) | D (34.9) | B (13.8) | C (16.6) | E (35.8) |
| Northbound Site Entrance | F (333.4) | F (3337.9) | F (10913) | F (1486.8) | F (17804.0) | F (44574.1) |
| Southbound Lexington Avenue | F (354.3) | F (2563.7) | F (6644.9) | F (3163.6) | F (13387.7) | [3] |
| | | | | | | |
| 2032 Build (Case 3) Signal [2] | | | | | | |
| Overall | - | - | - | B (14.1) | C (28.3) | F (92.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [4] | | | | | | |
| Overall | B (10.2) | B (11.6) | B (19.2) | B (12.0) | B (16.0) | C (25.0) |

[1] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[2] TIS modeled Case 2 and 3 with two through lanes in both eastbound and westbound directions on SR 24. MT modeled with one through lane in each direction based on the proposed condition in the SR 24, Love Creek to Mulberry Knoll Road Project.
[3] Capacity cannot be calculated as intersection volume exceeds HCM limitations.
[4] Henlopen TID proposes two through lanes in each direction along SR 24.

Table 3
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [5] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **2. SR 24 / Love Creek Elementary School / Beacon Middle School** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) [6] | | | | | | |
| Overall | A (9.6) | A (7.7) | A (2.0) | B (14.2) | B (10.4) | A (6.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (6.4) | A (4.6) | A (0.6) | B (10.3) | A (5.4) | C (20.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (5.9) | A (4.5) | A (0.8) | C (23.3) | A (7.3) | D (41.3) |

[5] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[6] TIS modeled intersection in Case 1 with one through lane in each direction. Existing conditions, following the completion of the SR 24, Love Creek to Mulberry Knoll Road Project, will have two through lanes in each direction along SR 24.

Table 4
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [7] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **3. SR 24 / Mulberry Knoll Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (8.8) | A (9.3) | B (18.1) | A (8.9) | A (8.3) | B (17.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (30.5) | D (46.0) | E (78.1) | B (19.9) | C (23.3) | C (28.5) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (37.0) | D (52.3) | F (85.0) | C (20.7) | C (24.9) | C (30.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID)[8] | | | | | | |
| Overall | - | - | - | B (17.1) | B (16.4) | C (23.5) |

[7] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[8] Henlopen TID proposes the addition of dedicated right-turn lanes on both minor street approaches. The turn lanes are modeled with 180-foot storage length.

Table 5
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [9] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **4. SR 24 / Plantation Road / Warrington Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | C (23.3) | C (31.8) | C (34.6) | D (36.6) | D (44.1) | D (50.4) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (26.1) | C (35.6) | D (39.0) | C (32.4) | D (53.6) | D (50.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (26.7) | D (37.5) | D (40.7) | C (31.5) | E (60.8) | D (54.8) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [10] | | | | | | |
| Overall | - | - | - | C (28.8) | D (49.5) | D (42.0) |

[9] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[10] The Henlopen TID conceptual design includes two left turn lanes, two through lanes, and one right turn lane on the Warrington Road and Plantation Road approaches.

Table 6
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [11] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **5. SR 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (1.5) | A (5.1) | A (1.3) | A (1.8) | A (9.4) | A (7.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (1.3) | A (3.8) | A (1.3) | A (1.3) | B (10.9) | B (11.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (1.3) | A (3.7) | A (1.3) | A (1.7) | B (11.1) | B (12.2) |

[11] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 7
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [12] Two-Way Stop-Control** | **LOS per TIS [13]** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **6. SR 24 / Bryn Mawr Drive** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | B (10.4) | B (11.4) | B (11.7) | A (8.5) | A (9.5) | A (8.8) |
| Southbound Bryn Mawr Drive | C (15.1) | C (20.1) | C (21.8) | C (18.7) | C (20.1) | C (23.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | B (12.4) | C (17.0) | C (18.1) | A (8.9) | B (11.3) | B (11.1) |
| Southbound Bryn Mawr Drive | C (17.4) | D (29.6) | D (33.7) | D (30.6) | E (49.5) | F (56.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | B (11.5) | B (14.1) | C (15.1) | A (9.1) | B (11.7) | B (11.7) |
| Southbound Bryn Mawr Drive | C (17.1) | D (25.7) | D (29.4) | E (35.8) | F (62.4) | F (75.2) |

[12] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[13] TIS modeled this intersection with three though lanes in each direction on SR 24 which does not match the existing or proposed conditions.

Table 8
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [14] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **7. SR 24 / Rehoboth Mall Service Road / Hudson Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (3.1) | A (8.0) | A (5.4) | A (3.8) | B (10.7) | A (5.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (2.5) | A (6.0) | A (4.3) | A (2.5) | A (7.4) | A (5.0) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (2.4) | A (5.7) | A (4.1) | A (3.2) | A (7.1) | A (4.2) |

[14] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 9
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [15] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **8. SR 24 / SR 1** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (19.7) | C (23.0) | D (39.2) | B (17.8) | C (22.9) | C (24.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | D (43.2) | D (52.2) | E (77.3) | C (23.6) | C (32.1) | C (29.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (46.2) | E (56.5) | F (83.9) | C (29.8) | D (35.1) | C (33.1) |

[15] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 10
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [16] All-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **9. Warrington Road / Old Landing Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound Warrington Road | D (31.6) | C (23.3) | F (116.1) | D (28.4) | C (20.4) | F (102.7) |
| Westbound Strawberry Way | A (9.5) | A (9.6) | B (11.1) | A (9.6) | A (9.7) | B (11.2) |
| Northbound Old Landing Road | C (15.7) | B (12.9) | C (22.5) | C (15.6) | B (12.8) | C (22.3) |
| Southbound Old Landing Road | B (12.3) | C (20.3) | D (31.6) | B (12.3) | C (20.0) | D (31.2) |
| Overall | C (22.9) | C (20.0) | F (66.0) | C (21.2) | C (18.7) | F (60.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound Warrington Road | F (130.4) | F (131.1) | F (336.8) | F (75.9) | F (51.7) | F (216.8) |
| Westbound Strawberry Way | B (10.7) | B (12.1) | B (12.9) | B (10.8) | B (12.1) | B (13.0) |
| Northbound Old Landing Road | C (22.4) | c (20.2) | E (42.8) | C (22.1) | C (20) | E (42.4) |
| Southbound Old Landing Road | C (15.2) | F (88.0) | F (103.2) | C (15.1) | F (89.9) | F (101.8) |
| Overall | F (76.7) | F (91.8) | F (192.0) | E (48.5) | F (60.2) | F (138.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound Warrington Road | F (161.0) | F (155.6) | F (380.1) | F (115.3) | F (62.0) | F (243.9) |
| Westbound Strawberry Way | B (10.8) | B (12.2) | B (13.0) | B (10.9) | B (12.3) | B (13.1) |
| Northbound Old Landing Road | C (23.4) | C (20.9) | E (46.7) | C (23.1) | C (20.8) | E (46.3) |
| Southbound Old Landing Road | C (16.1) | F (105.0) | F (128.6) | C (16.0) | F (103.4) | F (127.6) |
| Overall | F (93.3) | F (108.9) | F (221.0) | F (57.0) | F (69.8) | F (159.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Roundabout | | | | | | |
| Overall | B (10.6) | B (11.7) | C (20.4) | B (10.6) | B (11.7) | C (20.4) |

[16] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 11
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [17] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **10. Mulberry Knoll Road / Cedar Grove Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.2) | A (7.6) | A (9.8) | A (8.1) | A (7.6) | A (9.9) |
| Northbound Mulberry Knoll Road | B (11.5) | B (11.1) | C (20.5) | B (11.8) | B (11.1) | C (20.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.3) | A (8.9) | A (8.3) | B (12.3) |
| Northbound Mulberry Knoll Road | C (20.1) | D (32.5) | F (614.3) | C (20.1) | D (32.5) | F (614.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (22.3) | E (40.4) | F (837.7) | C (22.3) | E (40.4) | F (837.7) |
| | | | | | | |
| 2032 Build (Case 3) w/ improvements [18] | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (19.3) | D (33.9) | F (581.4) | C (19.3) | D (33.9) | F (581.4) |
| | | | | | | |
| 2032 Build (Case 3) Roundabout [19] | | | | | | |
| Overall | - | - | - | A (6.9) | A (6.7) | C (18.0) |

[17] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[18] The TIS proposes to construct a dedicated eastbound right-turn lane on Cedar Grove Road.
[19] Henlopen TID proposes a roundabout at this intersection.

Table 12
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [20] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **11. Cedar Grove Road / Plantation Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (18.3) | B (18.3) | C (31.2) | B (17.6) | B (17.7) | C (34.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | B (19.8) | C (22.5) | D (41.4) | B (18.8) | C (21.0) | C (34.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (20.2) | C (23.3) | D (44.4) | B (19.1) | B (21.9) | D (44.8) |

[20] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 13
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [21] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **12. SR 24 / Spencer Lane / Williams Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.6) | B (10.4) | A (8.6) | A (8.6) | B (10.4) | A (8.6) |
| Westbound SR 24 - Left | A (9.8) | A (8.9) | B (10.0) | A (9.8) | A (8.9) | B (10.0) |
| Northbound Williams Way | C (24.3) | F (56.0) | D (31.2) | C (24.3) | F (56.0) | D (31.2) |
| Southbound Spencer Lane | C (24.3) | E (44.1) | E (40.6) | C (24.3) | E (44.1) | E (40.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (12.9) | B (10.2) | A (9.6) | B (13.5) | B (10.4) |
| Westbound SR 24 - Left | B (11.5) | B (10.6) | B (12.3) | B (11.5) | B (10.9) | B (12.7) |
| Northbound Williams Way | F (52.4) | F (220.3) | F (97.8) | F (52.4) | F (284.6) | F (115.8) |
| Southbound Spencer Lane | F (65.8) | F (233.6) | F (221.1) | F (65.8) | F (330.5) | F (291.9) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | A (10.0) | B (13.5) | B (10.8) | A (10.0) | B (14.2) | B (11.0) |
| Westbound SR 24 - Left | B (11.9) | B (11.1) | B (13.3) | B (11.9) | B (11.4) | B (13.8) |
| Northbound Williams Way | F (65.5) | F (305.4) | F (148.5) | F (65.5) | F (406.1) | F (181.6) |
| Southbound Spencer Lane | F (91.3) | F (535.2) | F (408.7) | F (91.3) | F (505.6) | F (547.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [22] | | | | | | |
| Eastbound SR 24 - Left | - | - | - | B (10.4) | B (14.5) | B (11.1) |
| Westbound SR 24 - Left | - | - | - | B (12.0) | B (11.5) | B (13.9) |
| Northbound Williams Way | - | - | - | E (41.9) | F (130.2) | F (86.1) |
| Southbound Spencer Lane | - | - | - | D (33.3) | F (176.2) | F (117.7) |

[21] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[22] Henlopen TID proposes left-turn lanes, two through lanes, and right turn lanes on both SR 24 approach at this intersection.

Table 14
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [23] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **13. SR 24 / Camp Arrowhead Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (10.5) | B (13.7) | B (14.6) | B (12.4) | B (15.8) | B (16.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (27.4) | E (59.5) | F (88.3) | B (10.6) | B (17.8) | B (18.2) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (45.3) | F (89.5) | F (129.1) | B (12.3) | D (38.9) | E (58.6) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [24] | | | | | | |
| Overall | - | - | - | A (6.5) | B (11.0) | B (12.2) |

[23] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[24] Henlopen TID proposes an additional through lane in both directions of SR 24.

Table 15
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [25] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **14. SR 24 / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.4) | A (9.4) | A (8.5) | A (8.2) | A (9.5) | A (8.5) |
| Southbound Harts Road | C (16.8) | E (37.7) | D (31.7) | C (18.6) | E (38.6) | D (32.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.3) | B (11.5) | A (9.9) | A (9.3) | B (11.5) | A (9.9) |
| Southbound Harts Road | F (109.5) | F (648.1) | F (541.0) | F (109.5) | F (648.1) | F (541.0) |
| | | | | | | |
| 2032 Build (Case 3) [26] | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (11.9) | B (10.4) | A (9.6) | B (11.9) | B (10.4) |
| Southbound Harts Road | F (198.1) | F (989.8) | F (982.7) | F (198.1) | F (989.8) | F (982.7) |

[25] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[26] Henlopen TID proposes the removal of this intersection.

Table 16
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [27] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **15. Robinsonville Road / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Harts Road | B (10.1) | B (13.2) | B (12.7) | B (10.1) | B (13.2) | B (12.7) |
| Southbound Robinsonville Road - Left | A (7.8) | A (7.6) | A (7.9) | A (7.8) | A (7.6) | A (7.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Harts Road | B (11.5) | A (25.1) | C (19.8) | B (11.8) | A (29.5) | C (19.8) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.2) | A (8.7) | A (8.2) | A (8.3) | A (8.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Harts Road | B (11.7) | D (29.7) | C (23.2) | B (12.0) | D (29.7) | C (20.5) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.3) | A (8.8) | A (8.3) | A (8.3) | A (8.7) |

[27] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 17
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [28] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **16. SR 24 / Jolyns Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound SR 24 - Left | A (8.7) | A (8.3) | A (9.1) | A (9.0) | A (8.3) | A (9.1) |
| Northbound Jolyns Way | C (16.0) | C (15.6) | C (20.8) | C (16.6) | C (16.1) | C (20.8) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound SR 24 - Left | A (9.4) | A (9.1) | B (10.2) | A (9.4) | A (9.1) | B (10.2) |
| Northbound Jolyns Way | C (22.2) | C (24.5) | E (37.1) | C (22.2) | C (24.5) | E (37.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound SR 24 - Left | A (9.6) | A (9.3) | B (10.6) | A (9.6) | A (9.3) | B (10.6) |
| Northbound Jolyns Way | C (24.3) | D (27.5) | E (45.3) | C (24.3) | D (27.5) | E (45.3) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [29] | | | | | | |
| Overall | - | - | - | A (1.5) | A (1.6) | A (1.4) |

[28] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

[29] Henlopen TID proposes to signalize this intersection with two through lanes and dedicated turn lanes in each direction along SR 24, extending Jolyns Way north of SR 24 to connect to Robinsonville Road forming a northern leg of the intersection, and adding dedicated right turn lanes on both Jolyns Way approaches. The capacity analysis for the Case 3 with TID results above modeled the intersection without the proposed northern leg because traffic volumes have not been prepared for this condition.

**PLANNING & ZONING COMMISSION**
ROBERT C. WHEATLEY, CHAIRMAN
HOLLY J. WINGATE, VICE-CHAIRMAN
BRIAN BUTLER
J. BRUCE MEARS
G. SCOTT COLLINS

**Sussex County**
DELAWARE
sussexcountyde.gov
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JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

March 7, 2025

Mr. J. Michael Riemann, P.E.
Principal
Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

By email to: mriemann@beckermorgan.com

RE: Staff Review of the Preliminary Site Plan for Belmead Farm, LLC (C/Z 2001) for the establishment of 166 apartments to be housed in 45,940 square feet of mixed commercial structures and seven (7), three-story, 24-unit apartment buildings containing 168 apartment units total (for a combined total of 334 multifamily units), a clubhouse amenity, private garages and storage units, five (5) commercial structures containing a total of 26,065 square feet of commercial uses (to potentially include two (2) drive-thru facilities), related parking and associated site improvements to be located on a 39.22 acre parcel of land the east side of John J. Williams Highway (Route 24), approximately 0.31-mile southwest of Mulberry Knoll Road (S.C.R. 284) in Lewes, Delaware
Tax Parcels: 334-18.00-40.01 & 40.06

Dear Mr. Riemann,

Further to your submission of February 25th, 2025, Staff have reviewed the Preliminary Site Plan for Belmead Farm, LLC (C/Z 2001) for the establishment of 166 apartments to be housed within 45,940 square feet of structures of mixed commercial and residential use and seven (7) three-story, 24-unit apartment buildings containing 168 apartment units total (for a combined total of 334 multifamily units), a clubhouse amenity, private garages and storage units, five (5) commercial structures containing a total of 26,065 square feet of commercial uses (to potentially include two (2) drive-thru facilities), related parking and associated site improvements to be located on a 39.22 acre parcel of land. The parcel is zoned Agricultural Residential (AR-1) District, and the related Change of Zone Application is to facilitate a Change of Zone to a Planned Commercial (C-4) District.

The property is lying on the east side of John J. Williams Highway (Route 24), approximately 0.-31 mile southwest of Mulberry Knoll Road (S.C.R. 284) in Lewes, Delaware. The majority of the parcels have a Growth Area Future Land Use Designation of "Commercial Area" with a small portion on the southeastern corner of Parcel 40.01 being located in the "Coastal Area" per Sussex County's 2018 Comprehensive Plan Update. The subject property is located within the Henlopen Transportation Improvement District (TID). However, the Applicant has completed a Traffic Impact Study (TIS) at the request of the Delaware Department of Transportation (DelDOT) as it was noted that the proposed development is not consistent with the Land Use and Transportation Plan (LUTP).

Staff engaged in a series of Pre-Application Meetings with the Applicant. The first meeting took place on Wednesday, June 29th, 2022, where Staff met with the Applicant provided high-level commentary regarding the proposal. The second meeting took place on Thursday, February 13th, 2025, in which Staff reviewed the design of the project and provided more detailed feedback regarding the Site design and the status of required document submittals.

Staff have reviewed the submitted Preliminary Site Plan for compliance with Chapter 115 (the Zoning Ordinance) and the Planned Commercial (C-4) District Site Plan specific criteria outlined in §115-83.25(F)(2)(a-h) and §115-83.25(F)(4)(a-d) and the provisions and goals outlined within Sussex County's 2018 Comprehensive Plan. Staff have the following comments for your consideration with regard to the Revised Preliminary Site Plan:

<u>Overall Site Plan Comments</u>

1. **Staff recommend that the Applicant consider an applying a Master Planning approach when incorporating the various design elements of the Plan to ensure an appropriate juxtaposition and harmony of the various uses proposed. Doing so will ensure that the intent of the C-4 District to *"provide an integrated Master Plan setting for uses in the Planned Commercial Development District"* is fully achieved (§115-83.25(f)(4)).**
    - *BMG Response: The plan presented as part of the rezoning package is a result of applying a master plan approach to design. There was a thoughtful process to include the clients goals within the context of the site, while conforming to the C-4 District objectives. While the final plan does not show all the iterations of master planning, it is the culmination of all that is being presented.*
2. **Staff note that the purpose of the Planned Commercial District is to encourage carefully planned large-scale commercial, retail, and mixed-use developments as a means of creating a superior shopping, working and living environment through unified developments, and to provide for the application of design ingenuity while protecting existing and future developments. Please ensure that these elements are fully demonstrated and addressed in the Plans and any supporting statements (§115-83.24).**
    - *BMG Response: We believe that the plan presented as part of the rezoning package creates harmony between commercial, mixed use, and residential uses throughout the site, without detrimental harm to surrounding development, both existing and future.*
3. Please show the location and design details of all refuse areas on the Plans (ie: dumpster facilities) and include the nature of any proposed screening to be provided.
    - *BMG Response: Locations of refuse areas are shown on the plans. Final details of the screening structures will be provided at final site plan.*
4. Staff note that for a proposal of 308 individual parking spaces (301 to 400 parking spaces total) for the multifamily units that 8 ADA Accessible Spaces are required. It appears that 7 spaces have been provided. Please include one (1) further ADA Accessible Space in order to comply with the 2012 International Building Code Requirements (2012 International Building Code, 11-14 - Table 1106.1 "Accessible Parking Spaces").
    - *BMG Response: It is our intent to adhere to all ADA requirements. We will*

*include an additional ADA space to comply with this requirement.*

5. Staff do note that a small portion of the subject property on the southwest side contains a Future Land Use Map designation of "Coastal Area." Therefore, Staff ask that the Applicant please ensure that design consideration is given by the Applicant toward the establishment of a greenways which utilizes schools, parks, wildlife habitat areas, river and stream corridors, wetlands, floodplains, historic sites, business parks, urban sidewalks, abandoned rail lines, roads, beach areas and vacant land. Greenways should provide benefits like safe pedestrian, bicycling and equestrian routes for recreationists and commuters; and natural wildlife corridors and biological reserves (§115-194.3(E)).
    - *BMG Response: Development has been limited to those areas outside of the Coastal Area, and the existing greenway will be maintained to the highest extent practicable.*

6. Staff request that the nature, character and location of all transit facilities be shown on the Plans. Please note that the location of any transit facilities will have to be coordinated with the Delaware Transit Corporation (DTC), a Division of the Delaware Department of Transportation (DelDOT) in accordance with their siting requirements.
    - *BMG Response: We will coordinate our plans with DTC and show all proposed transit facilities prior to final site plan.*

<u>Staff Review Comments Regarding Application of Sussex County Comprehensive Plan Elements</u>

1. **Please ensure that any open space or public spaces provided serve a valuable public purpose and is inter-connected. Wherever feasible, open space should be provided in locations that can connect to existing public or semi-public open spaces or preserve land along a waterway (Sussex County Comprehensive Plan, 12-10).**
    - *BMG Response: The intent of the proposed master plan is to provide public, and semi-public open space to the greatest extent practical while meeting the goals and objectives of the client's development goals, as well as the C-4 Planned Commercial District. Open spaces provide the users with valuable spaces to utilize, for both active and passive recreation and congregation.*
2. **Please ensure that the new development complements the character of the existing surrounding communities by providing an appropriate distribution and intensity of uses to include buffers and downlighting where appropriate (Sussex County Comprehensive Plan, 4-9).**
    - *BMG Response: The proposed development has been thoughtfully planned to compliment the surrounding area and provide a distribution of development intensity across the site.*
3. Staff request that the character of all proposed lighting be shown on the Plans. The Comprehensive Plan states, "screening of outdoor lights on residential and commercial properties should be provided whenever feasible to prevent intrusions into adjoining residential areas" (Sussex County Comprehensive Plan, 12-4).
    - *BMG Response: Character and proposed lighting has not been determined at the time of master plan. It would be the intent to provide adequate and attractive lighting to the site, while adhering to all screening and light pollution standards to prevent any light intrusion on to neighboring properties.*

4. Please consider placement of parking to the rear or side of buildings, where practicable, so that the front yard can be landscaped. Doing so provides for a less intense and more aesthetically pleasing corridor sightline (Sussex County Comprehensive Plan 12-4).
    - *BMG Response: Placement of parking has been thoughtfully designed in a way to not create large expanses of parking which would be visible from the public right-of-way. Residential parking for the mixed-use buildings have been located to the rear of the buildings, to enhance the pedestrian experience of the retail and commercial areas.*
5. Street trees and shade trees within existing parking lots are encouraged to lessen the intensity of large parking areas (Sussex County Comprehensive Plan, 12-12). Staff recommend a robust street tree design along the primary lateral corridors of internal vehicle and pedestrian circulation in order to enhance the pedestrian design on the site.
    - *BMG Response: The landscape plan that has been provided is general in nature as required per the C-4 rezoning requirements. A thorough landscape plan will be developed as the plans progress to include an attractive site, with seasonal interest, which will enhance the user experience. Landscaping will be focused on native species, and appropriate for the coastal area.*
6. Staff recommend sidewalks wider than 5 feet along the major pedestrian corridors throughout the site to more fully meet the intent of (Sussex County Comprehensive Plan, 12-7).
    - *BMG Response: Understood.*

<u>Planned Commercial District (C-4) - Site Plan Review Requirements</u>

1. **Staff request that a tabular summary of the percentage of the Site devoted to buildings, open space, streets and parking areas and total floor area of all residential and non-residential structures (§115-83.25(F)(2)(c)).**
    - *BMG Response: Site Data table has been updated reflect areas noted above.*
2. **Please provide Architectural Sketches or typical proposed structures and typical landscaping and screening areas (§115-83.25(F)(2)(e)).**
    - *BMG Response: Architectural renderings and elevations have been provided as part of the rezoning booklet provided to staff for distribution.*
3. Staff request that the required setback lines (BRLs) be clearly delineated on the Plans to ensure compliance with minimum District requirements and that measurements be provided of the various development structures to the property lines (§115-83.25(F)(2)(a)).
    - *BMG Response: Building restriction lines have been added to the Plans.*
4. Staff request that further details be provided on the Landscape Plan and that the Landscape Plan show the proposed height and type of trees to be provided within the development project. For example, please clarify that the "interior parking lot canopy trees" to be included are deciduous trees (§115-83.25(F)(2)(b)).
    - *BMG Response: The landscape plan that has been provided is general in nature as required per the C-4 rezoning requirements. A detailed landscape plan will be developed as the plans progress to include an attractive site, with seasonal interest, which will enhance the user experience. Landscaping will be focused on native species, and appropriate for the coastal area.*
5. Staff note that a Plan showing proposed generalized parking arrangements has been included in the Applicant's submittal (§115-83.25(F)(2)(d)). Staff request the Plan include a breakdown of the number of bedrooms in the proposed multifamily units in both the apartment and

mixed-use buildings to ensure a design compliant with the parking provisioning requirements in (§115-162(B)(1)). Please note any parking reductions based on (§115-162(B)(2)) will require the Plan to show that "the land area saved shall be used only for open space, landscaping or pedestrian walkways."

- *BMG Response: The breakdown of bedrooms proposed in the multifamily and mixed use buildings has been provided in the Site Data column.*

6. **Staff reviewed the Plan in terms of the requirements of (§115-83.25(F)(2)) which requires the Plan display the requirements of (§115-220 – *Preliminary Site Plan Requirements*) and have the following comments:**
   - Please include Zoning District boundaries (§115-220(B)(2)).
     - Please include the location and nature of all proposed construction, excavation or grading, including but not limited to buildings, streets and utilities (§115-220(B)(5)). *BMG Response: The subject parcel is zoned AR-1 and all adjacent parcels are also zoned AR-1, therefore district boundaries are not within the view of the plan. In addition, the plans show locations of construction items such as buildings and streets. The proposed utility networks will be designed in accordance with all applicable agency requirements, including but not limited to Tidewater Utilities, Sussex County Engineering, DHSS Office of Drinking Water, DNREC Division of Water and the DE State Fire Marshal. Detailed designs of these networks will be provided after further coordination with each office has occurred. Please refer to the Public Facilities Evaluation Report for additional information related to utility availability and design.*
   - Please include the Net Development Area (§115-220(B)(6)).
     - Please include approximate location and size of nonresidential areas, if any (parking areas, loading areas or other) (§115-220(B)(9)).

       *BMG Response: The net development area has been provided.*
   - Please include approximate location and size of recreational areas, if any (§115-220(B)(10)).
     - Please include the number of construction phases proposed, if any, with the plot showing the approximate boundaries of each phase and the proposed completion date of each phase (§115-220(B)(12)).

       *BMG Response: The project will be constructed in three (3) phases. Phase 1 – Multifamily; Phase 2 -Mixed Use; Phase 3 – Commercial. The proposed completion date of each phase is unknown at this time. A phase plan has been included with this submission to depict the approximate location and size of each phase, as indicated above.*
     - Please show location of all wetlands (both state and federal) shall be indicated, in order to facilitate compliance with state and federal wetlands requirements (§115-220(B)(13)).

       *BMG Response: The existing wetlands are shown on the Site Plan and a copy of the Wetlands Delineation Report was included within the Drainage Assessment Report (DAR). Federally jurisdictional palustrine forested wetlands are located in the southern corner of the subject property. These are likely also regulated as Section 404 wetlands by DNREC Subaqueous Lands. The wetlands and associated buffers will not be impacted by these development plans. In fact, a 100 ft buffer is provided, rather than the minimum 30 ft buffer. Please refer to the DAR for a detailed report of wetland findings.*

- Please include the designation of all areas proposed as open space on the Plan (§115- 220(B)(15)).
  *BMG Response: Open space label designations have been added to the Plans.*
- Please provide interconnectivity (Stub/Easement) to all parcels adjacent to Parcels 40.01 & 40.06 on the Plan (§115-220(B)(16)).
  *BMG Response: The plans currently show an interconnectivity stub to the western adjacent parcel 39.00, along the east/west access road. The project considered connectivity to the east, but the connection would stub to an existing running track at the Beacon Middle School. Should the School District desire an interconnection, we can revisit the feasibility of that connection. At this time, the interconnection would not provide benefit to either parcel. Any subject interconnection would be subject to a cross access easement and agreement with the adjacent parcel owners.*
- Please provide all items listed in (§115-220(B)(17)(a-h)) related to wetland resources on the site on the Plan:
  *BMG Response: The existing wetlands on-site are non-tidal wetlands requiring a 30 ft. resource buffer. We have voluntarily provided a 100 ft. buffer, as the resources are located in the forested areas to remain undisturbed. An access easement is not proposed as the buffer is not a constructed buffer enhancement, requiring regular maintenance.*
- Boundary and wetland type
  *BMG Response: Wetland type has been added to the plans.*
- All existing forest by type as indicated in (§115-220(B)(17)(b)).
  *BMG Response: Forest type has been added to the plans.*
- Proposed access easement layout (§115-220B(17)(f)).
  *BMG Response: Proposed access easement provisions are subject to coordination with each subject adjacent parcel. Should the adjacent parcel owners be willing to enter*
- A reference by title, author and date, to the DAR (§115-220(B)(17)(g)).
  *BMG Response: A DAR reference was added to the Site Data Table.*
- Any walking trails, including the method of construction and the materials used to establish the trails (§115-220B(17)(h)).
  *BMG Response: No walking trails are proposed to be constructed with resource buffer areas. Concrete sidewalks are proposed to be constructed throughout the facility as shown on the plans.*

7. Please include all proposed setbacks for both Parcels on the Plan (§115-83.25F(2)(a)).
   *BMG Response: Proposed setbacks have been added to the plans however please note that it is intended to consolidate the parcels in the future.*
8. Please include the required Tabular Summary (§115-83.25F(2)(c)).
   *BMG Response: The Site Data table was updated to include tabular summaries of all appropriate areas.*

9. Please include architectural sketches of typical proposed structures and typical landscaping and screening areas (§115-83.25(F)(2)(e)). Staff request that the architectural plans clearly show the active frontages and orientation of the buildings and how these buildings relate to public realm.
   *BMG Response: A supplemental booklet was provided on March 7th, 2025 which included renderings and architectural elevations of the proposed buildings.*

10. Please include plan or report indicating the extent, timing and estimate costs of all off-site improvements such as roads, sewer and drainage facilities necessary to the construction of the planned development. Such plan or report shall relate to the sequence of development (§115-83.25F(2)(f)).
    *BMG Response: An Offsite Improvements – Opinion of cost was provided within the Environmental Assessment & Public Facilities Evaluation Report (EAPFR). See pg 140 (last page) of the document.*
11. Please provide a Report or Plan showing the adequacy of public facilities and services such as water, sewer drainage, streets and roads to serve the proposed development (§115-83.25F(2)(g)).
    *BMG Response: An Environmental Assessment & Public Facilities Evaluation Report (EAPFR) was provided with the application package. Section 2.0 of the report discusses public facilities and services.*
12. Please include a general plan for sedimentation and erosion control and stormwater management (§115-83.25F(2)(h)).
    *BMG Response: The Site Plan includes provisions for sedimentation, E&S control and stormwater management. Please note the locations of silt fence and a stabilized construction entrance, as well as stormwater management areas that will be utilized as temporary sediment traps during construction. In addition, all stormwater management practices and erosion and sediment control devices will be in accordance with DNREC 5101 Sediment and Stormwater Regulations.*
13. Staff request the Applicant consider more landscape buffering between the exclusively residential use (Apartments) and the mixed-use structures as well as around the proposed Clubhouse (§115-83.25F(4)(c)).
    *BMG Response: Additional landscaping has been considered and shown on the Site Plan rendering graphic that was provided within the supplemental booklet provided on March 7, 2025. A dense evergreen buffer will be provided and details will be further developed as the plan progresses into final site plan stage.*

Prior to approval of the Final Site Plan, approval letters or letters of no objection from the following agencies shall be submitted to the Sussex County Planning and Zoning Office (All items in which a check mark appears have been received by the Department. Any items in bold have not been received and still require submittal to the Department):

- **Delaware Department of Transportation (DelDOT)**
- **Sussex Conservation District**
- **Office of the State Fire Marshal**

*BMG Response: Noted. Agency approvals will be provided upon receipt.*

Once all of the above matters have been addressed, please provide **one (1) full-size copy and one (1) electronic copy of a Revised Preliminary Site Plan**. This Application has been scheduled for a Public Hearing on **Wednesday, March 19th, 2025**. Therefore, please submit all required materials no later than the close of business on **Tuesday, March 11th, 2025.**

Please feel free to contact the Department with any questions during business hours, 8:30 A.M. – 4:30 P.M., Monday through Friday at 302-855-7878.

Sincerely,

Mr. Jamie Whitehouse, AICP MRTPI
Director, Department of Planning and Zoning

CC: Mr. Jonathan S. Falkowski, P.E., Associate Principal – Becker Morgan Group, Inc.
Mr. Chad D. Carter, P.E., Senior Associate – Becker Morgan Group, Inc.
Change of Zone No. 2001 Belmead Farm, LLC file

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

March 11, 2025

Mr. Jamie Whitehouse, Director
Sussex County Planning  Zoning
2 The Circle, P.O. Box 589
Georgetown, Delaware 19947

RE: **Zoning Map Amendment Application (Supplemental Information)**
**BELLE MEAD FARM**
Sussex County, DE
BMG Project No.: 2022079.00
C/Z: 2001

Dear Jamie:

On behalf of our client, Belmead Farm, LLC, Becker Morgan Group, Inc. is hereby submitting a point by point response to the staff comments received on 3/07/202.

If you have any questions, please do not hesitate to contact me.

Sincerely,

BECKER MORGAN GROUP, INC.

Jon Falkowski

Jon S. Falkowski, P.E.
Associate Principal

Cc: Mike Riemann – Becker Morgan Group, Inc. (mriemann beckermorgan.com)
Chad Carter – Becker Morgan Group, Inc. (ccarter beckermorgan.com)

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BECKER MORGAN GROUP, INC.

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SALISBURY, MARYLAND 21801
410.546.9100

3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

1942 EAST 7TH STREET, SUITE 240
CHARLOTTE, NORTH CAROLINA 28204
980.270.9100

314 EAST MAIN STREET
CLAYTON, NORTH CAROLINA 27520
919.243.1332

www.beckermorgan.com

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
**302-855-7878 ph. 302-854-5079 fax**

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

20044(+/-) John J Williams Hwy - Belle Mead Farm - Route 24

**Type of Conditional Use Requested:**

**Tax Map #:** 334-18.00-40.01 & 334-18.00-40.06 **Size of Parcel(s):** 39.22 +/- ac.

**Current Zoning:** AR-1 **Proposed Zoning:** C4 **Size of Building:** TBD

**Land Use Classification:** COMMERCIAL

**Water Provider:** TIDEWATER **Sewer Provider:** SUSSEX COUNTY

**Applicant Information**

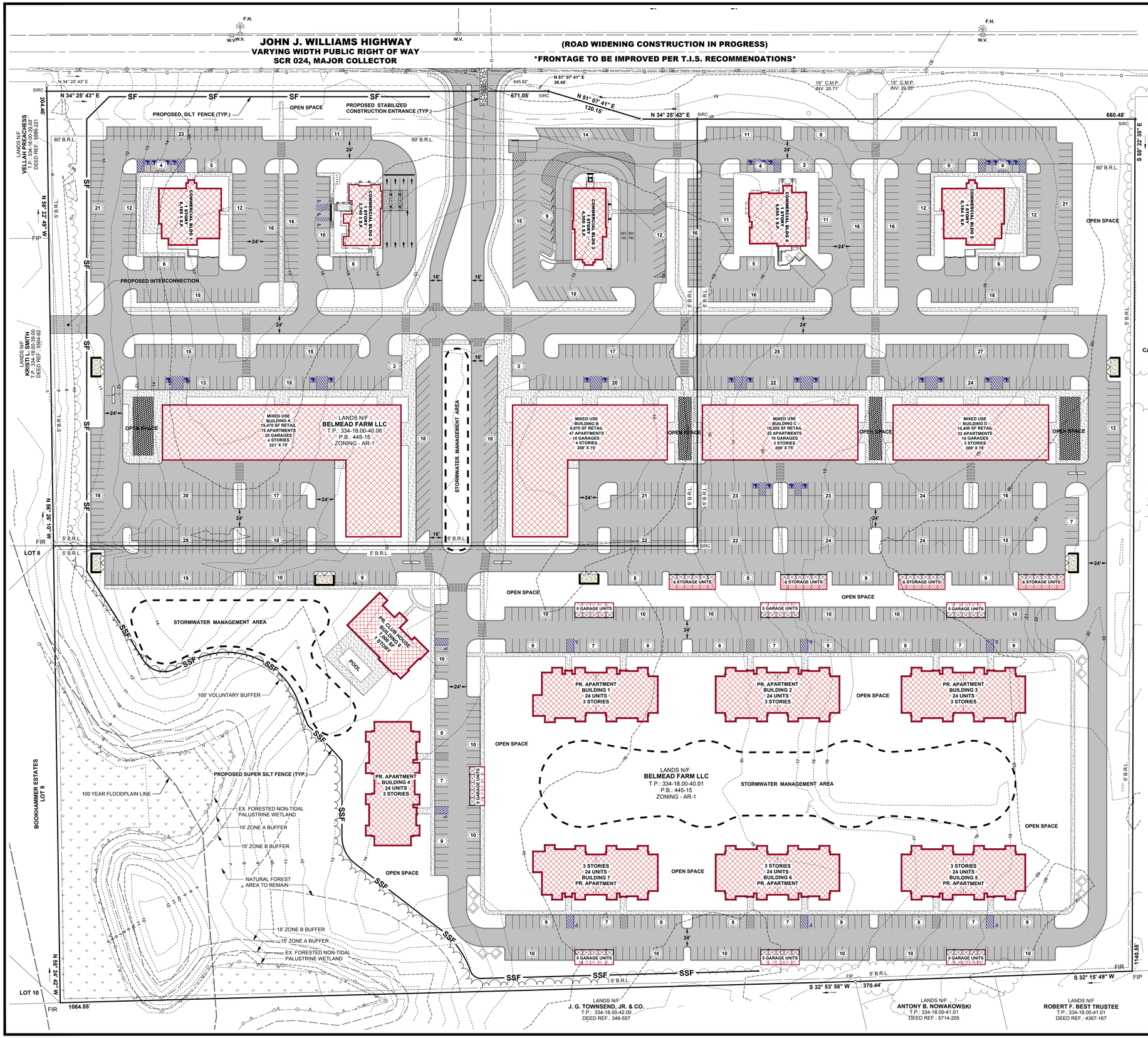
Applicant Name: BELMEAD FARM LLC
Applicant Address: 105 FOULK ROAD
City: WILMINGTON State: DE ZipCode: 19803
Phone #: 429-8700 E-mail: _____

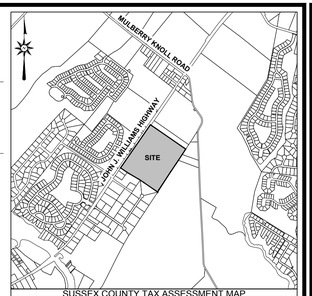
**Owner Information**

Owner Name: BELMEAD FARM LLC
Owner Address: 105 FOULK ROAD
City: WILMINGTON State: DE Zip Code: 19803
Phone #: 429-8700 E-mail: _____

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: BECKER MORGAN GROUP, INC
Agent/Attorney/Engineer Address: 309 S. GOVERNORS AVE
City: DOVER State: DE Zip Code: 19904
Phone #: 734-7950 E-mail: MRIEMANN@BECKERMORGAN.COM




SUSSEX COUNTY TAX ASSESSMENT MAP

**VICINITY MAP** SCALE : 1" = 2000'

## SITE DATA

1. OWNER OF RECORD: BELMEAD FARM LLC
28855 LEWES GEORGETOWN HIGHWAY
LEWES, DELAWARE 19958
2. ENGINEER / SURVEYOR: BECKER MORGAN GROUP INC.
309 SOUTH GOVERNORS AVE.
DOVER, DELAWARE 19904
302-734-7950
3. PROPERTY LOCATION: JOHN J WILLIAMS HIGHWAY, LEWES, DE 19958
LATITUDE N 38° 42' 40.68" GRS80 - NAD83 (2011)
LONGITUDE W 75° 09' 08.01" GRS80 - NAD83 (2011)
4. TAX PARCEL NUMBER: 334-18.00-40.01; 334-18.00-40.06
5. DEED REFERENCE : D.R. 5653-59
6. PLAT REFERENCE : P.B. 445-15
7. SITE AREA SUMMARY: 334-18.00-40.01 (27.2402 AC. ±) / 334-18.00-40.06 (11.9803 AC.±)
TOTAL AREA: 39.2210 ACRES ±
8. EXISTING ZONING: AR-1: AGRICULTURAL RESIDENTIAL
9. PROPOSED ZONING: C-4: PLANNED COMMERCIAL DISTRICT
10. BULK AREA SUMMARY: BUILDINGS: 194,706 SF ± (11.40%)
ROADS / PARKING: 622,268 SF ± (36.42%)
OPEN SPACE: 529,603 SF ± (34.68%)
COMMERCIAL: 10 AC ± (25% OF TOTAL SITE)
MIXED-USE (16 AC ± or 40% OF TOTAL AREA)
RETAIL: 45,740 SF ±
RESIDENTIAL:
STUDIO: 10 UNITS
1 BEDROOM: 54 UNITS
2 BEDROOM: 90 UNITS
3 BEDROOM: 12 UNITS
MULTI-FAMILY (14 AC ± or 35% OF TOTAL AREA)
RESIDENTIAL:
1 BEDROOM: 42 UNITS
2 BEDROOM: 126 UNITS
3 BEDROOM: 0 UNITS
11. NET DEVELOPMENT AREA: TOTAL SITE: 1,708,466 SF ± (39.22 AC)
RESOURCE AREA: 74,000 SF ± (1.69 AC)
NET AREA: 1,634,466 SF ± (37.52 AC)
12. PARKING CALCULATIONS: COMMERCIAL
GENERAL COMMERCIAL: 5 PER 1,000 SF OF GROSS SF.
REQUIRED: 26,095 GROSS LEASABLE AREA
REQUIRED: 26,085 ÷ 200 SF = 130 SPACES REQUIRED
PROVIDED: 436 SPACES
ACCESSIBLE PARKING SPACES: 14 SPACES
NOTE: COMMERCIAL USES SHOWN ARE CONCEPTUAL AT NATURE. PARKING SUBJECT TO FINAL TENANT USE AND SITE PLAN REQUIREMENTS.
MIXED-USE
COMMERCIAL/RETAIL: 1 SPACE PER 200 S.F.
REQUIRED: 45,740 S.F. ÷ 200 S.F. = 228.7 (229 SPACES)
REQUIRED: EST. 24 EMPLOYEES ÷ 24 / 2 = 12 SPACES
RESIDENTIAL: 2 SPACES PER DWELLING UNIT
REQUIRED: 166 DWELLING UNITS x 2 = 332 SPACES
TOTAL REQUIRED: 573 SPACES
PROVIDED: 655 SPACES
ACCESSIBLE PARKING SPACES: 18 SPACES
MULTI-FAMILY
MULTI-FAMILY: TWO SPACES PER DWELLING UNIT
REQUIRED: 168 DWELLING UNITS x 2 = 336 SPACES
PROVIDED: 308 SPACES + 35 GARAGES = 343 SPACES
ACCESSIBLE PARKING SPACES: 7 SPACES
13. ROAD CLASSIFICATION: JOHN J WILLIAMS HIGHWAY - MAJOR COLLECTOR (45 M.P.H.)
14. SURVEY DATUM: NGS MONUMENTS
VERTICAL: NAVD 88 - X
HORIZONTAL: NAD 83 (2011) DSP - X
15. SURVEY UNIT: LINEAR: US SURVEY FOOT
ANGULAR: DEGREES MINUTES SECONDS (DMS)
COORDINATE: GROUND
16. MONUMENTATION: 6 FOUND / 0 SET
17. SURVEY CLASSIFICATION: SUBURBAN SURVEY
18. DRAINAGE ASSESSMENT: DRAINAGE ASSESSMENT REPORT WAS PROVIDED BY BECKER MORGAN GROUP, INC DATED FEBRUARY 2025. WETLANDS WERE DELINEATED BY WATERSHED ECO. IN APRIL 2023.

## GENERAL NOTES

1. THE BOUNDARY & TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD RUN SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., DOVER, DE. IN MARCH 2023.
2. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION. NO TITLE EXAMINATION PERFORMED.
3. PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
4. PORTION OF PARCEL IS LOCATED WITHIN ZONE "AE", BASE FLOOD ELEVATION 5', BASED ON FIRM MAP 10005C0334K, EFFECTIVE DATE MARCH 16, 2015.

BECKER MORGAN GROUP

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ENGINEERING

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**Maryland**
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**North Carolina**
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980.270.9100
Raleigh
919.243.1332
Wilmington
910.341.7600

**www.beckermorgan.com**

NAD83/DSP

PROJECT TITLE

**LANDS OF**
# BELMEAD FARM, LLC

**JOHN J WILLIAMS HIGHWAY**
**LEWES, DELAWARE 19958**
**SUSSEX COUNTY**

SHEET TITLE

# REZONING SITE PLAN

0 30 60 120

**SCALE: 1" = 60'**

| ISSUE | BLOCK | |
|---|---|---|
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| MARK | DATE | DESCRIPTION |

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|---|---|
| **PROJECT NO.:** | **2022079.00** |
| **DATE:** | **03/11/2025** |
| **SCALE:** | **1" = 60'** |
| DRAWN BY: **C.D.C.** | PROJ. MGR.: **J.S.F.** |

LAYER STATE: C001

SHEET

# C-001

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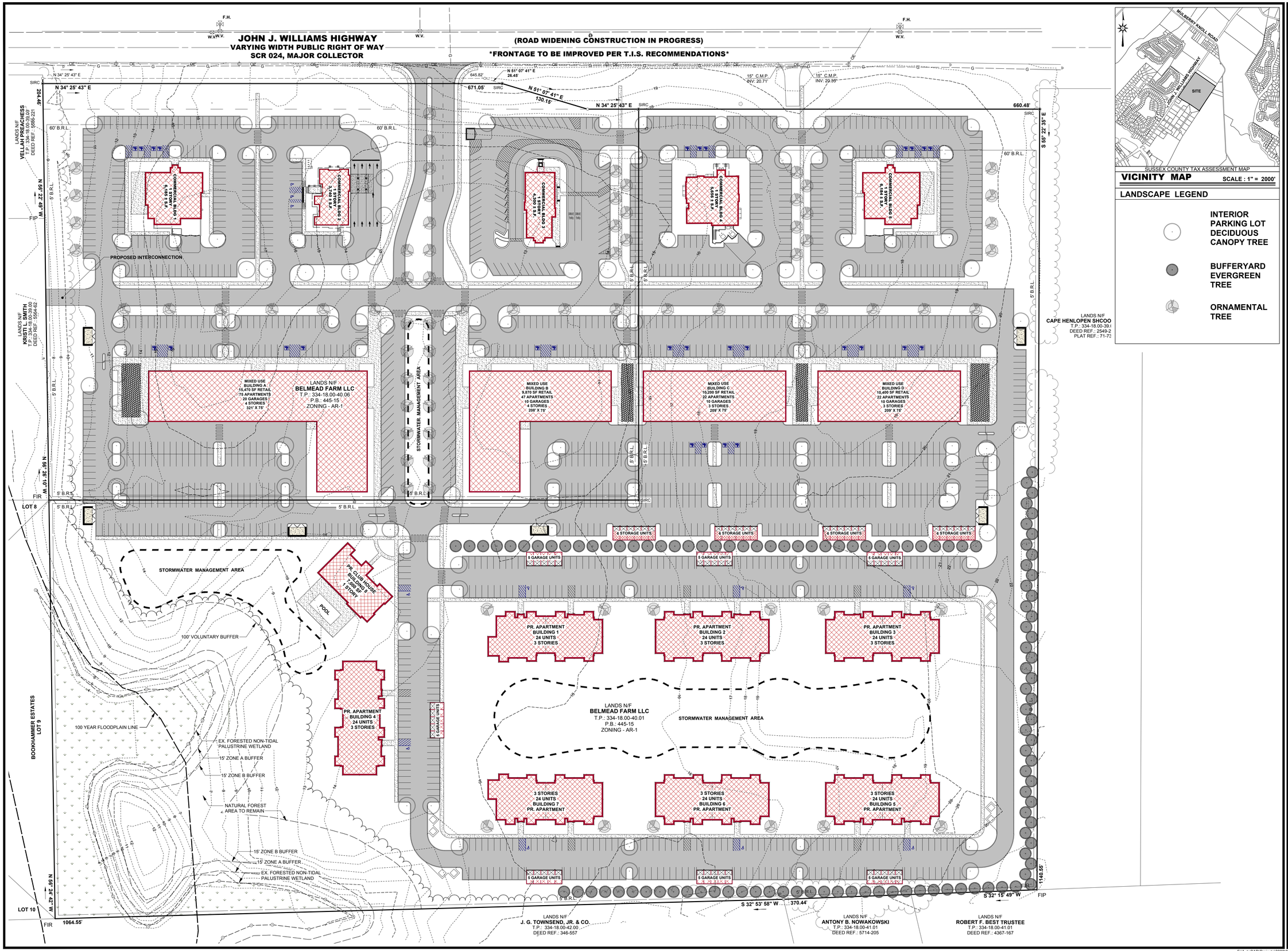


BECKER MORGAN GROUP

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ENGINEERING

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309 South Governors Avenue
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The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
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302.369.3700

**Maryland**
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Salisbury, MD 21801
410.546.9100

**North Carolina**
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

**www.beckermorgan.com**

PROJECT TITLE

LANDS OF
**BELLE MEADE FARM LLC**

JOHN J WILLIAMS HIGHWAY
LEWES, DELAWARE 19958
SUSSEX COUNTY

SHEET TITLE

**REZONING LANDSCAPE PLAN**

0 30 60 120
SCALE: 1" = 60'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|

LAYER STATE: L001

| | |
|---|---|
| PROJECT NO.: | 2022079.00 |
| DATE: | 03/11/2025 |
| SCALE: | 1" = 60' |
| DRAWN BY: C.D.C. | PROJ. MGR.: J.S.F. |

SHEET
**L-001**

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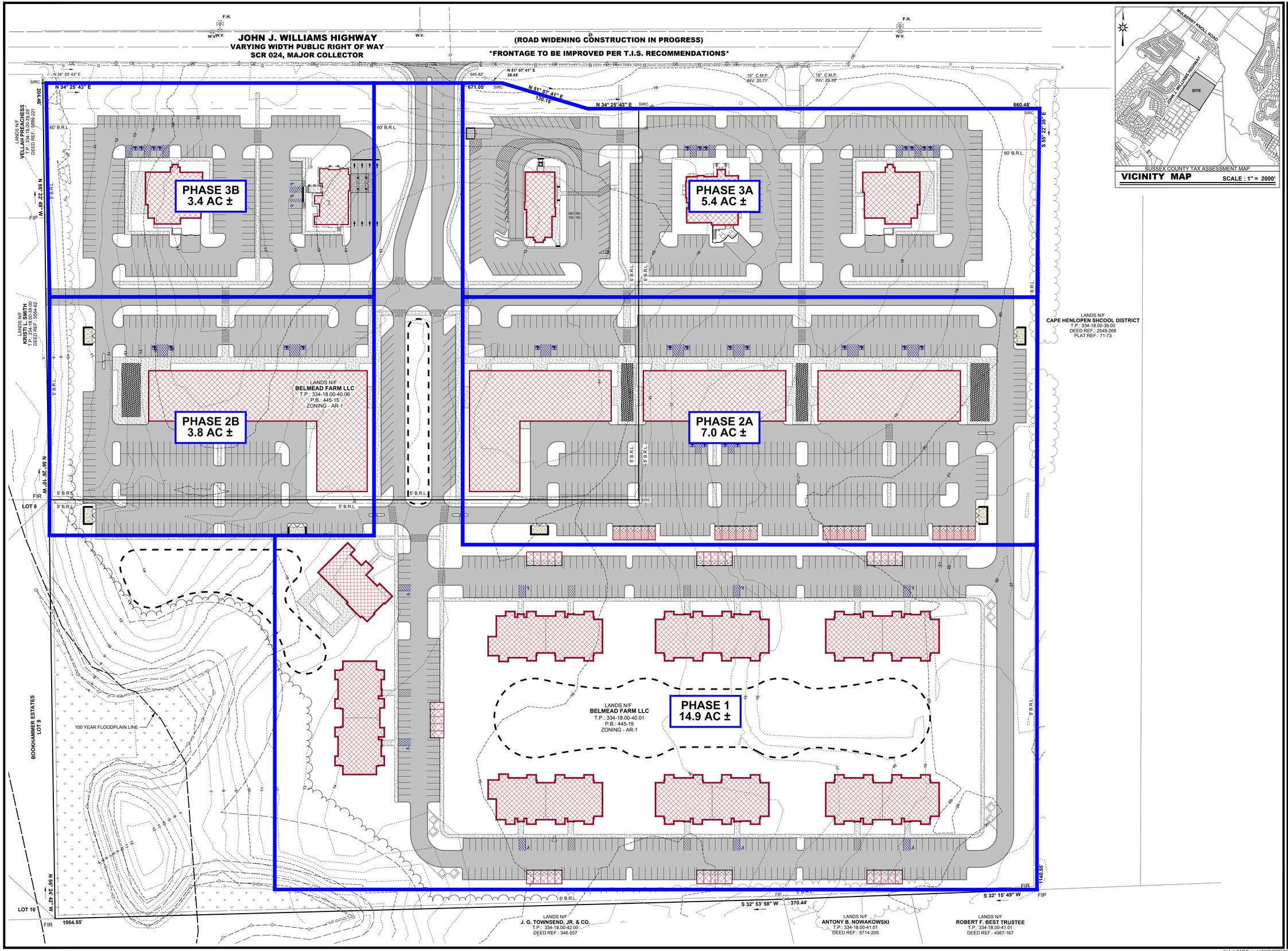


BECKER MORGAN GROUP

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910.341.7600

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PROJECT TITLE

LANDS OF
# BELLE MEADE FARM LLC

JOHN J WILLIAMS HIGHWAY
LEWES, DELAWARE 19958
SUSSEX COUNTY

SHEET TITLE

## PRELIMINARY PHASING PLAN

(SUBJECT TO CHANGE)

0 30 60 120
SCALE: 1" = 60'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|

LAYER STATE: C-501

| | |
|---|---|
| PROJECT NO.: | 2022079.00 |
| DATE: | 03/11/2025 |
| SCALE: | 1" = 60' |
| DRAWN BY: C.D.C. | PROJ. MGR.: J.S.F. |

SHEET
**C-501**

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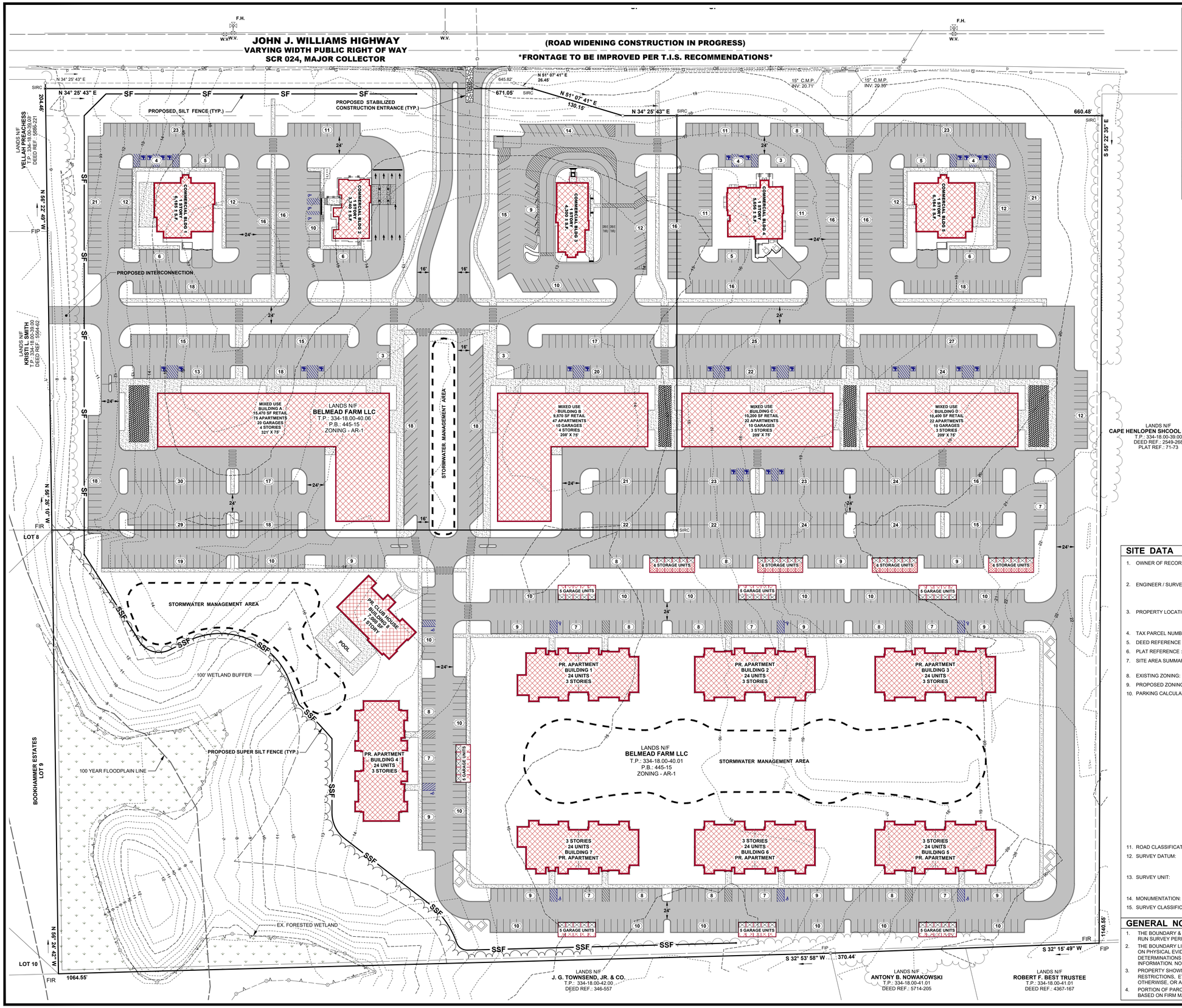


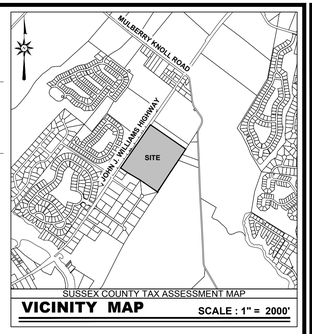


## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | BELMEAD FARM LLC<br>28855 LEWES GEORGETOWN HIGHWAY<br>LEWES, DELAWARE 19958 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 SOUTH GOVERNORS AVE.<br>DOVER, DELAWARE 19904<br>302-734-7950 |
| 3. | PROPERTY LOCATION: | JOHN J WILLIAMS HIGHWAY, LEWES, DE 19958<br>LATITUDE N 38° 42' 40.68" GRS80 - NAD83 (2011)<br>LONGITUDE W 75° 09' 08.01" GRS80 - NAD83 (2011) |
| 4. | TAX PARCEL NUMBER: | 334-18.00-40.01; 334-18.00-40.06 |
| 5. | DEED REFERENCE : | D.R. 5653-59 |
| 6. | PLAT REFERENCE : | P.B. 445-15 |
| 7. | SITE AREA SUMMARY: | 334-18.00-40.01 (27.2402 AC. ±) / 334-18.00-40.06 (11.9803 AC.±)<br>TOTAL AREA: 39.2210 ACRES ± |
| 8. | EXISTING ZONING: | AR-1: AGRICULTURAL RESIDENTIAL |
| 9. | PROPOSED ZONING: | C-4: PLANNED COMMERCIAL DISTRICT |
| 10. | PARKING CALCULATIONS: | COMMERCIAL (10 AC ± or 25% OF TOTAL AREA)<br>GENERAL COMMERCIAL: 5 PER 1,000 SF OF GROSS SF.<br>REQUIRED: 26,095 GROSS LEASABLE AREA<br>REQUIRED: 26,085 ÷ 200 SF = 130 SPACES REQUIRED<br>PROVIDED: 436 SPACES<br>ACCESSIBLE PARKING SPACES: 14 SPACES<br><br>NOTE: COMMERCIAL USES SHOWN ARE CONCEPTUAL AT NATURE. PARKING SUBJECT TO FINAL TENANT USE AND SITE PLAN REQUIREMENTS.<br><br>MIXED-USE (16 AC ± or 40% OF TOTAL AREA)<br>COMMERCIAL/RETAIL: 1 SPACE PER 200 S.F.<br>REQUIRED: 45,740 S.F. ÷ 200 S.F. = 228.7 (229 SPACES)<br>REQUIRED: EST. 24 EMPLOYEES ÷ 24 / 2 = 12 SPACES<br>RESIDENTIAL: 2 SPACES PER DWELLING UNIT<br>REQUIRED: 166 DWELLING UNITS x 2 = 332 SPACES<br>TOTAL REQUIRED: 573 SPACES<br>PROVIDED: 655 SPACES<br>ACCESSIBLE PARKING SPACES: 18 SPACES<br><br>MULTI-FAMILY (14 AC ± or 35% OF TOTAL AREA)<br>MULTI-FAMILY: TWO SPACES PER DWELLING UNIT<br>REQUIRED: 168 DWELLING UNITS x 2 = 336 SPACES<br>PROVIDED: 308 SPACES + 35 GARAGES = 343 SPACES<br>ACCESSIBLE PARKING SPACES: 7 SPACES |
| 11. | ROAD CLASSIFICATION: | JOHN J WILLIAMS HIGHWAY - MAJOR COLLECTOR (45 M.P.H.) |
| 12. | SURVEY DATUM: | NGS MONUMENTS<br>VERTICAL: NAVD 88 - X<br>HORIZONTAL: NAD 83 (2011) DSP - X |
| 13. | SURVEY UNIT: | LINEAR: US SURVEY FOOT<br>ANGULAR: DEGREES MINUTES SECONDS (DMS)<br>COORDINATE: GROUND |
| 14. | MONUMENTATION: | 6 FOUND / 0 SET |
| 15. | SURVEY CLASSIFICATION: | SUBURBAN SURVEY |

## GENERAL NOTES

1. THE BOUNDARY & TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD RUN SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., DOVER, DE. IN MARCH 2023.
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4. PORTION OF PARCEL IS LOCATED WITHIN ZONE "AE", BASE FLOOD ELEVATION 5', BASED ON FIRM MAP 10005C0334K, EFFECTIVE DATE MARCH 16, 2015.

BECKER MORGAN GROUP

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ENGINEERING

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**North Carolina**
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980.270.9100
Raleigh
919.243.1332
Wilmington
910.341.7600

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PROJECT TITLE

LANDS OF
**BELMEAD FARM, LLC**

**JOHN J WILLIAMS HIGHWAY**
**LEWES, DELAWARE 19958**
**SUSSEX COUNTY**

SHEET TITLE

# REZONING SITE PLAN

0 30 60 120
**SCALE: 1" = 60'**

| ISSUE BLOCK | | |
|---|---|---|
| MARK | DATE | DESCRIPTION |

| | |
|---|---|
| **PROJECT NO.:** | **2022079.00** |
| **DATE:** | **02/24/2025** |
| **SCALE:** | **1" = 60'** |
| DRAWN BY: **C.D.C.** | PROJ. MGR.: **J.S.F.** |

LAYER STATE: C001

SHEET
**C-001**

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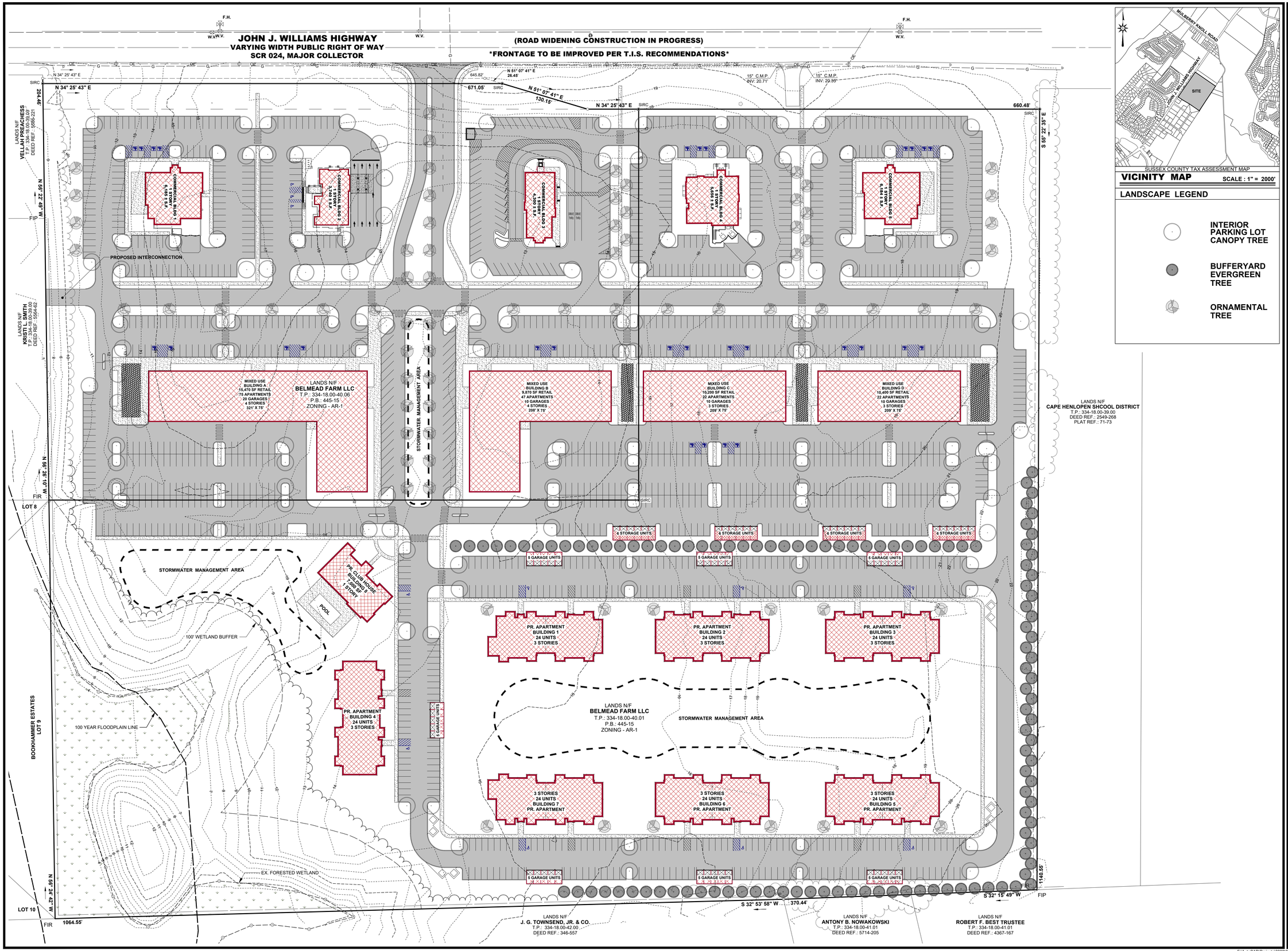





SUSSEX COUNTY TAX ASSESSMENT MAP

**VICINITY MAP** SCALE : 1" = 2000'

**LANDSCAPE LEGEND**

- INTERIOR PARKING LOT CANOPY TREE
- BUFFERYARD EVERGREEN TREE
- ORNAMENTAL TREE

BECKER MORGAN GROUP

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410.546.9100

**North Carolina**
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Wilmington, NC 28403
910.341.7600

**www.beckermorgan.com**

PROJECT TITLE

LANDS OF
**BELLE MEADE FARM LLC**

JOHN J WILLIAMS HIGHWAY
LEWES, DELAWARE 19958
SUSSEX COUNTY

SHEET TITLE

**REZONING LANDSCAPE PLAN**

0 30 60 120

**SCALE: 1" = 60'**

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|

LAYER STATE: L001

| | |
|---|---|
| PROJECT NO.: | 2022079.00 |
| DATE: | 02/24/2024 |
| SCALE: | 1" = 60' |
| DRAWN BY: C.D.C. | PROJ. MGR.: J.S.F. |

SHEET

**L-001**

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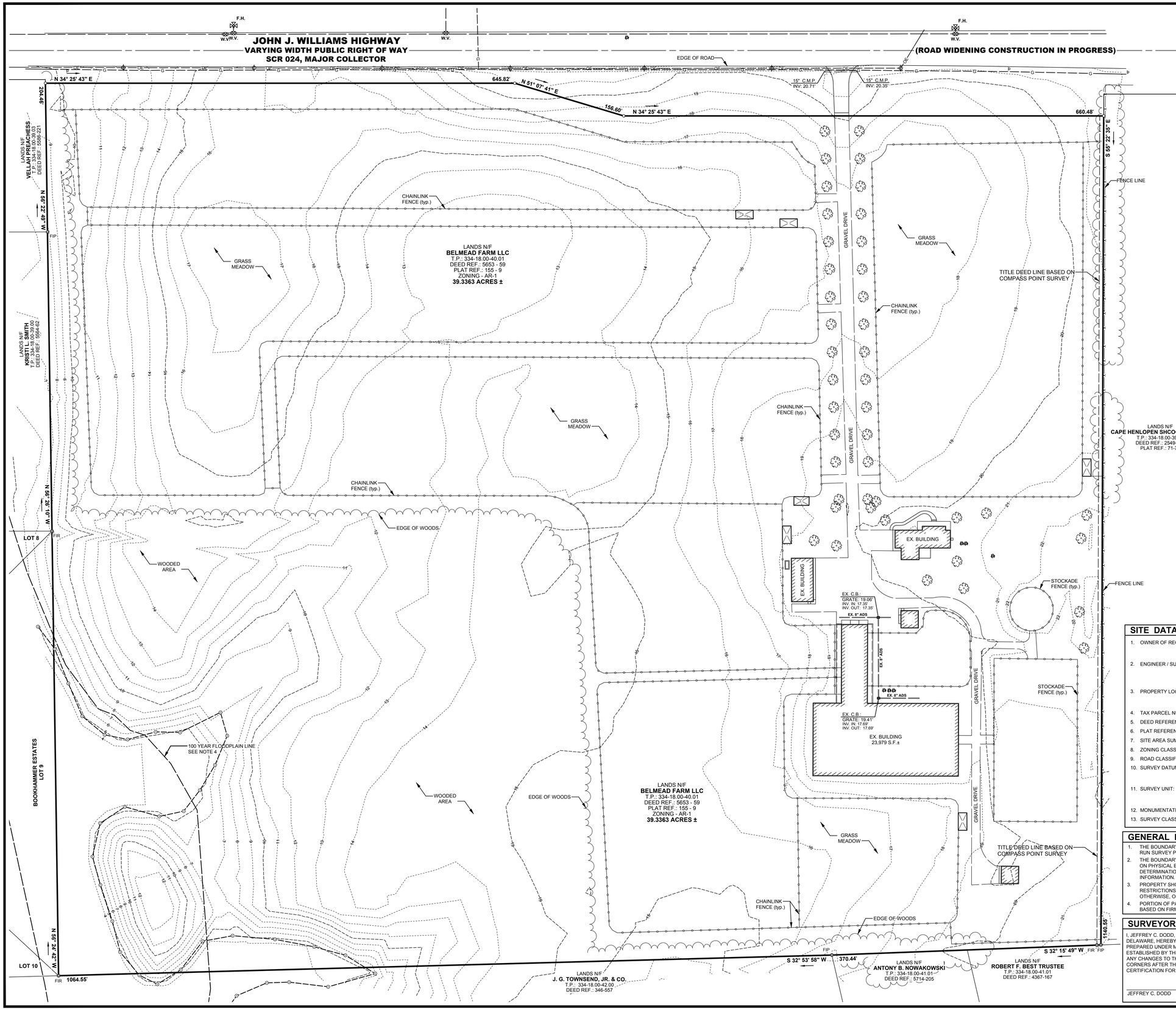


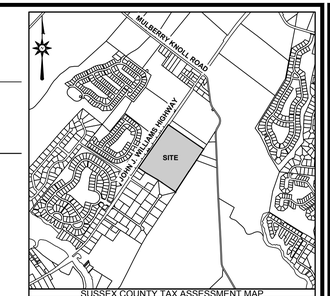


## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | BELMEAD FARM LLC<br>28855 LEWES GEORGETOWN HIGHWAY<br>LEWES, DELAWARE 19958 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 SOUTH GOVERNORS AVE.<br>DOVER, DELAWARE 19904<br>302-734-7950 |
| 3. | PROPERTY LOCATION: | JOHN J WILLIAMS HIGHWAY, LEWES, DE 19958<br>LATITUDE N 38° 42' 40.68" GRS80 - NAD83 (2011)<br>LONGITUDE W 75° 09' 08.01" GRS80 - NAD83 (2011) |
| 4. | TAX PARCEL NUMBER: | 334-18.00-40.01 |
| 5. | DEED REFERENCE : | D.R. 5653-59 |
| 6. | PLAT REFERENCE : | P.B. 155 - 9 & P.B. 71 - 73 |
| 7. | SITE AREA SUMMARY: | 39.3363 ACRES ± |
| 8. | ZONING CLASSIFICATIONS: | AR-1- AGRICULTURAL RESIDENTIAL |
| 9. | ROAD CLASSIFICATION: | JOHN J WILLIAMS HIGHWAY - MAJOR COLLECTOR (45 M.P.H.) |
| 10. | SURVEY DATUM: | NGS MONUMENTS<br>VERTICAL: NAVD 88 - X<br>HORIZONTAL: NAD 83 (2011) DSP - X |
| 11. | SURVEY UNIT: | LINEAR: US SURVEY FOOT<br>ANGULAR: DEGREES MINUTES SECONDS (DMS)<br>COORDINATE: GROUND |
| 12. | MONUMENTATION: | 6 FOUND / 0 SET |
| 13. | SURVEY CLASSIFICATION: | SUBURBAN SURVEY |

## GENERAL NOTES

1. THE BOUNDARY & TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD RUN SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., DOVER, DE. IN MARCH 2023.
2. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION. NO TITLE EXAMINATION PERFORMED.
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4. PORTION OF PARCEL IS LOCATED WITHIN ZONE "AE", BASE FLOOD ELEVATION 5', BASED ON FIRM MAP 10005C0334K, EFFECTIVE DATE MARCH 16, 2015.

## SURVEYOR CERTIFICATION

I, JEFFREY C. DODD, REGISTERED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF DELAWARE, HEREBY STATE THAT THE INFORMATION SHOWN ON THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS ESTABLISHED BY THE STATE OF DELAWARE BOARD OF PROFESSIONAL LAND SURVEYORS. ANY CHANGES TO THE PROPERTY CONDITIONS, IMPROVEMENTS, BOUNDARY OR PROPERTY CORNERS AFTER THE DATE SHOWN HEREON SHALL NECESSITATE A NEW REVIEW AND CERTIFICATION FOR ANY OFFICIAL OR LEGAL USE.

JEFFREY C. DODD P.L.S.NO. 782 DATE

BECKER MORGAN GROUP

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**North Carolina**
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**www.beckermorgan.com**

NAD83/DSP

PROJECT TITLE

LANDS OF
**BELMEAD FARM LLC**

JOHN J WILLIAMS HIGHWAY
LEWES, DELAWARE 19958
SUSSEX COUNTY

SHEET TITLE

# BOUNDARY & TOPOGRAPHIC SURVEY

0 30 60 120

**SCALE: 1" = 60'**

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|
| | | |

LAYER STATE: BNDY TOPO

| | |
|---|---|
| **PROJECT NO.:** | **2022079.00** |
| **DATE:** | **03/30/23** |
| **SCALE:** | **1" = 60'** |
| DRAWN BY: **B.G.** | PROJ. MGR.: **J.C.D.** |

SHEET
**1 OF 1**

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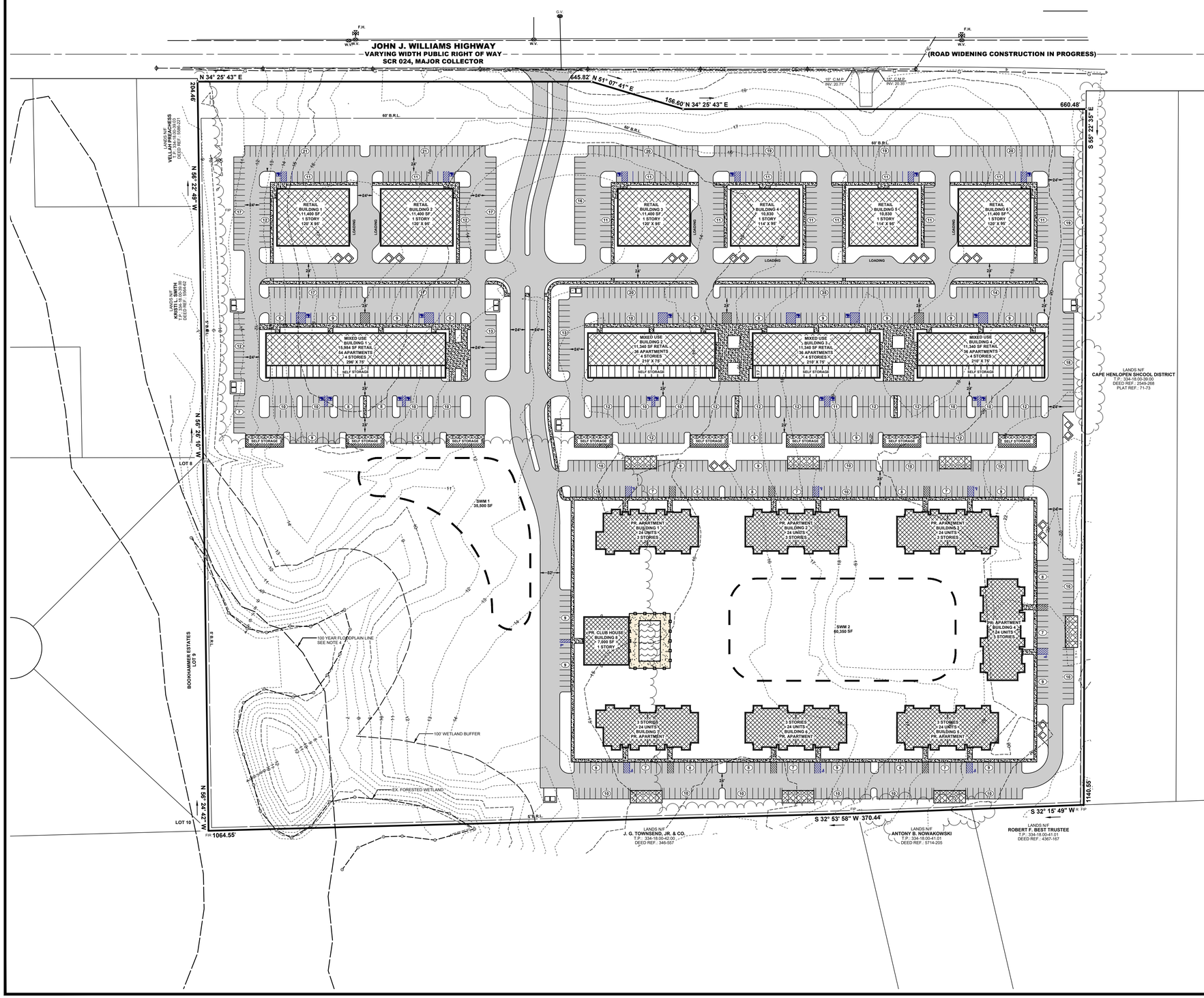


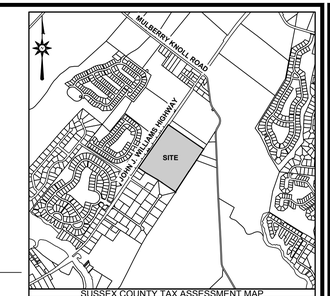


**VICINITY MAP** SCALE : 1" = 2000'

## SITE DATA

1. OWNER OF RECORD: BELMEAD FARM LLC
28855 LEWES GEORGETOWN HWY
LEWES, DE 19958
2. ENGINEER / SURVEYOR: BECKER MORGAN GROUP INC.
309 SOUTH GOVERNORS AVE
DOVER, DE 19904
302-734-7950
3. PROPERTY MAP NUMBER: 334-18.00-40.01
4. ZONING CLASSIFICATION: EXISTING: AR-1 - AGRICULTURAL RESIDENTIAL
PROPOSED: C-4 - PLANNED COMMERCIAL
5. PRESENT USE: EQUESTRIAN / RESIDENTIAL
6. PROPOSED USE: COMMERCIAL / RESIDENTIAL - APARTMENTS
7. SITE AREA: 39.3363 AC ±
8. PROPOSED BUILDINGS:

| COMMERCIAL: | RETAIL | DUs |
|---|---|---|
| BUILDING 1: | 11,400 S.F. ± | |
| BUILDING 2: | 11,400 S.F. ± | |
| BUILDING 3: | 11,400 S.F. ± | |
| BUILDING 4: | 10,830 S.F. ± | |
| BUILDING 5: | 10,830 S.F. ± | |
| BUILDING 6: | 11,400 S.F. ± | |
| TOTAL: | 67,260 S.F. ± | |
| MIXED USE: | | |
| BUILDING 1: | 15,984 S.F. ± | 54 |
| BUILDING 2: | 11,340 S.F. ± | 36 |
| BUILDING 3: | 11,340 S.F. ± | 36 |
| BUILDING 4: | 11,340 S.F. ± | 36 |
| TOTAL: | 50,004 S.F. ± | 162 DUs |
| RESIDENTIAL | | |
| BUILDING 1: | | 24 |
| BUILDING 2: | | 24 |
| BUILDING 3: | | 24 |
| BUILDING 4: | | 24 |
| BUILDING 4: | | 24 |
| BUILDING 4: | | 24 |
| TOTAL: | | 168 DUs |
| SELF STORAGE | | |
| TOTAL: | 29,790 S.F. ± | |

9. C-4 RESIDENTIAL AREA: 11.88 ACRES ± (517,343.95 SQ. FT.)
30.2 % (40% MAX)
10. RESOURSE AREA: FORESTED TIDAL WETLAND: 1.16 ACRES ± (50,554.28 SQ. FT.)
100' TIDAL WETLAND BUFFER: 2.77 ACRES ± (120,759.42 SQ. FT.)
TOTAL RESOURCE AREA: 3.93 ACRES ± (171,313.70 SQ. FT.)
11. NET DEVELOPMENT AREA: 35.40 ACRES ± (1,542,024 SQ. FT.)
12. LIMIT OF DISTURBANCE: 29.28 ACRES ± (1,275,560 SQ. FT.)
13. PERMITTED DENSITY: 12.0 DWELLING UNITS/ACRES
14. PROPOSED UNITS: 330 DWELLING UNITS (8.39 DU/AC GROSS / 9.32 DU/AC NET)
15. OPEN SPACE: 10.05 ACRES ± (437,778 SQ. FT.)
16. IMPERVIOUS COVERAGE: PROPOSED: 18.60 ACRES ± (47.3% COVERAGE)
17. PARKING CALCULATIONS: REQUIRED:
RETAIL: 1 PER 200 SQUARE FEET OF FLOOR AREA USED FOR SALES OR DISPLAY OF MERCHANDISE PURPOSES, PLUS 1 FOR EACH 2 EMPLOYEES ON THE LARGEST SHIFT
TOTAL RETAIL: 117,264 SF x .80 (FLOOR AREA) = 93,811.20 SF
TOTAL RETAIL: 93,811.20 / 200 = 469 SPACES
PROVIDED: 577 TOTAL (INC. 12 ACCESSIBLE)
RESIDENT.: UNITS 1 – 50 @ 2.0 PER SPACES = 2 X 50 = 100 SPACES
UNITS 51 – 200 @ 1.7 PER SPACES = 1.7 X 150 = 255 SPACES
UNITS 201 – 330 @ 1.6 PER SPACES = 1.6 X 130 = 208 SPACES
TOTAL SPACES = 563
PROVIDED: 619 TOTAL (INC. 17 ACCESSIBLE PARKING & 35 ENCLOSED GARAGE)
18. FLOOD ZONE: DEVELOPMENT AREA: ZONE X (RESOURCE AREA: ZONE AE ELEV 5 FT.)
19. SETBACKS: C-4 ZONING:
FRONT: 60 FT.
SIDE: 5 FT.
REAR: 5 FT.
20. BUILDING HEIGHT: PERMITTED: 42 FT.
21. SOURCE OF WATER: ARTESIAN WATER COMPANY INC.
22. SOURCE OF SEWER: SUSSEX COUNTY
23. SOURCE OF GAS: TBD
24. SOURCE OF ELECTRIC: TBD
25. SANITARY SEWER FLOWS: AVERAGE DAILY FLOW: 330 APARTMENT UNITS * 240 GPD = 79,200 GPD
PEAK DAILY FLOW: 79,200 GPD * 4 = 316,800 GPD

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

**Delaware**
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

**Maryland**
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

**North Carolina**
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

**www.beckermorgan.com**

NAD83/DSP

PROJECT TITLE

LANDS OF
# BELLE MEADE FARM LLC

JOHN J WILLIAMS HIGHWAY
LEWES, DELAWARE 19958
SUSSEX COUNTY

SHEET TITLE

# CONCEPT PLAN

0 40 80 160
SCALE: 1" = 80'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|

LAYER STATE: INDY TOPO

**PROJECT NO.:** 2022079.00
**DATE:** 03/30/23
**SCALE:** 1" = 60'
DRAWN BY: C.D.C. PROJ. MGR.: C.D.C.

SHEET
**1 OF 1**

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F:\AutoCAD\Projects\2022\2022079\DWG\2022079-SITE-C3D21.dwg, Jan 11, 2024 - 10:47am

# APPLICATION FOR REZONING
# CZ 2001

# BELLE MEAD FARM

**MARCH 2025**

PREPARED BY:

BECKER MORGAN GROUP, INC.
309 S. GOVERNORS AVE.
DOVER, DE 19904

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## Project Overview – (Rezoning – Belle Mead Farm.)

### 1.1 Executive Summary

The proposed property is located on Route 24, John J. Williams Highway, in Sussex County Delaware. The existing zoning is AR-1 (Agricultural Residential), and the proposed zoning is C-4 (Planned Commercial). This site is located within Investment Levels 2 and 3, per the Delaware Strategies for State Policies and Spending. This site is located within the Henlopen Transportation Improvement District (TID). The 39.33 acre site is labeled as commercial located within the Coastal Area according to the Sussex County Comprehensive Plan Future Land Use, Dated January 2019.

The site fronts John J. Williams Highway, a Principal Arterial which has recently completed road widening improvements as part of the Henlopen TID / DelDOT CTP. Directly to the north of the property is Beacon Middle School, in the Cape Henlopen School District. To the east of the parcel is agricultural land, and directly to the south is Bookhammer Estates, a residential subdivision. Within the vicinity of the site there are several other commercial sites, including Love Creek Elementary School, Delaware State Police Troop 7, and several small businesses, as well as a proposed shopping center to the north (Atlantic Fields). This is an area for which commercial zoning is targeted as shown on the future land use map, and additional commercial properties are currently being built. The subject site itself is currently a mixture of agricultural and wooded areas.

The proposed project is a mixed-use development featuring multi-family housing, mixed-use buildings with retail as well as residential, and commercial pad sites along the Route 24 frontage. Superior land planning has been provided to protect all existing natural resources on the site. Mixed use developments promote physical activity, create diverse housing options and align with the values of eco-conscious residents and businesses. This project will create a pedestrian friendly environment, which blends different residential housing types, with retail and commercial uses within a walkable community with uninterrupted pedestrian connections.

This mixed use project will provide a percentage of the total dwelling units to affordable housing. These units will seek to better protect the health, safety and welfare of Sussex County's residents and workforce by providing affordable rental housing for residents with low and moderate incomes

This project intends to use a combination of stormwater facilities including green technology BMPs as well as wet ponds. The ultimate goal is a reduction in volume discharge from the site per the Delaware Sediment and Stowmwater Regulations.

The site will be served by public water and public sewer. A high quality, reliable source of potable drinking water and fire protection service will be provided by Tidewater Utilities, Inc. A gravity sewer collection system is proposed. The property is adjacent to the Sussex County Unified Sewer District.

In summary, the proposed site will become an anchor to both the residential and commercial areas that surround the site. With superior land planning this site will enhance the surrounding properties, will feature excellent architectural design, and will provide additional housing to the rapidly growing Route 24 corridor.

## 1.2 Project Team – (Rezoning – Belle Mead Farm)

Applicant / Developer:

**Belmead Farm LLC.**
Contact: Bill Krapf
105 Foulk Road
Wilmington, DE 19803
Telephone: (302)-429-8700
e-mail: bkrapf capanoinc.com

Attorney:

**Brockstedt Mandalas Federico, LLC.**
Contact: John Paradee
6 S. State St.
Dover, DE 19901
Telephone: (302) 677-0061
Fax: (302) 677-0065
e-mail: jparadee lawbmf.com

Civil Engineer / Surveyor:

**Becker Morgan Group, Inc**
Contact: Michael Riemann, P.E.
309 South Governors Avenue
Dover, DE 19904
Telephone: (302) 734-7950
Fax: (302) 734-7965
e-mail: mriemann beckermorgan.com

Architect:

**Becker Morgan Group, Inc**
Contact: Jack Mumford III, AIA
Port Exchange Bldg
312 West Main St, Ste 300
Salisbury, MD 21801
Telephone: (410)-546-9100
e-mail: jmumford beckermorgan.com

## 1.3 Project Data – (Rezoning – Belle Mead Farm)

| | |
|---|---|
| Total Site Area: | 39.33 Acres |
| Current Zoning District: | AR-1 (Agricultural Residential) |
| Proposed Zoning: | C-4 (Planned Commercial District) |
| Proposed Use: | Mixed-use, multifamily, and commercial |
| Tax Parcel: | 334-18.00-40.01 334-18.00-40.06 |
| Woodlands: | Existing: 10.96 Acres |
| Setbacks: C-4 | |
| Front: | 60 ft |
| Side: | 5 ft |
| Rear: | 5 ft |
| Maximum Building Height: | 42 ft |
| Utilities: | |
| Sewer: | Sussex County |
| Water: | Tidewater |
| Electric: | Delmarva Power |
| Telephone: | Verizon |

Access roads: John J. Williams Highway (SCR 024, Principal Arterial)

Floodplain: Zone X (Areas with less than 0.2% chance of flooding)
Zone AE (Base flood elevation determined to be 5')
*No development is being proposed within the floodplain*

## 1.4 Existing Conditions – (Rezoning – Belle Mead Farm)

A boundary survey of the proposed site (parcel numbers 334-18.00-40.01 □ 334-18.00-40.06) was surveyed by Becker Morgan Group in March of 2023. The total area of the site is 39.33 □acres. The survey indicates the forested areas to be approximately 10.96 □ acres.

The land currently consists of a mixture of agricultural and forested land.

The existing topography of the survey indicates that a majority of the site is sloping towards the interior of the site, and the steepest slopes occurring in the southeast corner of the site. Overall existing drainage of the site indicates that most of the runoff flows to the middle of the site, then down towards the southeast corner into the wetlands. The greatest elevation change on the site is about 18 feet.

The USDA soil survey of Sussex County, Delaware shows the site to be a majority (□60%) Downer sandy loam 0 to 2 percent slopes, (□20%) Downer sandy loam 2 to 5 percent slopes, (□10%) Hurlock sandy loam, 0 to 2 percent slopes, and (□10%) Rosedale loamy sand 2 to 5 percent slopes.

Per the National Wetland Inventory Map, there is a small area of nontidal wetlands found on the subject site. Additionally, there are no state regulated wetlands found on site. According to the FEMA Flood Map □10005C0334K Revised March 16, 2015, the majority of the subject property is located within Zone X, with a small portion of the site located within Zone AE (Base Flood Elevation 5') although no development is proposed within this floodplain area.

The subject property is not known to be identified as a Historic Property. The property has been in agricultural use since at least 1927. Currently, there is 1 residential building on site, and 5 existing agricultural structures on the site. No endangered species have been identified on the subject property. Also, the absence of identified wetlands, including Atlantic White Cedar Wetlands (AWCW) on the site makes evaluations for threatened plant species unnecessary.

Tidewater has an existing water main running parallel to John J. Williams Highway Tidewater has provided a "Willing and Able to Serve" letter for both water and fire protection to the subject site.

The subject development is located within the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intention of the TID is to plan comprehensively and thereby enable both land development and transportation improvements needed to support it.

## 1.5 Traffic (TIS / TID)

A Traffic Impact Study was completed 2024. The study looked at not only the effect of the Belle Meade project on surrounding roadway infrastructure, but also the impacts of 15 additional committed developments that are planned for the area. In total, 16 intersections were examined along SR 24 and the surrounding roadways. Though either construction improvements that will be made directly by the developer, or monetary contributions from the developer to DelDOT projects and programs to fund future projects, each of the 16 intersections are expected to operate at acceptable levels of service in the future.

Even though the project is located within the Henlopen TID limits, a project specific Traffic Impact Study was performed because the TID did not account for the specific land use that is proposed. As such, the TIS served to supplement the TID in this way, accounting for development at the project site that the TID did not. The TIS studied the impacts of future traffic anticipated during the Weekday AM and PM peak hours as well as the Summer Saturday peak hour conditions.

Of the 16 intersections studied, several were identified as needing improvements to existing conditions to provide adequate level-of-service in the full-build analysis year. At each, either the TID proposes improvements to satisfy what is required, or the developer will be required to fund the necessary improvements directly. To supplement the TID funds set aside for these improvements, the developer will be required to make a monetary contribution.

Specifically, the TIS requires the following:

1. The developer shall improve the State-maintained roads on which they front (Delaware Route 24) within the limits of the frontage.
2. The developer should construct a full-movement access on Delaware Route 24, with turn lanes. The developer should enter into a signal agreement with DelDOT for this access to be signalized.
3. SR 24 should be widened to include two 11’ lanes and 5’ bicycle lanes in each direction within the extents of the site frontage.
4. The developer shall pay the Henlopen TID fee.
5. Include relevant bicycle and pedestrian improvements.

## 1.6 Landscaping and Screening (Rezoning – Belle Mead Farm)

The subject site will plan on providing a landscaped area on all perimeter edges that are not currently adjacent to wooded areas, except along the parcel's John J. Williams Highway road frontage. The landscaped area or retained woodland will serve as a screen to minimize the visual effects between the subject site and adjacent properties. All landscaping on site shall be native trees and shrubs to further integrate the project into the existing landscape.

Furthermore, the site will be attractively landscaped throughout to provide a seamless integration into the surrounding area and promote a healthy and vibrant place to live and visit. Landscape materials used will be focused on native species which will provide wildlife support, water conservation, and minimal maintenance, while providing biodiversity.

The developer of the subject site will make every attempt to preserve as much of the existing woodland as practical. Scenic views of the existing woodland will be preserved as much as practical. Studies show that wooded areas and trees contribute to an overall feeling of wellbeing and serenity.

Disturbance of the site will be minimized to include only those areas required for clearing of building pads, roads, parking, and utility installation. All undisturbed vegetation that matches and fits in the surrounding vegetation shall remain. Grade changes to the site shall be limited to those necessary to provide positive drainage and proper cover over utilities.

## 1.7 Stormwater Management Regulations– (Rezoning – Belle Mead Farm)

A detailed plan review is required through Sussex Conservation District and will include review of stormwater management, drainage, and erosion and sediment control.

The site currently drains to the Rehoboth Bay Watershed.

This project will meet current stormwater rules and regulations regarding stormwater management. This project intends to use a combination of stormwater facilities including green technology BMPs as well as wet ponds. The ultimate goal is a reduction in volume discharge from the site per the Delaware Sediment and Stormwater Regulations.

Erosion and sediment control will be provided by methods approved by Sussex Conservation District and Sussex County. Any post-development discharge rates will be controlled to discharge less than or equal to the discharge rates of pre-development conditions.

## 1.8 Rezoning of the Subject Site – (Rezoning – Belle Mead Farm)

The intent of this application is to amend the Sussex County Comprehensive Zoning Map from AR-1 Agricultural Residential District to a C-4 Planned Commercial District for the subject property containing 39.33 acres. It will also be the intent of the developer to provide an aesthetically pleasing site with amenities for its users, while keeping it environmentally friendly and preserving as much of the natural land as possible. The developer intends to not only comply with state and county standards but exceed these standards with superior planning and design.

Per the 2018 Comprehensive Plan, the subject property is within the Coastal Area, defined as a growth zone. This region is among the most desirable locations in Sussex County for new development, as is reflected in new construction data and real estate prices. Coastal Areas are areas that can accommodate development provided special environmental concerns are addressed. A range of housing types should be permitted in Coastal Areas, including single-family homes, townhouses, and multi-family units. Appropriate mixed-use development should also be allowed. In doing so, careful mixtures of homes with light commercial, office and institutional uses can be appropriate to provide for convenient services and to allow people to work close to home. This application proposes rezoning to C-4, which is an applicable zoning district within the Coastal Area. Additionally, the proposed commercial, mixed-use, and residential uses match the goals and objectives of the Comprehensive Plan.

## 1.9 Proposed Finding of Facts – (Rezoning – Belle Mead Farm)

1. This is an application to amend the comprehensive zoning map from AR-1 (Agricultural Residential) to C-4 (Planned Commercial) with an area of 39.33 acres more or less, in Lewes Rehoboth Hundred located on the southeast side of Delaware Route 24 (John J. Williams Highway) approximately mile southwest of the Mulberry Knoll intersection.

2. The subject property is a parcel owned by Belmead Farm, LLC. The applicant is Belmead Farm, LLC, a Delaware limited liability company.

3. The subject property is located on Route 24 which is classified by DelDOT as a principle arterial road. Based upon its review, DelDOT has approved a TIS. A copy of the TIS approval letter has been attached to this booklet. The applicant will comply with the provisions of the TIS. Additionally, this project is located within the Henlopen TID, and as a result of the TIS a contribution of approximately 2.8m to the TID will be required.

4. The proposed site for the Belle Mead project is located in an area surrounded by existing communities, institutional, and commercial uses. The site is currently in agricultural use.

5. In the 2018 Sussex County Comprehensive Plan, the area for the proposed project is identified for the purposes for future land use as Commercial, within the Coastal Area.

6. In the 2018 Plan, the area is designated as commercial within the Coastal Area and C-4 Planned Commercial is an applicable district for future land use.

7. The State Strategies for Policies and Spending identify the area as located primarily within Investment Level 2 with a small portion within Level 3. Level 2 areas are in rapidly growing areas within the county that have, or will have, public water and wastewater services and utilities. These are areas that are generally adjacent to or near Level 1 areas. Level 3 Areas are in longer-term growth plans, and/or areas within growth areas that have some environmental constraints. Although growth is planned here, infrastructure and other investments may be made further into the future.

8. The applicant proposes to use the site for a mixed-use commercial and residential development. The proposed project is consistent with the character of the area.

9. The application specifically meets the purpose of the C-4 Planned Commercial District by providing a site for commercial and service activities along a principle arterial, where improvements have recently been completed.

10. This proposed mixed-use area lessens congestion on roads and streets by providing commercial activities and residences along Route 24 – John J. Williams Highway so that residents and visitors along the west side of the coastal area may have their commercial needs met without the necessity of commuting to the Route 1 corridor.

11. The proposed mixed-use project will be served with central water by Tidewater Utilities, Inc., the holder for the Certificate of Public Convenience and Necessity for the area.

12. The present site plan adjacent to the Sussex County Unified Sanitary Sewer District, operated and maintained by the Sussex County Engineering Department for wastewater treatment.

13. The proposed mixed-use plan meets the general purpose of the Zoning Ordinance by promoting the orderly growth, convenience, order, prosperity, and welfare of the County.

14. Delaware State Housing Authority supports this proposal per the PLUS comments dated February 20th, 2025. According to the DSHA's Housing Reform Map, this project is in an Area of Opportunity where diverse housing types should be supported. This means that this area has high-quality schools, supportive infrastructure, and the capacity to support diverse and affordable housing types. This project should continue to support the balance of housing type and affordability.

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
**302-855-7878 ph. 302-854-5079 fax**

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ___

**Site Address of Conditional Use/Zoning Map Amendment**

20044 (+/-) John J Williams Hwy - Belle Mead Farm - Route 24

**Type of Conditional Use Requested**:

**Tax Map #:** 334-18.00-40.01 & 334-18.00-40.06 **Size of Parcel(s)**: 39.22 acres

**Current Zoning:** AR-1 **Proposed Zoning:** C-4 **Size of Building**: TBD

**Land Use Classification:** Commercial

**Water Provider:** Tidewater **Sewer Provider:** Sussex County

**Applicant Information**

Applicant Name: BELMEAD FARM LLC
Applicant Address: 105 FOULK ROAD
City: WILMINGTON State: DE ZipCode: 19803
Phone #: (302) 429-8700 E-mail:

**Owner Information**

Owner Name: BELMEAD FARM LLC
Owner Address: 105 FOULK ROAD
City: WILMINGTON State: DE Zip Code: 19803
Phone #: (302) 429-8700 E-mail:

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: BECKER MORGAN GROUP, INC
Agent/Attorney/Engineer Address: 309 S. GOVERNORS AVE
City: DOVER State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: MRIEMANN@BECKERMORGAN.COM

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

___ **Completed Application**

___ **Provide two (2) paper copies** and one (1) electronic copy **of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

___ **Provide relevant** Application Fee (please refer to fees effective July 1, 2022)

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

___ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

___ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney*** _____ Date: 11/22/22

***Signature of Owner*** _____ Date: 11/14/2022

*For office use only:*

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

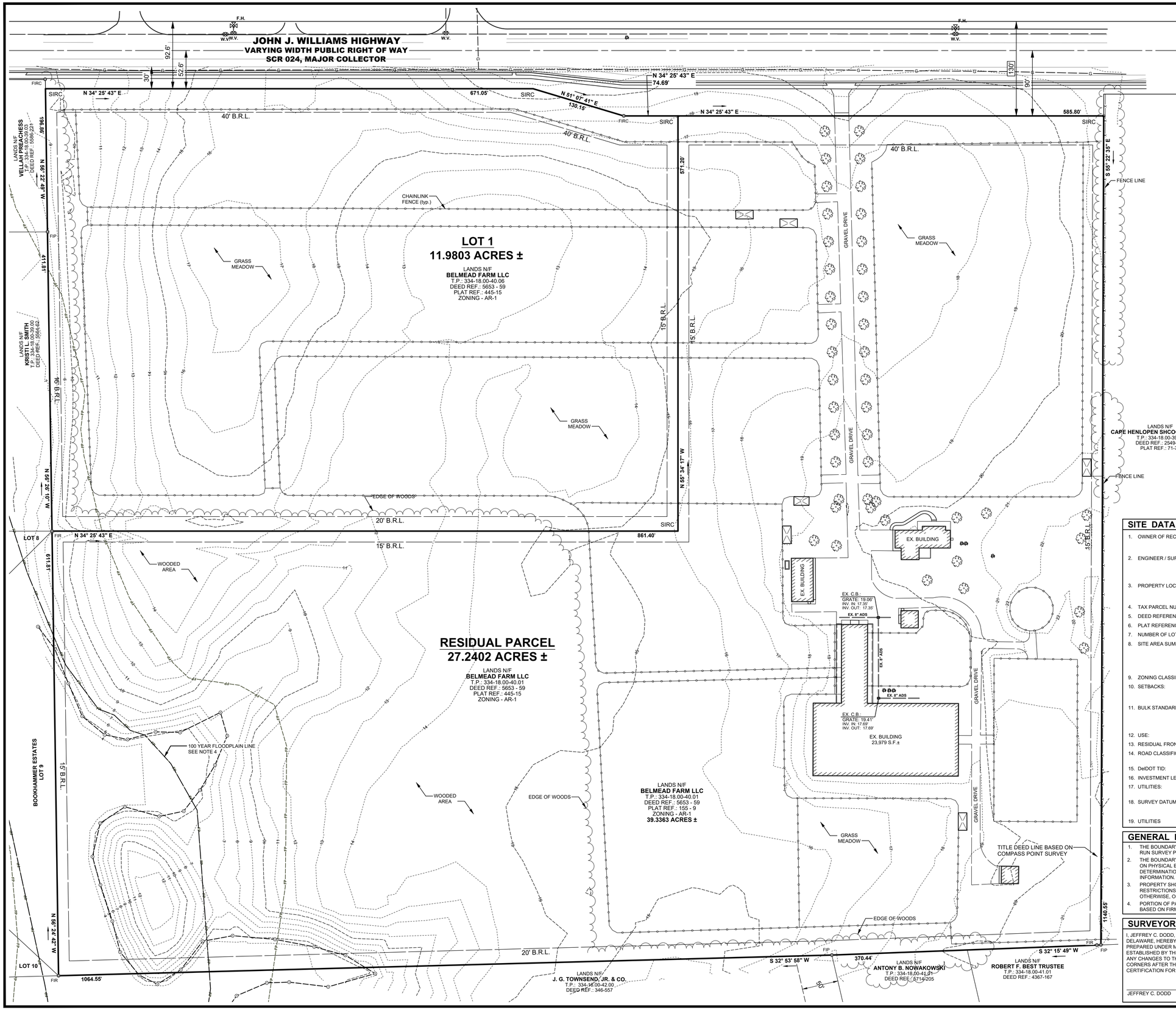
Location of property: _____

_____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____




## SITE DATA

| | | |
|---|---|---|
| 1. | OWNER OF RECORD: | BELMEAD FARM LLC<br>28855 LEWES GEORGETOWN HIGHWAY<br>LEWES, DELAWARE 19958 |
| 2. | ENGINEER / SURVEYOR: | BECKER MORGAN GROUP INC.<br>309 SOUTH GOVERNORS AVE.<br>DOVER, DELAWARE 19904<br>302-734-7950 |
| 3. | PROPERTY LOCATION: | JOHN J WILLIAMS HIGHWAY, LEWES, DE 19958<br>LATITUDE N 38° 42' 40.68" GRS80 - NAD83 (2011)<br>LONGITUDE W 75° 09' 08.01" GRS80 - NAD83 (2011) |
| 4. | TAX PARCEL NUMBERS: | 334-18.00-40.01 & 40.06 |
| 5. | DEED REFERENCES : | D.R. 5734-290 & 5653-59 |
| 6. | PLAT REFERENCES : | P.B. 445-15, P.B. 155-09 & P.B. 71-73 |
| 7. | NUMBER OF LOTS: | EXISTING - 1 / PROPOSED - 1 + RESIDUAL |
| 8. | SITE AREA SUMMARY: | PARCEL 40.01 PRIOR TO SUBDIVISION = 39.33 ACRES ±<br>LOT 1 = -11.98 ACRES ±<br>DEDICATED PUBLIC R.O.W. = -5.004 S.F.± / 0.11 ACRES ±<br>**PARCEL 40.01 RESIDUAL = 27.24 ACRES ±** |
| 9. | ZONING CLASSIFICATION: | AR-1- AGRICULTURAL RESIDENTIAL |
| 10. | SETBACKS: | FRONT: 40 FT.<br>SIDE: 15 FT.<br>REAR: 20 FT. |
| 11. | BULK STANDARDS: | MINIMUM LOT WIDTH: 150 FT.<br>MIN. LOT AREA: 20,000 S.F.<br>MINIMUM ROAD FRONTAGE: 150 FT.<br>MAX. BUILDING HEIGHT: 42 FT. |
| 12. | USE: | PRESENT: RESIDENTIAL PROPOSED: RESIDENTIAL |
| 13. | RESIDUAL FRONTAGE: | 585.8 FT. |
| 14. | ROAD CLASSIFICATION: | JOHN J WILLIAMS HWY. - OTHER PRINCIPAL ARTERIALS (45 M.P.H.) |
| 15. | DelDOT TID: | PARCELS INSIDE OF DelDOT T.I.D. HENLOPEN |
| 16. | INVESTMENT LEVEL: | PARCELS WITHIN LEVEL 2 INVESTMENT AREA |
| 17. | UTILITIES: | WATER: ON-SITE<br>SEWER: ON-SITE |
| 18. | SURVEY DATUM: | NGS MONUMENTS<br>VERTICAL: NAVD88<br>HORIZONTAL: NAD83 (2011) |
| 19. | UTILITIES | 6 FOUND / 5 SET |

## GENERAL NOTES

1. THE BOUNDARY & TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD RUN SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., DOVER, DE. IN MARCH 2023.
2. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION. NO TITLE EXAMINATION PERFORMED.
3. PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
4. PORTION OF PARCEL IS LOCATED WITHIN ZONE "AE", BASE FLOOD ELEVATION 5', BASED ON FIRM MAP 10005C0334K, EFFECTIVE DATE MARCH 16, 2015.

## SURVEYOR CERTIFICATION

I, JEFFREY C. DODD, REGISTERED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF DELAWARE, HEREBY STATE THAT THE INFORMATION SHOWN ON THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS ESTABLISHED BY THE STATE OF DELAWARE BOARD OF PROFESSIONAL LAND SURVEYORS. ANY CHANGES TO THE PROPERTY CONDITIONS, IMPROVEMENTS, BOUNDARY OR PROPERTY CORNERS AFTER THE DATE SHOWN HEREON SHALL NECESSITATE A NEW REVIEW AND CERTIFICATION FOR ANY OFFICIAL OR LEGAL USE.

JEFFREY C. DODD P.L.S.NO. 782 DATE

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

**Delaware**
309 South Governors Avenue
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**Maryland**
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Salisbury, MD 21801
410.546.9100

**North Carolina**
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

**www.beckermorgan.com**

PROJECT TITLE

LANDS OF
# BELMEAD FARM LLC

JOHN J WILLIAMS HIGHWAY
LEWES, DELAWARE 19958
SUSSEX COUNTY

SHEET TITLE

# BOUNDARY & TOPOGRAPHIC SURVEY

0 30 60 120

SCALE: 1" = 60'

ISSUE BLOCK

| MARK | DATE | DESCRIPTION |
|---|---|---|

LAYER STATE: BNDY TOPO

| | |
|---|---|
| PROJECT NO.: | 2022079.00 |
| DATE: | 03/07/25 |
| SCALE: | 1" = 60' |
| DRAWN BY: B.G. | PROJ. MGR.: J.C.D. |

SHEET
1 OF 1

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LAYER STATE: 2.3_AERIAL-MAP-1000

**AERIAL MAP - SITE LOCATION**
**BELLE MEAD FARM**

**20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)**
**SUSSEX COUNTY / DELAWARE**

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 1000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

**AERIAL**

F:\AutoCAD\Projects\2022\2022079\DWG\Misc\202207900-AERIAL.dwg, Mar 05, 2025 - 8:41am

LAYER STATE: 2.4_ZONING-MAP-2-1500

# SUSSEX COUNTY ZONING - SITE LOCATION
# BELLE MEAD FARM

**20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)**
**SUSSEX COUNTY / DELAWARE**

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING
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309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 1000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

**ZONING**

F:\AutoCAD\Projects\2022\2022079\DWG\Misc\202207900-AERIAL.dwg, Mar 07, 2025 - 12:33pm

THE SUSSEX PLAN

Sussex County Comprehensive Plan

# Existing Land Use

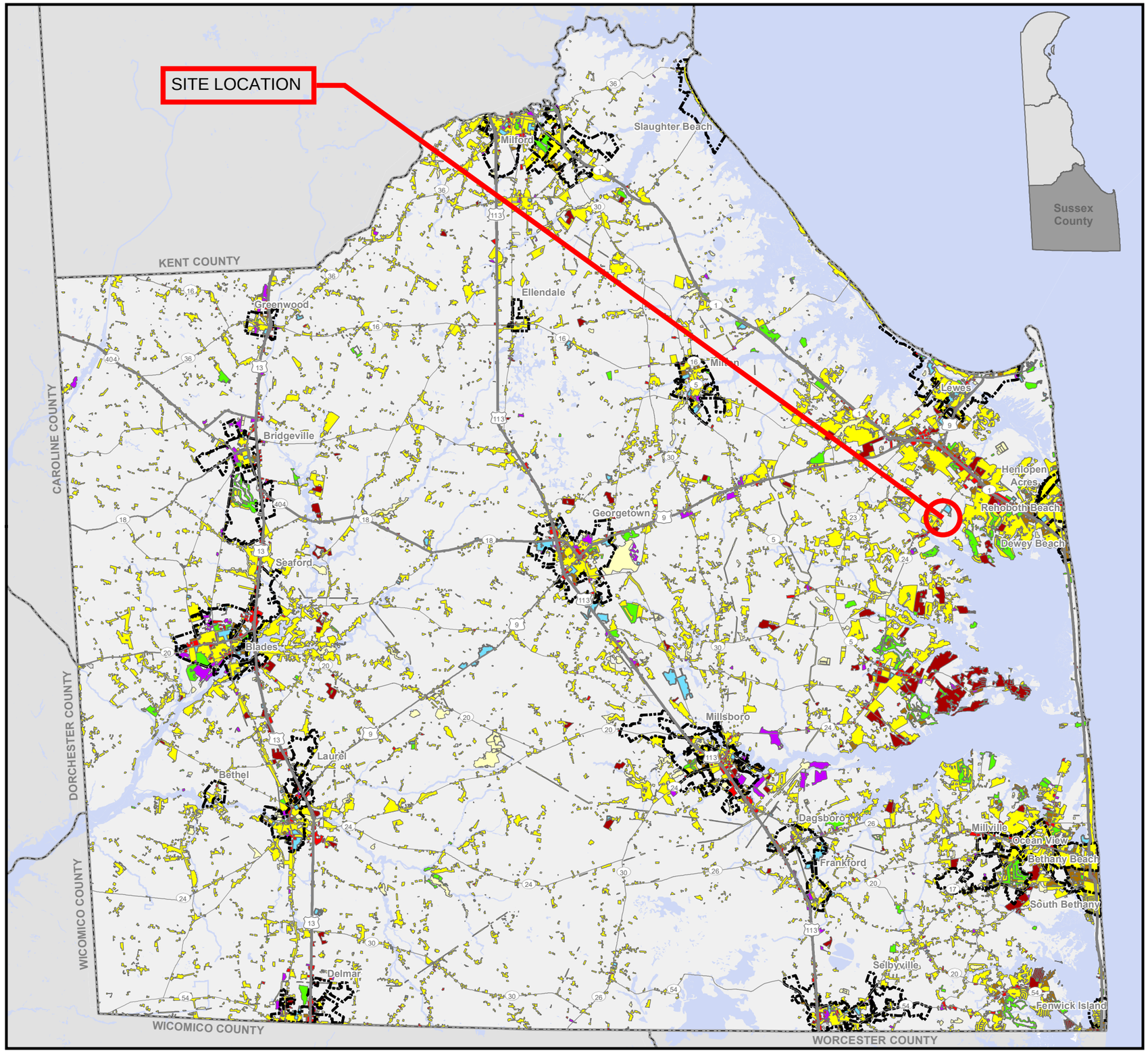
- Single-Family Dwellings
- Multi-Family Dwellings
- Mobile Home Parks/Courts
- Commercial
- Industrial
- Institutional
- Mixed Use
- Agricultural & Undeveloped Lands
- Recreation
- Utilities
- County Boundaries
- Municipalities
- Major Rivers
- Waterbodies

Sources: DE FirstMap - 2012 Existing Land Use, Sussex County Mapping Dept., Office of Management and Budget, State of Delaware, Delaware Geographic Data Committee

McCORMICK TAYLOR

0 2.5 5 Miles

N




5766_016_ExistingLandUse2012_11x17_rev 4/27/2017 9:38:19 AM

LAYER STATE: 2.5_EXISTING LAND USE-1000

# EXISTING LAND USES - SITE LOCATION
# BELLE MEAD FARM

**20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)**
**SUSSEX COUNTY / DELAWARE**

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BMG: **2022079.00**
SCALE: **1" = 1000'**
DATE: **MAR. 2025**
DRAWN BY: **M.J.A.**

**EXISTING**

F:\AutoCAD\Projects\2022\2022079\DWG\Misc\202207900-AERIAL.dwg, Mar 06, 2025 - 4:05pm

LAYER STATE: 2.10_VICINITY MAP-5000

**VICINITY MAP - SITE LOCATION**
**BELLE MEAD FARM**
**SURROUNDING COMMERCIAL**
20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)
SUSSEX COUNTY / DELAWARE

BECKER MORGAN GROUP

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Ph. 302.734.7950
Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 3000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

**VICINITY**

F:\AutoCAD\Projects\2022\2022079\DWG\Misc\202207900-AERIAL.dwg, Mar 06, 2025 - 3:36pm

THE SUSSEX PLAN

Sussex County Comprehensive Plan

# 2045 Future Land Use Map

**Growth Areas**
- Municipalities
- Town Center
- Developing Area
- Existing Development Area
- Coastal Area
- Commercial
- Industrial Area

**Rural Areas**
- Low Density
- Protected Land
- Ag. Preservation District
- Ag. Preservation Easement

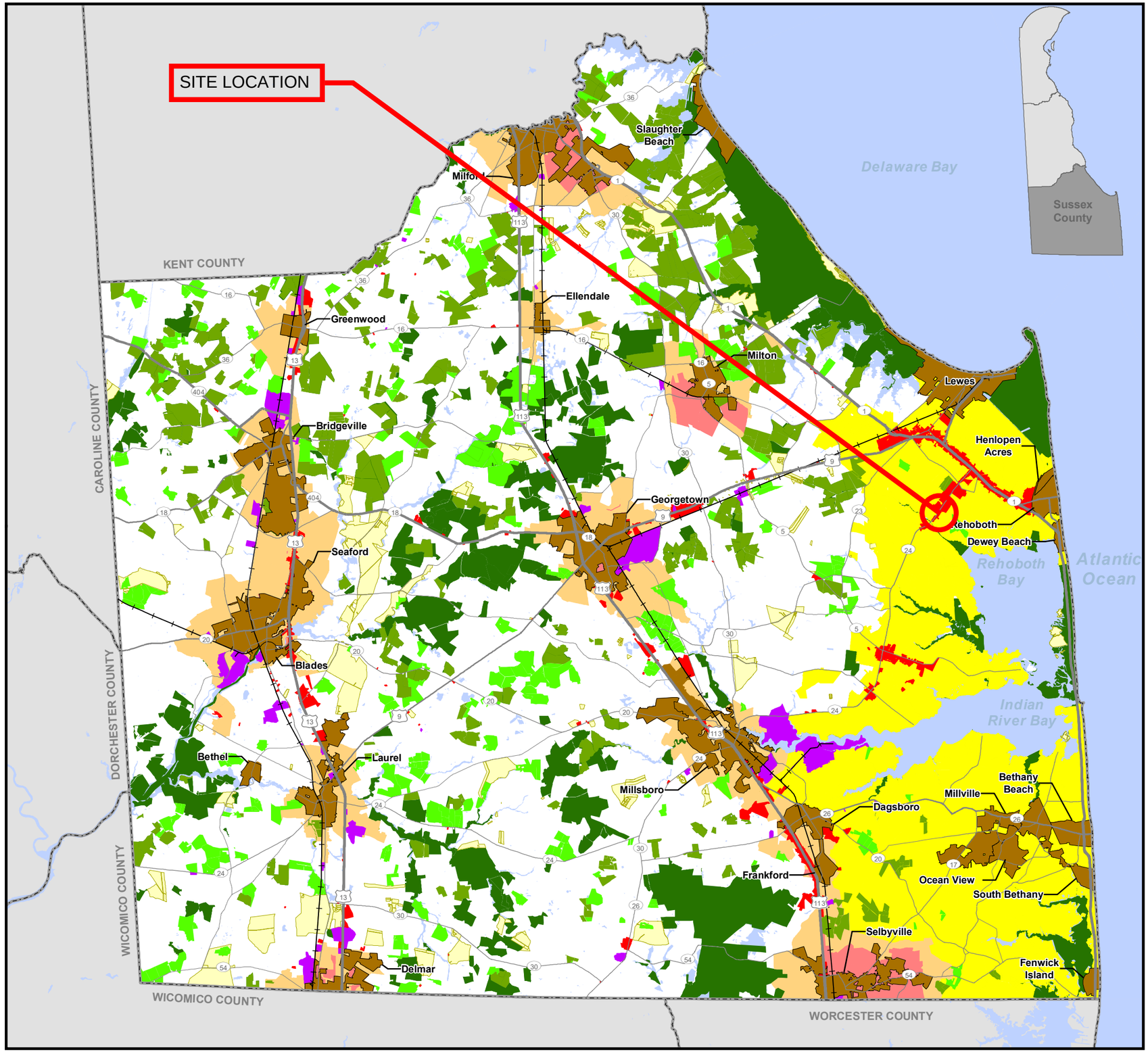
Sources: DE FirstMap, Sussex County Mapping Dept.
Land Use Data from 2008, State Forest Data from 2013, Forest Conservation Easements Data from 2016, Municipal Annexation Areas 2016

*The official depiction of the protected lands can be found on the Protected Land Map (Figure 5.2-1)

McCORMICK TAYLOR

0 2.5 5 Miles

N




5766_040_FutureLandUse2045_11x17_Final 1/16/2019 2:39:52 PM

LAYER STATE: 2.6_FUTURE LAND USE-1000

## 2045 FUTURE LAND USE - SITE LOCATION
## BELLE MEAD FARM

20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)
SUSSEX COUNTY / DELAWARE

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ENGINEERING
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309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 1000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

FUTURE

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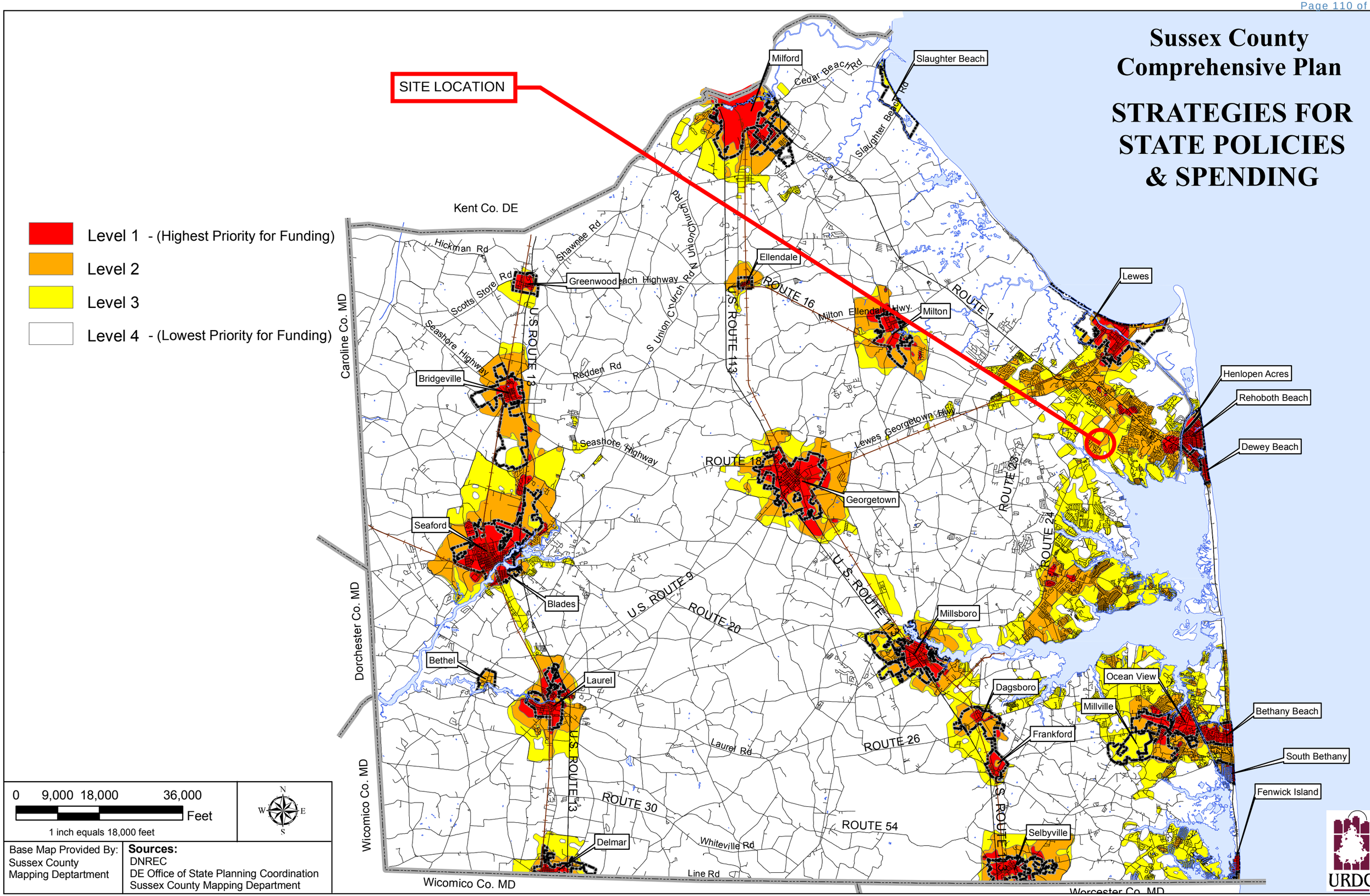
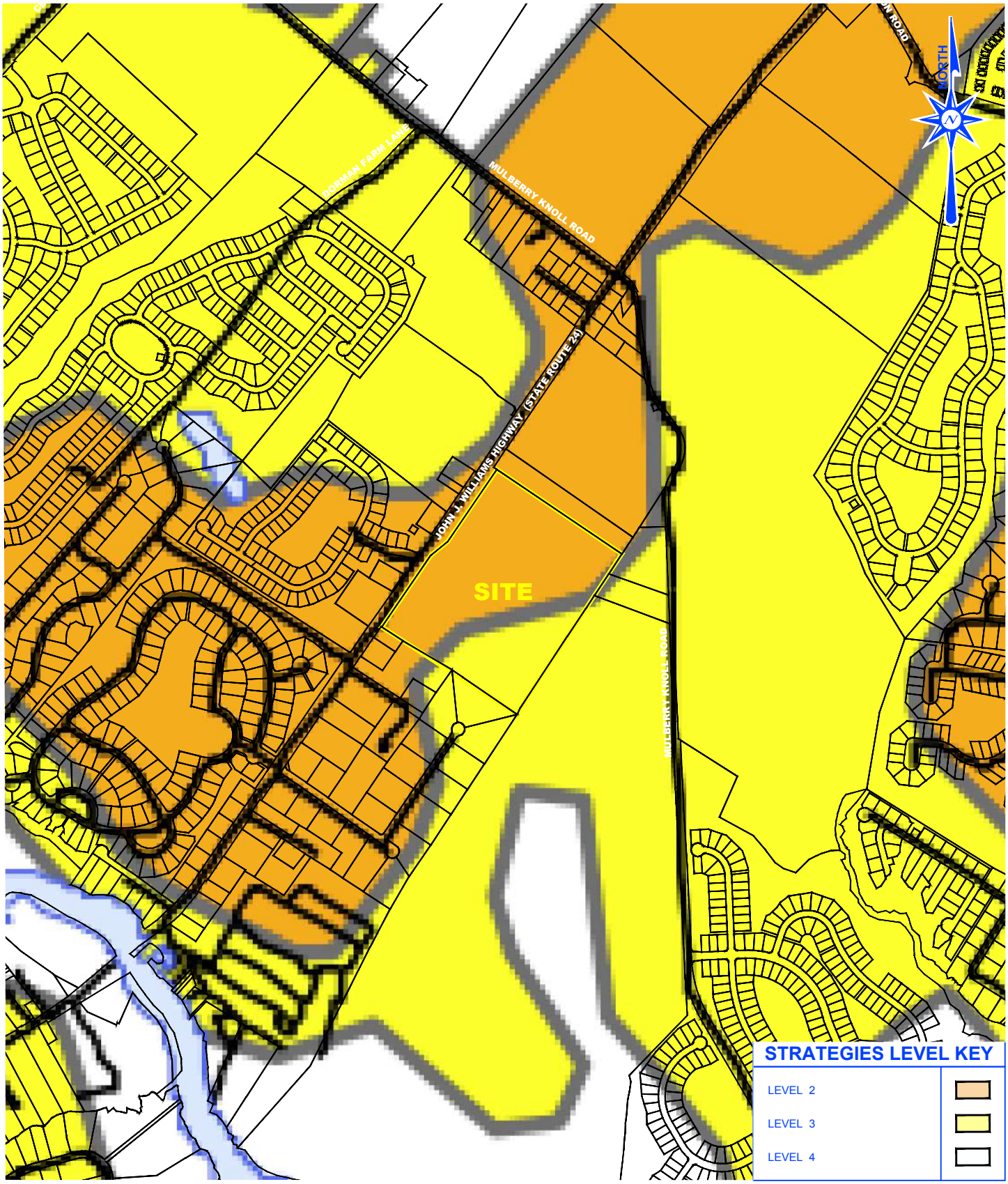
# Sussex County Comprehensive Plan

## STRATEGIES FOR STATE POLICIES & SPENDING




Base Map Provided By:
Sussex County
Mapping Deptartment

**Sources:**
DNREC
DE Office of State Planning Coordination
Sussex County Mapping Department




LAYER STATE: 2.8_STRATEGIES SPENDING-1000

STRATEGIES FOR STATE POLICIES & SPENDING - SITE LOCATION

**BELLE MEAD FARM**

20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)
SUSSEX COUNTY / DELAWARE

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Dover, DE 19904
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Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 1000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

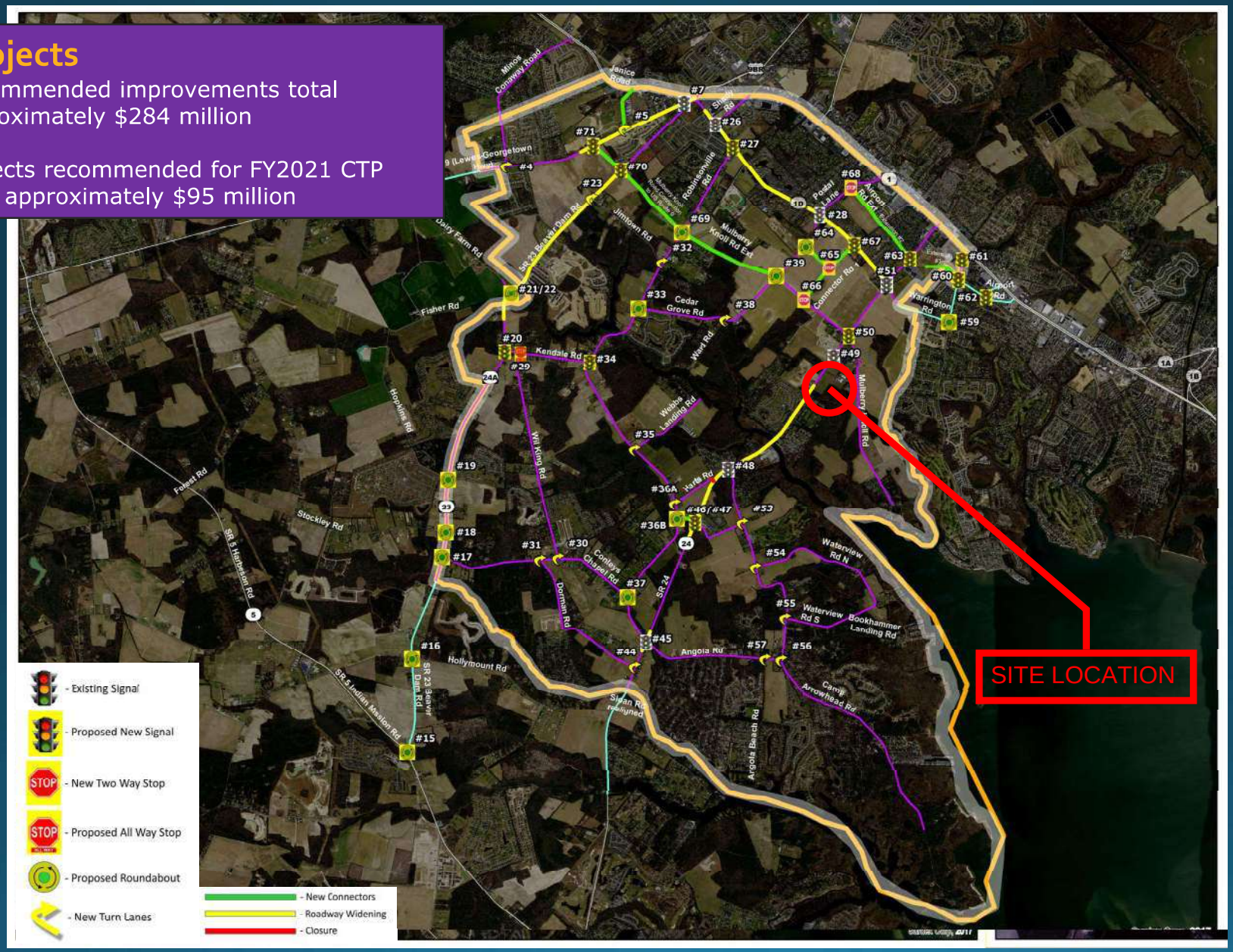
STRATEGIES

F:\AutoCAD\Projects\2022\2022079\DWG\Misc\202207900-AERIAL.dwg, Mar 06, 2025 - 9:24am

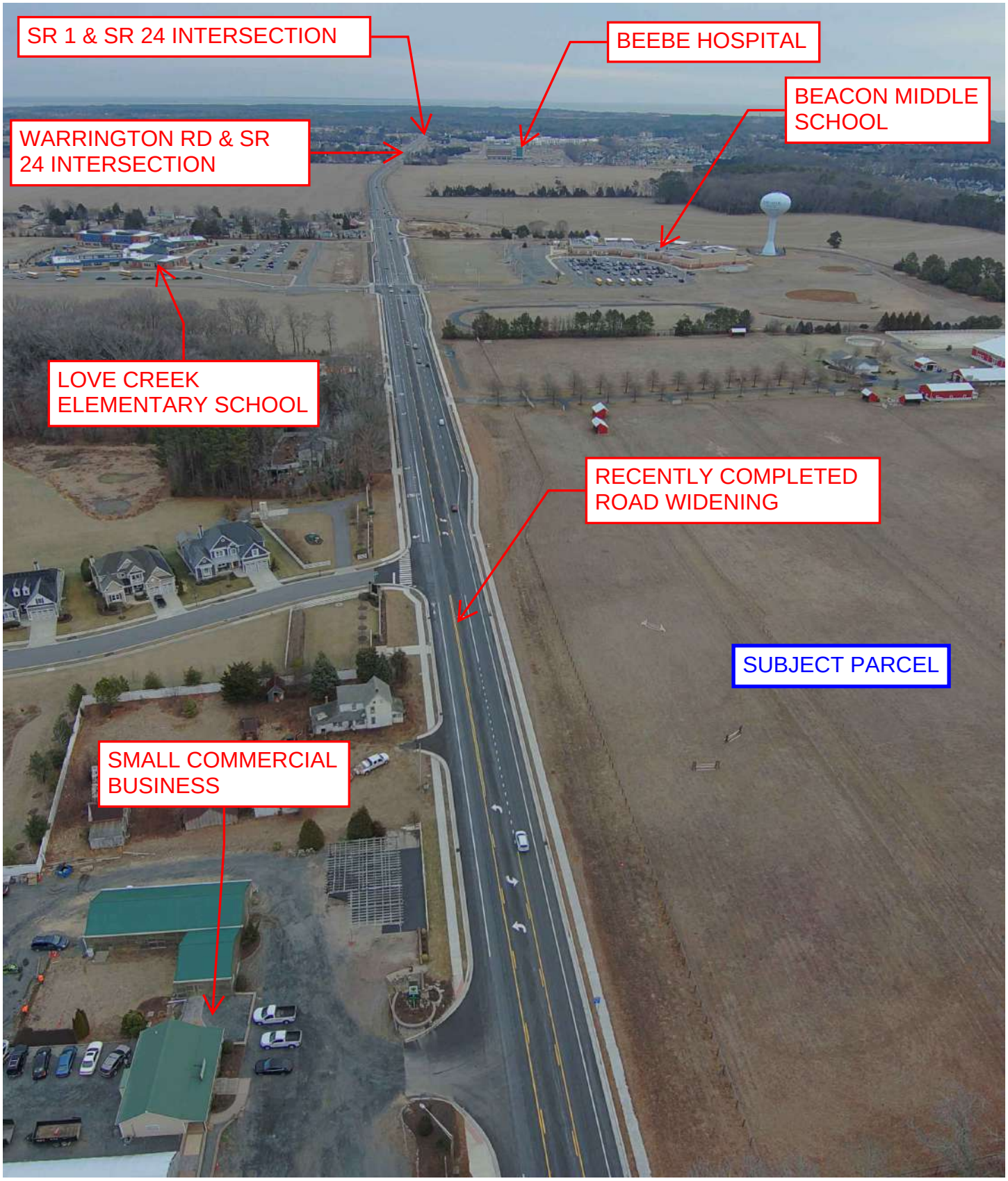
# Proposed Improvement Type & Location

## All Projects

- Recommended improvements total approximately $284 million
- Projects recommended for FY2021 CTP total approximately $95 million




DelDOT




LAYER STATE: IMPROVEMENT-AERIALS

**AERIAL PHOTOGRAPH - SITE LOCATION**
**BELLE MEAD FARM**

**20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)**
**SUSSEX COUNTY / DELAWARE**

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Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 1000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

**AERIAL**

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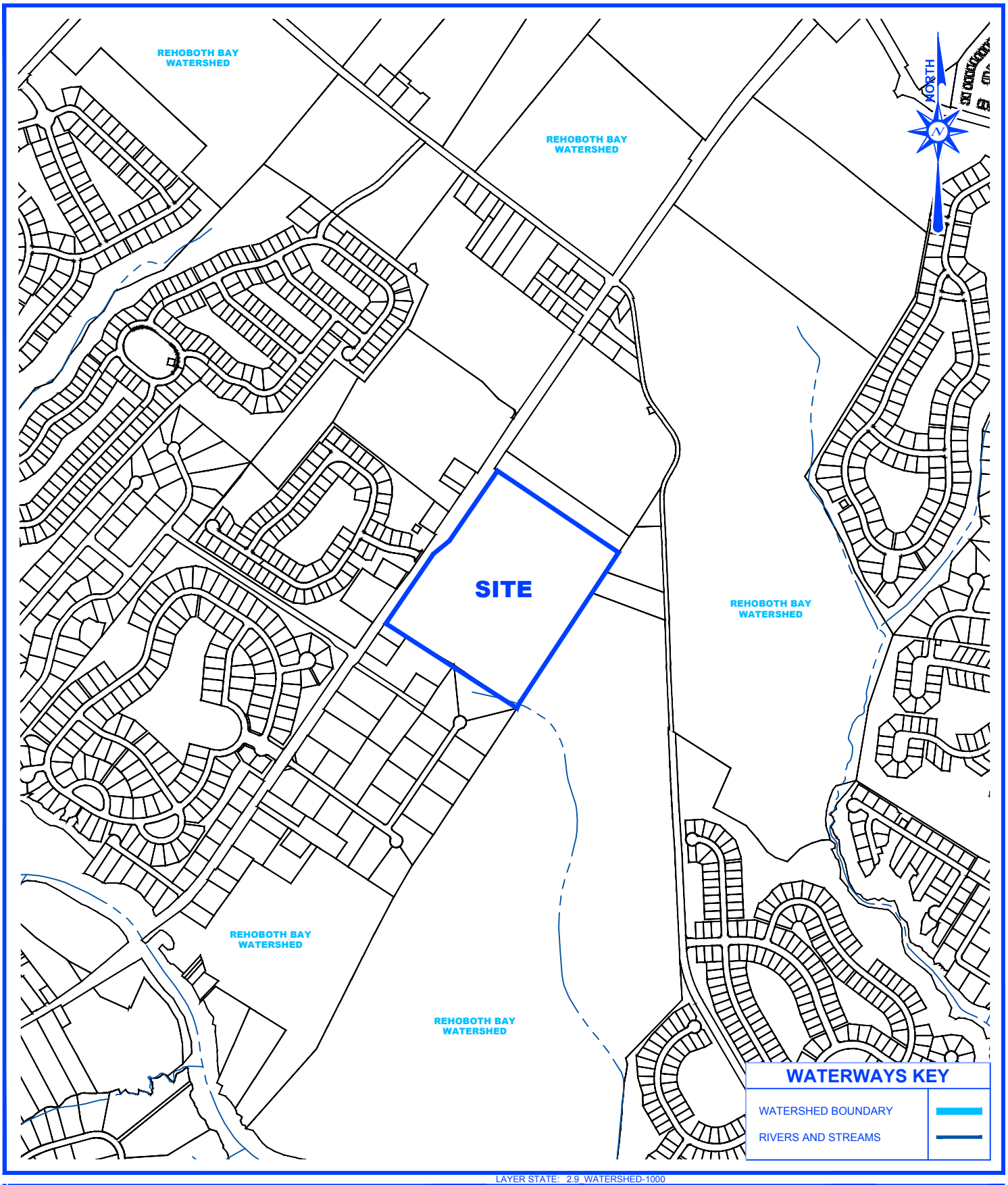


LAYER STATE: 2.9_WATERSHED-1000

## WATERSHED & WATERWAYS - SITE LOCATION
## BELLE MEAD FARM

20044 ± JOHN J. WILLIAMS HIGHWAY (SR 24)
SUSSEX COUNTY / DELAWARE

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Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 1000'
DATE: MAR. 2025
DRAWN BY: M.J.A.

WATERSHED

F:\AutoCAD\Projects\2022\2022079\DWG\Misc\202207900-AERIAL.dwg, Mar 07, 2025 - 12:37pm

# FEMA Flood Plain

10/23/2024, 3:46:36 PM

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Parcels

FEMA Flood Maps

AE

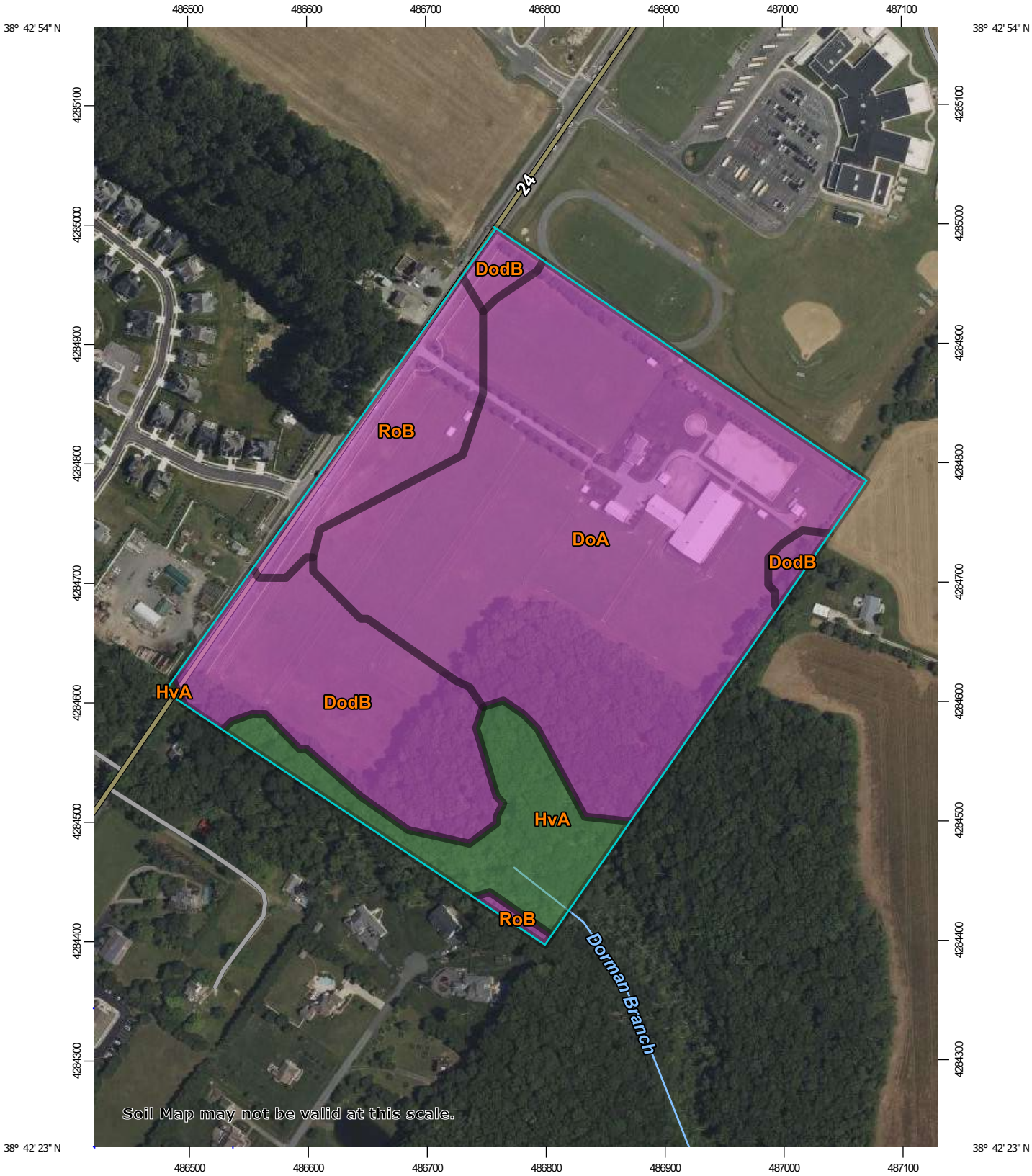
X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

FIRM Panel

FEMA, Surdex Corp

DNREC Stormwater
2018

# Hydrologic Soil Group—Sussex County, Delaware
(2022079.00 Belle Mead)




Map Scale: 1:4,570 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Soil Rating Lines**

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Soil Rating Points**

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Water Features**

Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 25, Aug 31, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Hydrologic Soil Group

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| DoA | Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area | A | 26.7 | 59.6% |
| DodB | Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area | A | 9.2 | 20.5% |
| HvA | Hurlock sandy loam, 0 to 2 percent slopes | A/D | 4.8 | 10.6% |
| RoB | Rosedale loamy sand, 2 to 5 percent slopes | A | 4.1 | 9.2% |
| **Totals for Area of Interest** | | | **44.8** | **100.0%** |

BECKER MORGAN GROUP
ARCHITECTURE ENGINEERING

# BELLE MEAD - C4 REZONING

## CONCEPT MASTER PLAN

FEBRUARY 2025

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

# MIXED-USE BUILDING

1 WEST ELEVATION

SCALE: 3/32" = 1'-0"

2 NORTH ELEVATION

SCALE: 3/32" = 1'-0"

3 SOUTH ELEVATION

SCALE: 3/32" = 1'-0"

4 EAST ELEVATION

SCALE: 3/32" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

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302.734.7950

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Newark, DE 19713
302.369.3700

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

# BELLE MEADE FARM-MIXED USE APT. - A

John J. Williams Hgy.
Lewes, DE 19958
Sussex County

PRELIMINARY
DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS
ISSUED: 03/07/2025

SHEET TITLE

## EXTERIOR ELEVATIONS

0' 4' 8' 16' 24'
SCALE: 3/32" = 1'-0"

ISSUE BLOCK

| Mark | Date | Description |
|---|---|---|

| | |
|---|---|
| PROJECT NO: | 202207901 |
| DATE: | 03/07/2025 |
| SCALE: | 3/32" = 1'-0" |
| DRAWN BY: SMG | PROJ MGR: DJB |

A201

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3/7/2025 8:02:28 AM Autodesk Docs://Belle Meade Farm, LLC/202207901_MIXED USE APT_A.rvt

1 WEST ELEVATION

SCALE: 1/8" = 1'-0"

2 NORTH ELEVATION

SCALE: 1/8" = 1'-0"

3 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

4 EAST ELEVATION

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

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Salisbury, MD 21801
410.546.9100

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Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

# BELLE MEADE FARM-MIXED USE APT. - B

John J. Williams Hgy.
Lewes, DE 19958
Sussex County

PRELIMINARY
DESIGN CONCEPT ONLY. SUBJECT TO FURTHER REVISIONS. NOT FOR CONSTRUCTION NOT FOR PERMITS
ISSUED: 03/07/2025

SHEET TITLE

## EXTERIOR ELEVATIONS

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

ISSUE BLOCK

| Mark | Date | Description |
|---|---|---|

| | |
|---|---|
| PROJECT NO: | 202207901 |
| DATE: | 03/07/2025 |
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| DRAWN BY: SMG | PROJ MGR: DJB |

A201

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3/7/2025 7:37:13 AM Autodesk Docs://Belle Meade Farm, LLC/202207901_MIXED USE APT_B.rvt

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

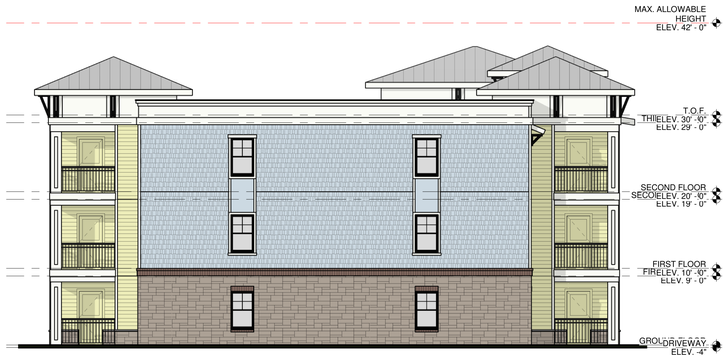
# GARDEN STYLE APARTMENT

1 NORTH ELEVATION

SCALE: 1/8" = 1'-0"

2 WEST ELEVATION

SCALE: 1/8" = 1'-0"




3 EAST ELEVATION

SCALE: 1/8" = 1'-0"

4 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

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302.734.7950

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410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

# BELLE MEADE FARM - GARDEN STYLE APARTMENTS

John J. Williams Hgy.
Lewes, DE 19958
Sussex County

PRELIMINARY
DESIGN CONCEPT ONLY, SUBJECT TO FURTHER REVISIONS, NOT FOR CONSTRUCTION NOT FOR PERMITS.
ISSUED: 03/07/2025

SHEET TITLE

## EXTERIOR ELEVATIONS

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

ISSUE BLOCK

| Mark | Date | Description |
|---|---|---|

| | |
|---|---|
| PROJECT NO: | 202207901 |
| DATE: | 03-07-2025 |
| SCALE: | 1/8" = 1'-0" |
| DRAWN BY: SMG | PROJ MGR: DJB |

A201

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3/7/2025 7:32:40 AM Autodesk Docs://Belle Meade Farm, LLC/202207901_GARDEN APT_V2.rvt

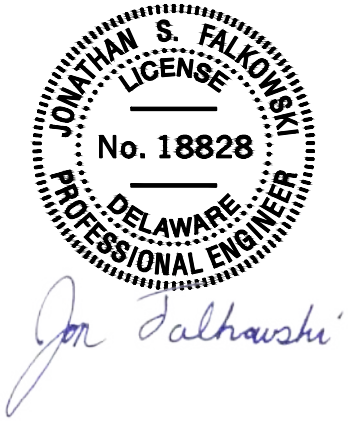
# DRAINAGE ASSESSMENT REPORT

**FOR**

## BELMEAD FARM LLC
## (CZ 2001)

Sussex County, Delaware

February 2025




Prepared by:

Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

SUSSEX COUNTY ENGINEERING

## DRAINAGE ASSESSMENT REPORT REVIEW CHECKLIST

The items contained in this checklist are necessary to evaluate the completeness of the Drainage Assessment Report submitted to Sussex County under Ch 115-193. All items are to be completed. If an item is not applicable, mark "N/A".

X 1. Cover page
X 2. Table of Contents
X 3. Project Narrative
- X a. Introduction
- X b. Existing Conditions (land use, land cover, drainage patterns, existing features).
- X c. Date(s) of field investigation.
- X d. Identification of any unstable or eroding stream bank or conveyance requiring stabilization or restoration measures.
- X e. The location of any stream blockages, such as debris jams, fallen or unstable trees, beaver dams or similar impediments to conveyance.
- X f. The location of any sand or gravel deposition within a channel or conveyance which impedes flow of water produced by a storm having an annual probability of occurrence of 10%.
- X g. A discussion of all recommended measures to remedy any impediment to drainage conveyance or drainage stability.
- X h. A summary of required local, state and federal permits required to remedy any impediment to drainage conveyance.
- X i. The easement width and a sufficient number of easements to provide adequate access to the resource for maintenance.

X 4. Site Investigation Documentation
- X a. Captioned photographs detailing the field investigation and its findings.
- N/A b. Conveyance or channel cross sections (Note: provide a section at each geometry transition. Additional cross sections are required at locations of unstable or eroding banks, areas requiring stabilization or restoration, stream blockages or impediments to conveyance, and areas of sand or gravel deposits.)

N/A 5. Environmental Conditions and Habitat Assessment Report (provided by the wetland delineator)
- N/A a. General context of the site with respect to land types within the property.
- N/A b. Period of Investigation
- N/A c. Soil Conditions
- N/A d. History of forest stands found on the property.
- N/A e. Identification of streams or other conveyances.
- N/A f. Condition and conveyance capability of streams or other conveyances.
- N/A g. Identification of the extent and types of wetlands.
- N/A h. The occurrence of any threatened or endangered species or the presence of any associated designated critical habitats listed by the Endangered Species Act of 1977.
- N/A i. Summary/Conclusion

X 6. Existing Conditions Mapping
- X a. Site Location with aerial
- X b. Tax Ditch (watershed, channel location, rights-of-way)
- X c. FEMA Flood Plain
- X d. Wetland Mapping
- X e. NRCS Soils
- X f. Head of Tide
- X g. Contours (1-ft LiDAR)

# TABLE OF CONTENTS


| SECTION | | PAGE |
|---|---|---|
| 1.0 | **SITE NARRATIVE** | Pg. 2 |
| 2.0 | **SITE INVESTIGATION DOCUMENTATION** | Pg. 3 |
| 3.0 | **ENVIRONMENTAL CONDITIONS & HABITAT ASSESSMENT REPORT** | Pg. 3 |
| 4.0 | **EXISTING CONDITIONS MAPPING** | Pg. 4 |

Appendix A: Captioned Field Visits Photos
Appendix B: Watershed Eco Wetlands Delineation Report
Fish and Wildlife Threatened and Endangered Species List
Appendix C: Existing Conditions Mapping


---

## 1.0 SITE NARRATIVE

### 1.1 Introduction:

In accordance with section 115-193F(2) of the Sussex County Code, Becker Morgan Group, Inc. has prepared the following Drainage Assessment Report ("DAR") in support of the Belmead Farm LLC. The subject site contains an existing perennial nontidal stream known as "Dorman Branch" with an associated 100-foot-wide resource buffer. The proposed development does not propose disturbance within said resource buffer; the closest part of development is approximately 700 feet the buffer limit.

This report serves to identify the presence of the following "concerning measures needed for drainage conveyances" in accordance with section 115-193F(2) of the Sussex County Code and the Drainage Assessment Report Review Checklist

### 1.2 Existing Conditions:

The subject property currently exists primarily as a horseback riding farm with open meadows, stables, barns and other existing structures. With a wooded area in the southern portion of the property. The property has one primary drainage outfall location which flows south towards Dorman Branch in the southern portion of the property.

### 1.3 Date(s) of field investigation:

Becker Morgan Group performed a topographic survey of this site in March of 2023.

### 1.4 Identification of any unstable or eroding stream banks or conveyance requiring stabilization or restoration measures:

No instability or erosion was observed along stream banks – the existing topography slopes gently from the forested uplands down to the wetlands and Dorman Branch.

### 1.5 The location of any stream blockages, such as debris jams, fallen or unstable trees, beaver dams or similar impediments to conveyance:

No stream blockages or beaver activity were observed along the stream or within the upstream drainage area to Dorman Branch. The extensive wetland area surrounding Pemberton Branch helps to attenuate high flow volumes.

**1.6 The location of any sand or gravel deposition within a channel or conveyance which impedes the flow of water produced by a storm having an annual probability of occurrence of 10%:**

No sand or gravel deposition was observed within the Dorman Branch that would impede the flow of water. Typical scouring of the stream during relatively large rain events was observed. Stream exhibited a normal base flow along the thalweg.

**1.7 A discussion of all recommended measures to remedy any impediment to drainage conveyance or drainage stability:**

As noted above, no impediments to drainage conveyance or drainage stability were observed along Dorman Branch or the surrounding areas.

**1.8 A summary of required local, state or federal permits required to remedy any impediment to drainage conveyance:**

As noted above, no impediments to drainage conveyance or drainage stability were observed along Dorman Branch or the surrounding areas.

**1.9 The easement width and a sufficient number of easements to provide adequate access to the resource for maintenance:**

Adequate access easements shall be provided from the proposed residential streets to the protected resource buffers associated with Dorman Branch.

## 2.0 SITE INVESTIGATION DOCUMENTATION

**2.1 Captioned photographs detailing the field investigation and its findings:**

Please see Appendix A for captioned photographs from field visits.

**2.2 Conveyance or channel cross sections:**

A detailed stormwater management design will be developed for the proposed development which will demonstrate no adverse impacts to the Dorman Branch using runoff-reduction practices in accordance with the Delaware Sediment and Stormwater Standards (DSSR). Such practices will be required by the DSSR to manage runoff generated by the proposed development to a rate less than or equal to that of the existing condition, and to discharge runoff in a non-erosive manner. This development will thus have no adverse impact on the Dorman Branch, and as such we do not believe it necessary to provide detailed cross-sections.

## 3.0 ENVIRONMENTAL CONDITIONS AND HABITAT ASSESSMENT REPORT

The U.S Fish  Wildlife Service has mapped a small portion of the site to be PFO1R Wetlands (Palustrine Forested Wetland, Tifal Freshwater). Which is mapped out and avoided on the site plan.

See Appendix B for the wetland's delineation report.

A Rare Species Search per the United States Fish and Wildlife Service (USFWS) database for the likelihood of rare and endangered species was performed. Two potential species were identified based on the search. The tri-colored bat, which the USFWS usually suggests that if tree clearing

is required within the breeding season, then a summer survey should be conducted to determine whether the bats are present. Tree clearing is usually restricted to the time period between Oct. 1 and March 31 to avoid impacts to the listed bat species. The Monarch Butterly requires specialized habitat (milkweed) for breeding. Suitable habitat for the species is not likely or anticipated to occur within the development area.

See Appendix B for the Species List.

## 4.0 EXISTING CONDITIONS MAPPING

Please see Appendix C for the following existing conditions mapped in accordance with the Drainage Assessment Report Review Checklist:

**4.1 Site location with aerial**
**4.2 Tax ditch (watershed, channel location, rights-of-way)**
**4.3 FEMA flood plain**
**4.4 Wetland mapping**
**4.5 NRCS soils**
**4.6 Head of tide**
**4.7 Contours (1-ft LIDAR)**

# APPENDIX A

# CAPTIONED FIELD VISIT PHOTOS

Photo 1: Dorman Branch and Surrounding Wetlands

Photo 2: Dorman Branch and Surrounding Wetlands

Photo 3: Newly constructed Swale

Photo 4: Newly Constructed Swale with Box Culvert Outlet

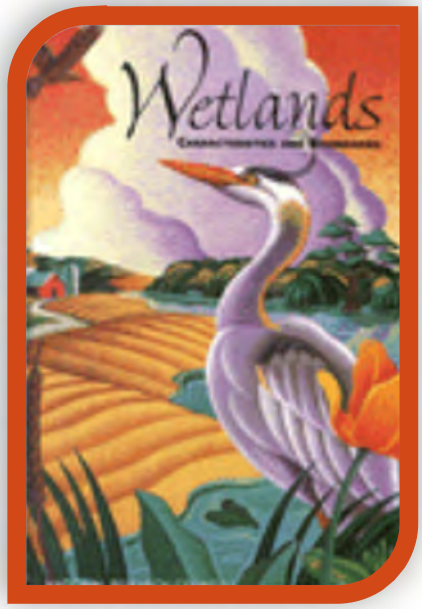
# APPENDIX B

# Watershed Eco Wetland Delineation Report

# Wetland Delineation – Belmead Farm, Lewes, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
April 30, 2023
Jim@WatershedEco.com

## Introduction




At the request of Becker Morgan Group, Inc., Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC reviewed background information and conducted a wetland delineation at the Belmead Farm, LLC. property and determined that palustrine forested wetlands were present in the southeastern portion of the property abutting a Dorman Branch. These wetlands and waters were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut the perennial stream Dorman Branch, a tributary to Love Creek and Rehoboth Bay, both Traditional Navigable Waterways. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The Navigable Waters Protection Rule (NWPR) became effective on June 22, 2020. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussions of Jurisdiction related to Waters and Wetlands in this report are based on the NWPR Section 404 of the Clean Water Act and as described in the definitions in this section as well as all guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction is established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on June 22, 2020 in the NWPR.

The NWPR defines four categories of WOTUS, 1. Territorial Seas and Traditional Navigable Waters, 2. Tributaries to 1., 3. Lakes and Ponds, and impoundments of Jurisdictional Waters and 4. Adjacent Wetlands. All other Waters are determined by the rule to be non-jurisdictional and the rule further clarifies exclusions which are not jurisdictional.

In this case we are interested in the jurisdictional status of mapped Waters in the form of non-tidal wetlands within the Subject Property. The mapped wetlands have been classified as adjacent wetlands. In the NWPR, adjacent wetlands are defined as follows: abutting, meaning to touch, or inundated by flooding from waters 1-3 above, separated only be a berm, bank or dune or an artificial dike or barrier. The NWPR further clarifies that an adjacent wetland must have a direct hydrologic surface connection to a water listed in 1-3 above in a typical year. The NWPR further clarifies that a tributary is a river or stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this definition in a typical year either directly or through one or more waters. A tributary must be intermittent or perennial. It is assumed that the mapped wetlands have a direct surface connection to Dorman Branch and would be regulated by the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule. At the present time the U.S. Army Corps of Engineers is following the 2023 Wetland Rules. The U.S. Army Corps of Engineers Philadelphia District and DNREC Subaqueous Lands Division should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 28855 Lewes Georgetown Highway in Lewes, Sussex County, Delaware. The Subject Property is located at Latitude and Longitude 38.711454and -75.152545 and is identified as Sussex County Tax Parcel No. 334-18.00-40.01 consisting of approximately 39.19 Acres.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of mowed pastures associated with equestrian use and woodlands in the southeast.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut Dorman Branch and drain southeasterly off-site to Love Creek, a tributary to Rehoboth Bay.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts palustrine forested wetlands in the southeastern portion of the subject property.

The USGS Mapping (Figure 3) depicts a blue-line stream identified as Dorman Branch in the southeastern portion of the property. The subject property is relatively flat with elevations ranging from 20 feet above sea level in the northwest to 10 feet asl in the southeast.

The National Hydrography Dataset map (Figure 4) depicts a blue-line stream feature with abutting palustrine forested wetlands in the southeastern portion of the property.

The 1937 aerial photo (Figure 5) depicts the property in agricultural use with woodlands in the southeast. The surrounding land use is predominantly agricultural and wooded with a few scattered residential properties.

The 1954 aerial photo (Figure 6) and 1968 imagery (Figure 7) depicts similar site conditions as the 1937 imagery. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts no significant changes within the subject property since 1968. Surrounding land use remains largely agricultural and wooded with residential development to the southwest and west.

The 2002 aerial photo (Figure 9) depicts no significant changes within the subject property or surrounding land since the 1992 imagery. Some site grading is apparent to the north.

The 2015 aerial photo (Figure 10) depicts a dwelling and barn have been constructed in the northeastern portion of the subject property. Woodlands remain in the southeast. New commercial development is apparent to the north and additional residential development is apparent to the south.

The 2022 aerial photo (Figure 11) depicts similar conditions as the 2015 imagery within the subject property. An additional residential subdivision has been constructed to the west.

The NRCS Soil Mapping (Figure 12) indicates the property is primarily underlain with well-drained Downer sandy loam (DoA and DodB), and Rosedale loamy sand (RoB). An area of poorly drained Hurlock sandy loam (HvA) is mapped within the woodlands in the southeastern portion of the property.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on April 26, 2023. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience.

## Results

Palustrine forested wetlands were observed in the southeastern portion of the property. These wetlands abut Dorman Branch which drains southeasterly off-site to Love Creek, a tributary to Rehoboth Bay, a Traditional Navigable Waterway. These wetlands would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of horse pastures with woodlands in the southeast.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

Typically, “blue-line” streams are regulated as State Subaqueous Lands. The perennial stream Dorman Branch is located inside of the delineated wetland boundary and would be regulated by DNREC as Subaqueous Lands

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco LLC. that federally jurisdictional palustrine forested wetlands are located within the southeastern portion of the subject property. These wetlands have a direct surface connection to Dorman Branch along the southern boundary of the property which drains off-site to Love Creek and Rehoboth Bay and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands mapped within the subject property.

Dorman Branch, along the southern property boundary would be regulated by DNREC as Subaqueous Lands. Dorman Branch was not delineated separately from the wetlands.

The mapped Waters can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

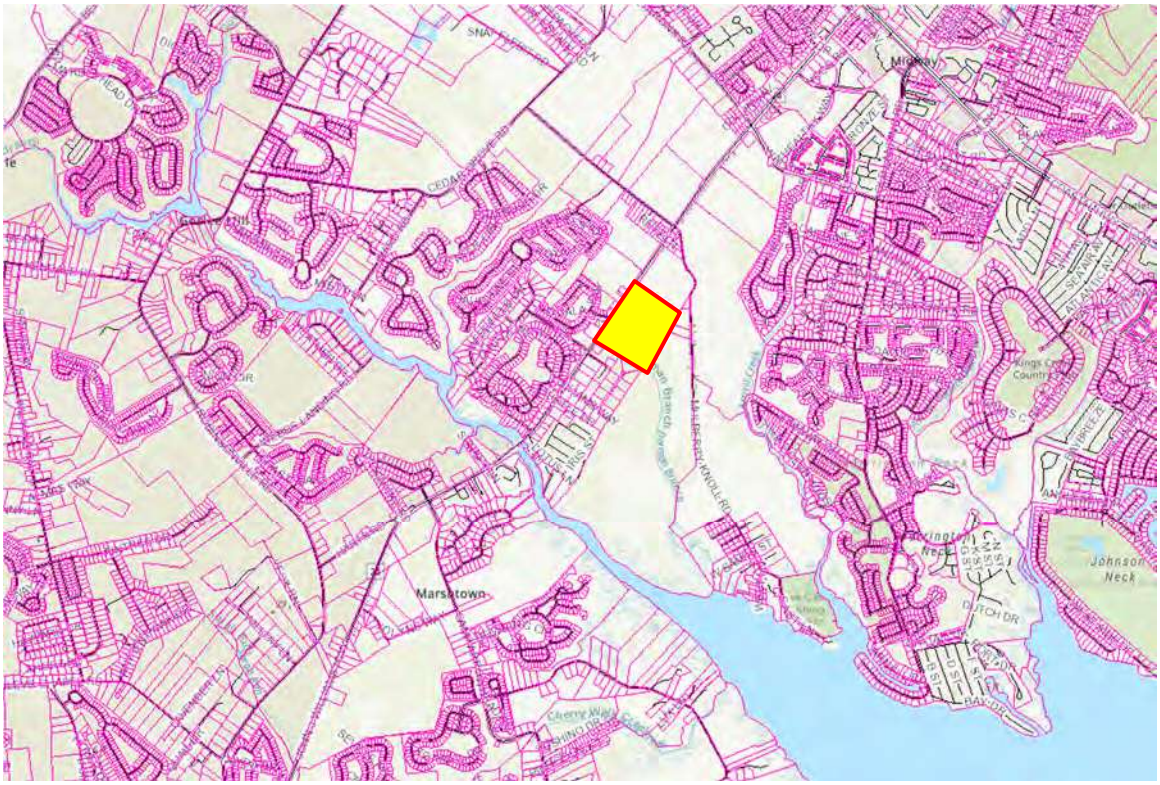



Figure 1: Location Map

Figure 2: National Wetland Inventory Map.

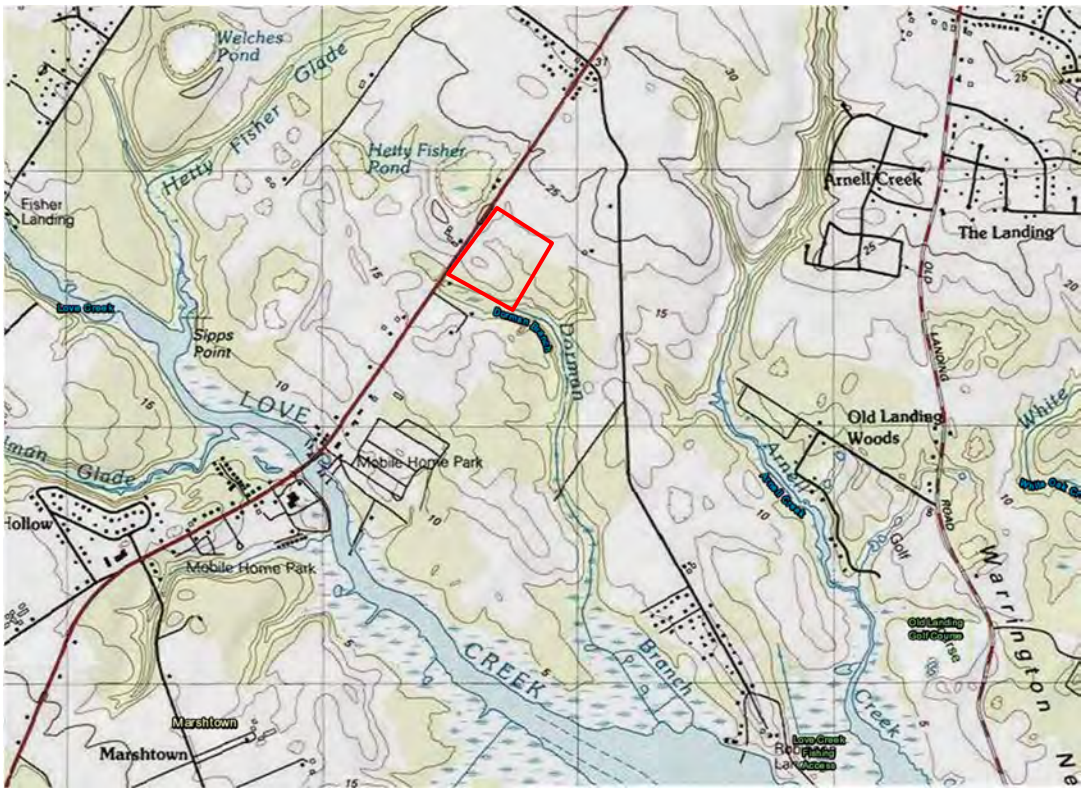



Figure 3: USGS Mapping.

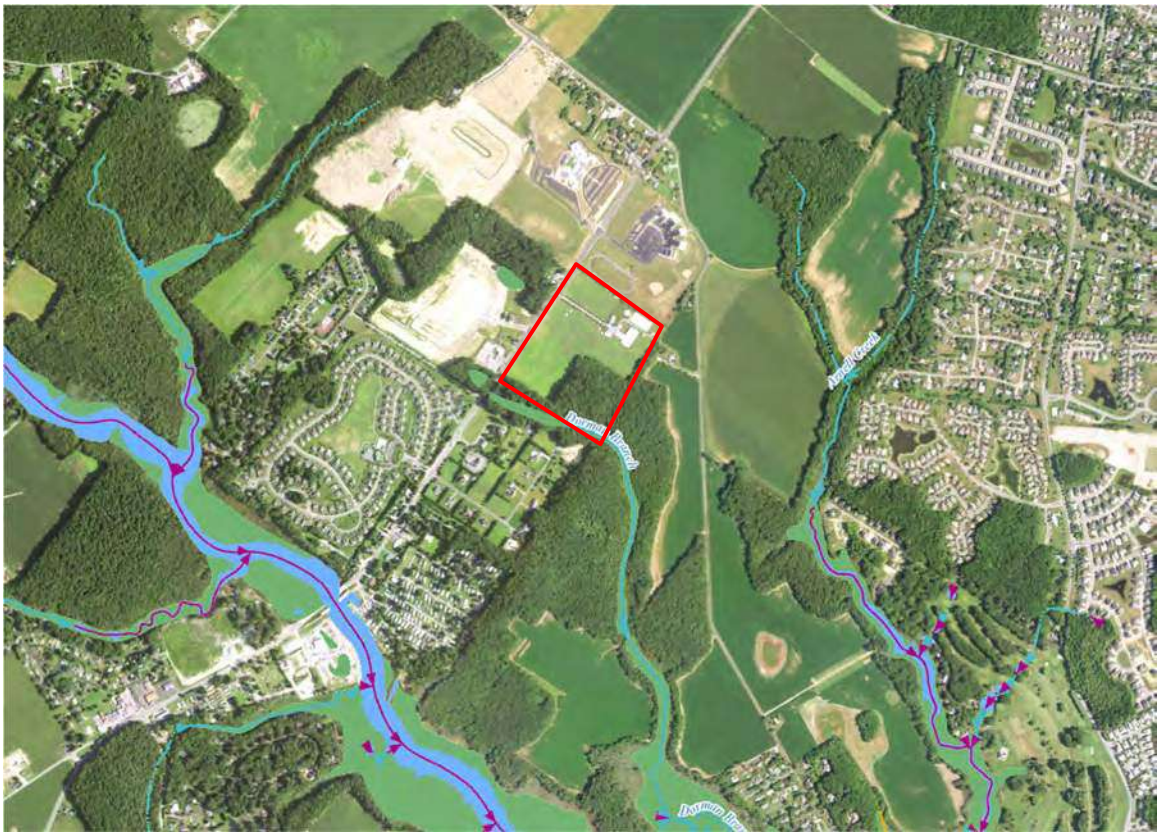


Figure 4: NHD Map.

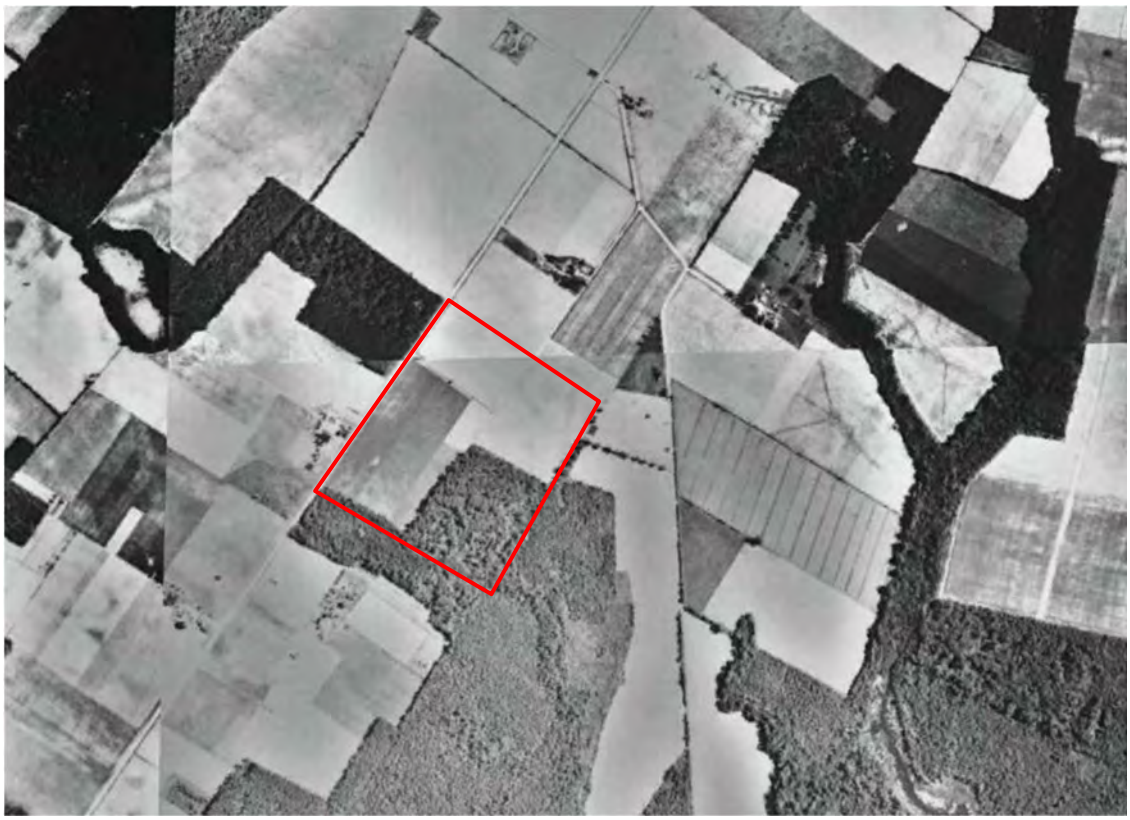


Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

Figure 10: 2015 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

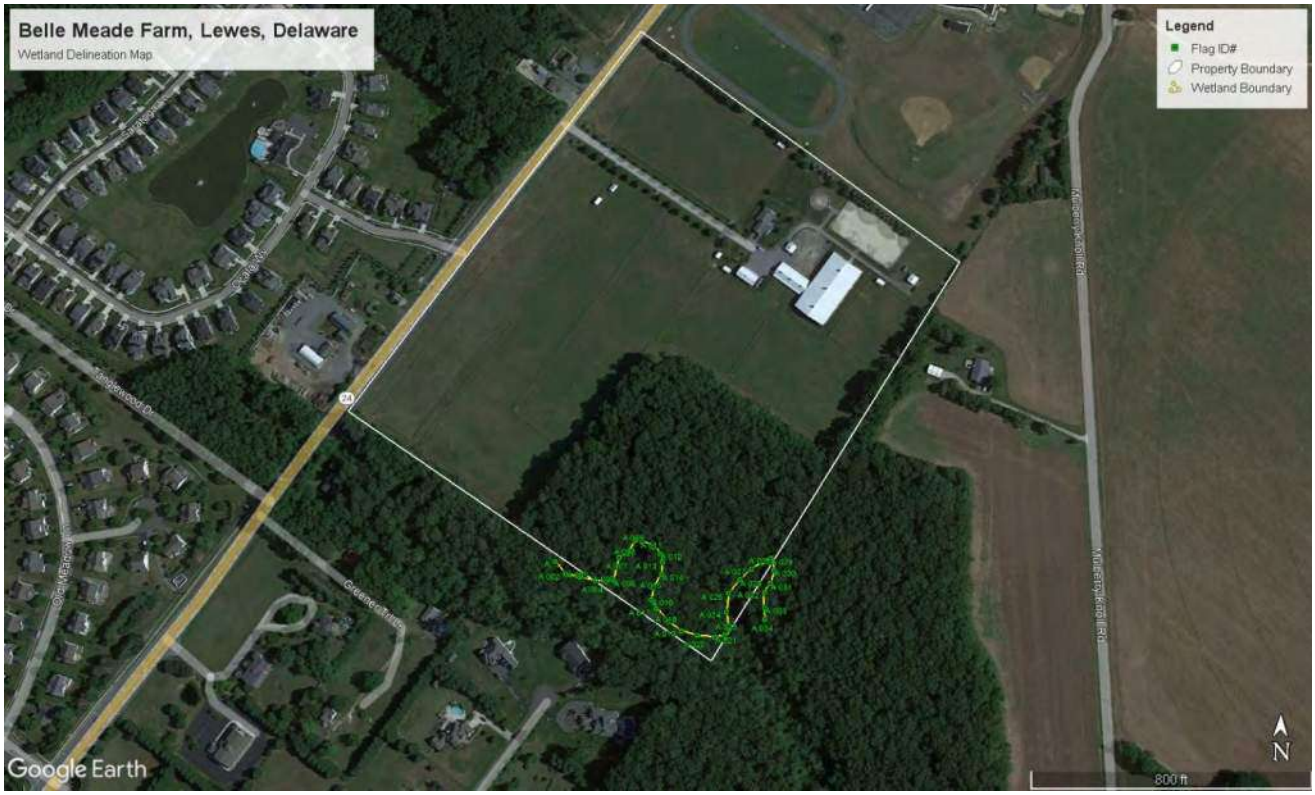



Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always o a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

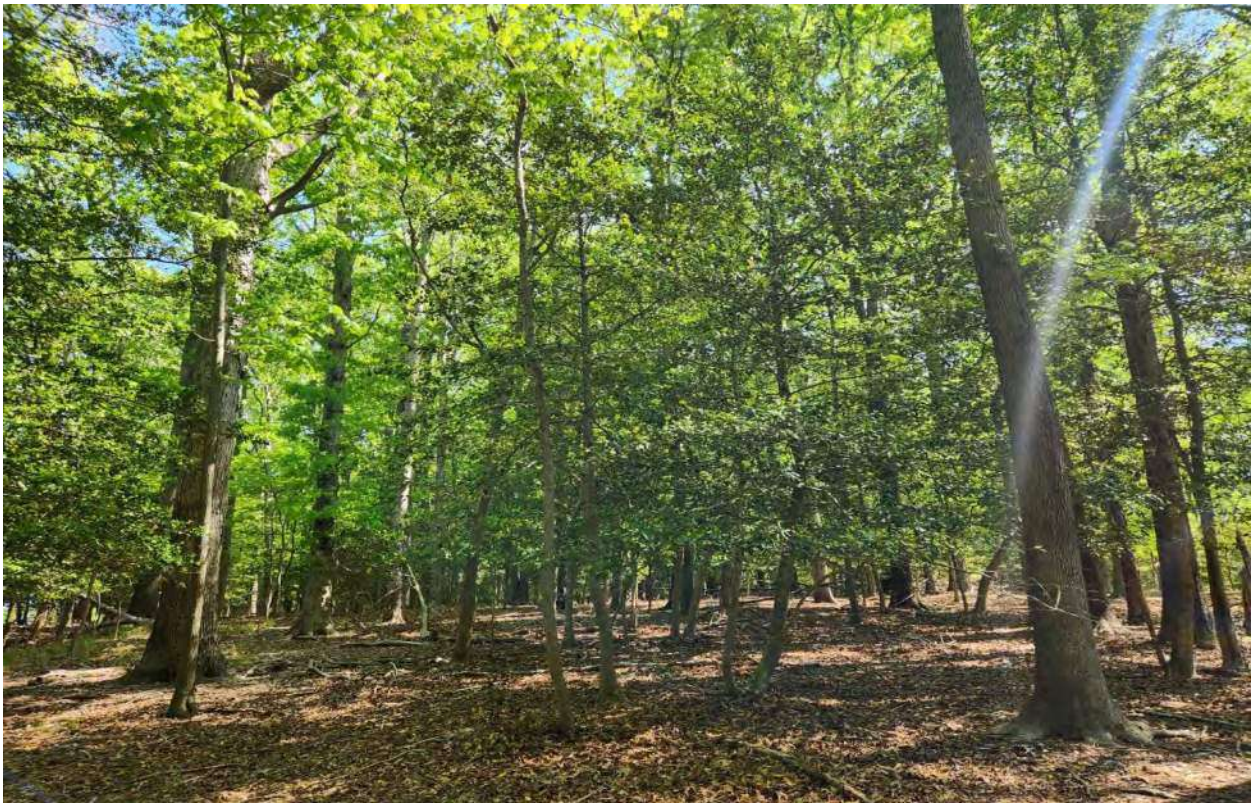
Paved driveway in the northwestern portion of the property, looking east.

Pasture surrounding barn in the northeastern portion of the property, looking northeast.

Pasture area in the north-central portion of the property, looking northeast.

Pasture bordering woodlands in the southwestern portion of the property, looking west.

Pasture area in the southwestern portion of the property, looking northeast.



Typical forested upland in the south-central portion of the property.

Forested wetland abutting Dorman Branch in the southeastern portion of the property.

Forested wetland in the southeastern portion of the property.

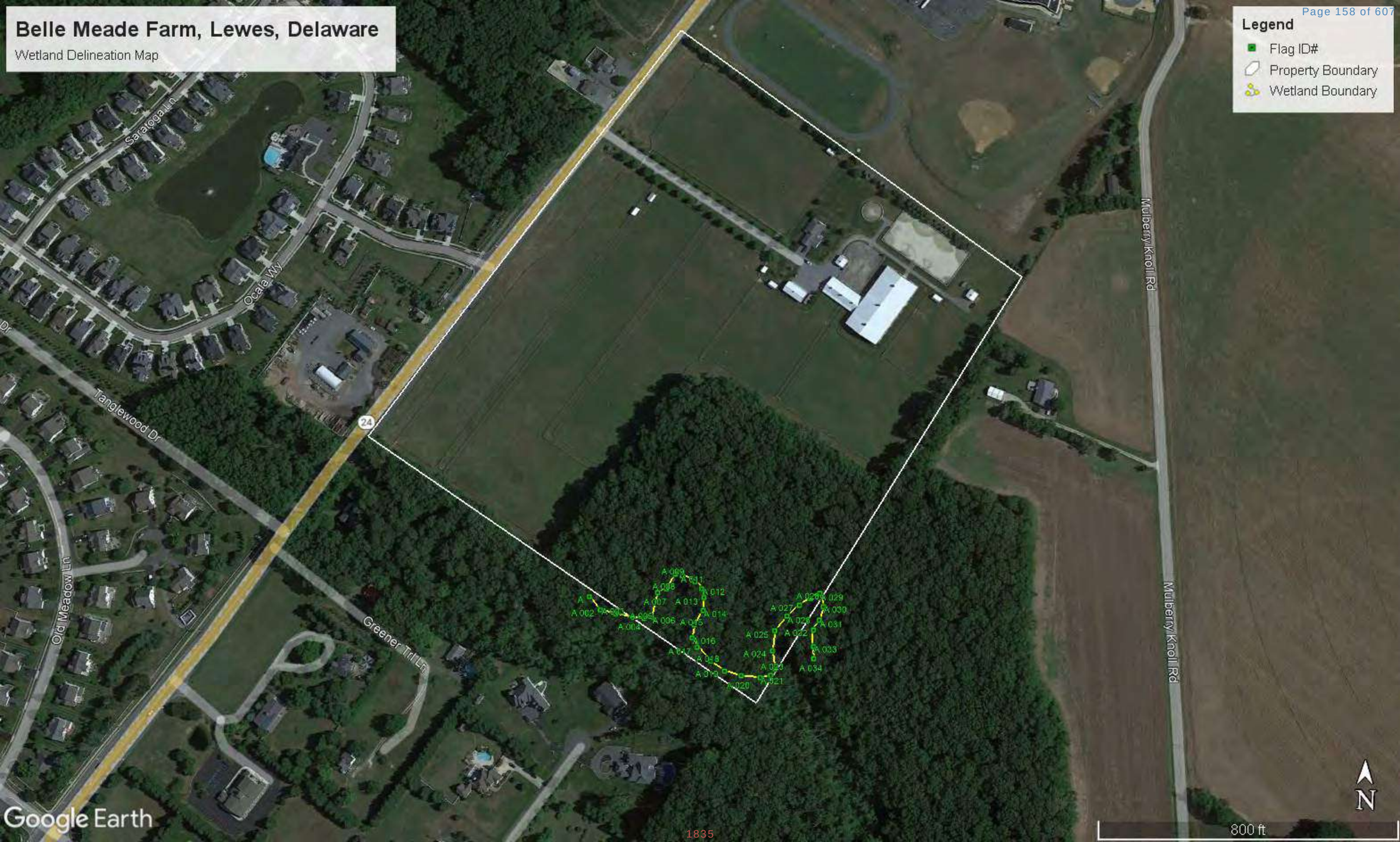
Forested upland in the southeastern portion of the property, looking northwest.

Pasture area bordering woodlands in the central portion of the subject property, looking south.

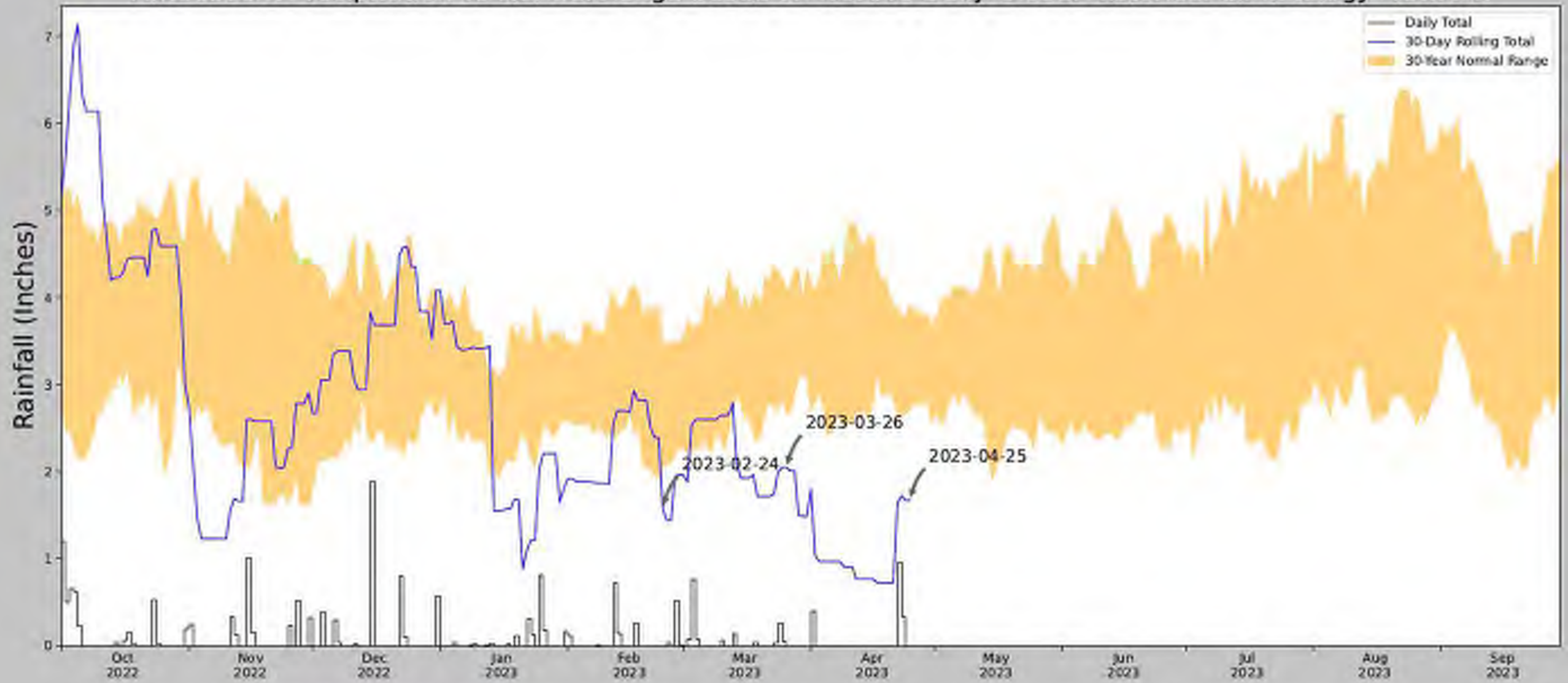
# Appendices

# Belle Meade Farm, Lewes, Delaware

Wetland Delineation Map



# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.711454, -75.152545 |
| Observation Date | 2023-04-25 |
| Elevation (ft) | 14.925 |
| Drought Index (PDSI) | Severe drought (2023-03) |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2023-04-25 | 2.712992 | 3.902362 | 1.669291 | Dry | 1 | 3 | 3 |
| 2023-03-26 | 2.679134 | 4.098032 | 2.047244 | Dry | 1 | 2 | 2 |
| 2023-02-24 | 2.05748 | 3.448032 | 1.57874 | Dry | 1 | 1 | 1 |
| Result | | | | | | | Drier than Normal - 6 |

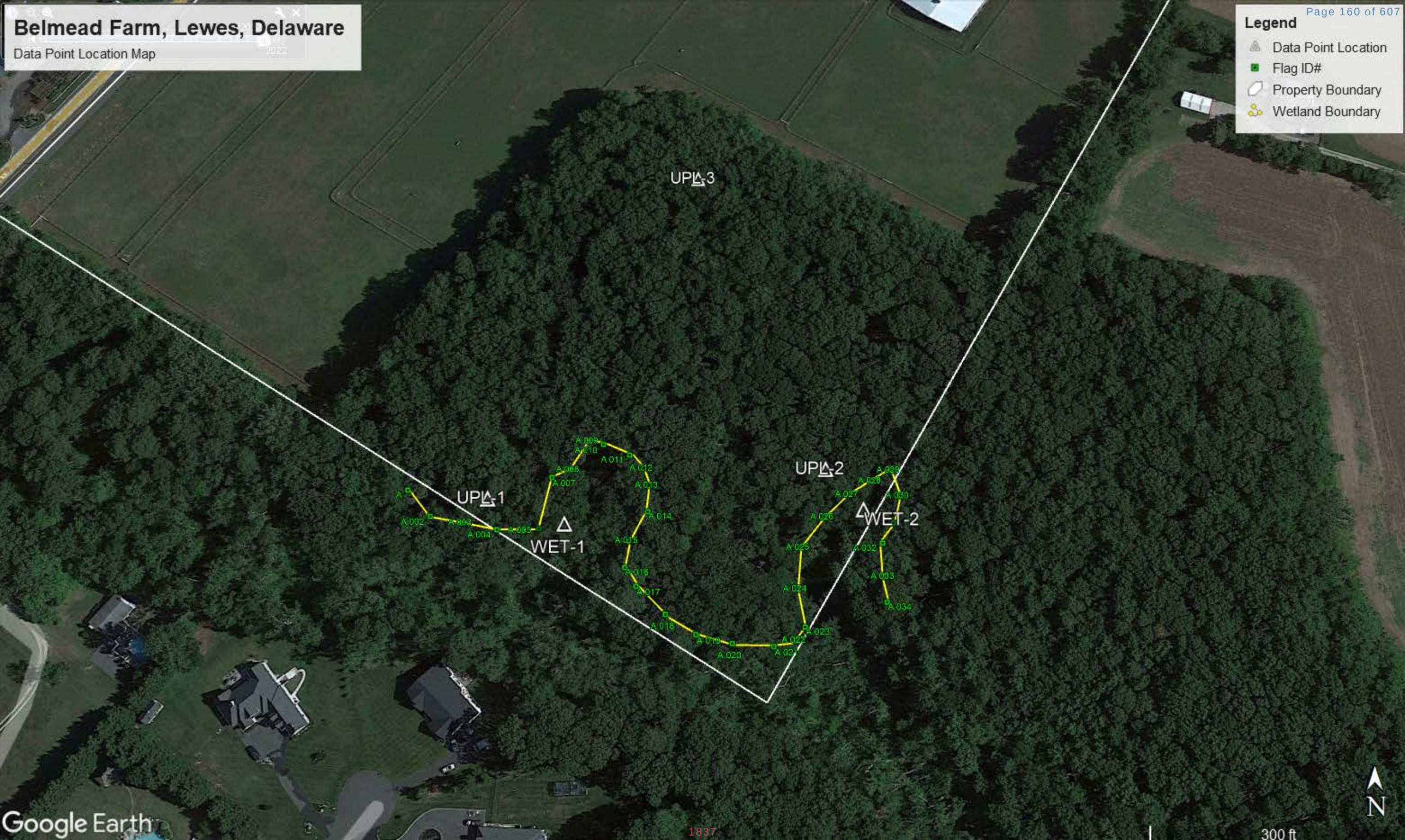
Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| GEORGETOWN-DELAWARE COASTAL AP | 38.6897, -75.3625 | 49.869 | 11.421 | 34.944 | 5.538 | 9080 | 88 |
| MILTON 3.8 SSE | 38.7271, -75.287 | 38.058 | 4.822 | 11.811 | 2.227 | 1 | 1 |
| GEORGETOWN 5 SW | 38.6333, -75.45 | 44.948 | 6.121 | 4.921 | 2.785 | 1940 | 0 |
| GEORGETOWN 5.8 W | 38.6972, -75.4931 | 35.105 | 7.062 | 14.764 | 3.282 | 1 | 0 |
| LEWES | 38.7842, -75.1581 | 9.843 | 12.806 | 40.026 | 6.275 | 331 | 0 |
| Linear Interpolation | N/A | N/A | N/A | N/A | N/A | 0 | 1 |

# Belmead Farm, Lewes, Delaware

Data Point Location Map



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-5 +

Subregion (LRR or MLRA): LRR T Lat: 38.709160 Long: -75.152600 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DodB) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liriodendron tulipifera* | 20 | yes | FACU |
| 2. *Quercus alba* | 25 | yes | FACU |
| 3. *Quercus rubra* | 20 | yes | FACU |
| 4. *Pinus taeda* | 20 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 85 = Total Cover | | |
| 50% of total cover: 42.5 | 20% of total cover: 17 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Quercus alba* | 10 | yes | FACU |
| 3. *Liquidambar styraciflua* | 5 | yes | FAC |
| 4. *Nyssa sylvatica* | 5 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Cornus florida* | 15 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 35 = Total Cover | | |
| 50% of total cover: 17.5 | 20% of total cover: 7 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | loamy sand | |
| 3-9 | 10YR 4/3 | 100 | | | | | loamy sand | |
| 9-20 | 10YR 4/6 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-1 in the south-central portion of the property.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.709046 Long: -75.152399 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ✓ No ___ |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1" |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | no | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Magnolia virginiana* | 5 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus effusus* | 10 | yes | OBL |
| 2. *Carex lurida* | 5 | no | OBL |
| 3. *Juncus tenuis* | 5 | no | FAC |
| 4. *Woodwardia areolata* | 10 | yes | OBL |
| 5. *Phragmites australis* | 10 | yes | FACW |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-8 | 10YR 2/1 | 100 | | | | | muck | saturated |
| 9-20 | 10YR 3/2 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

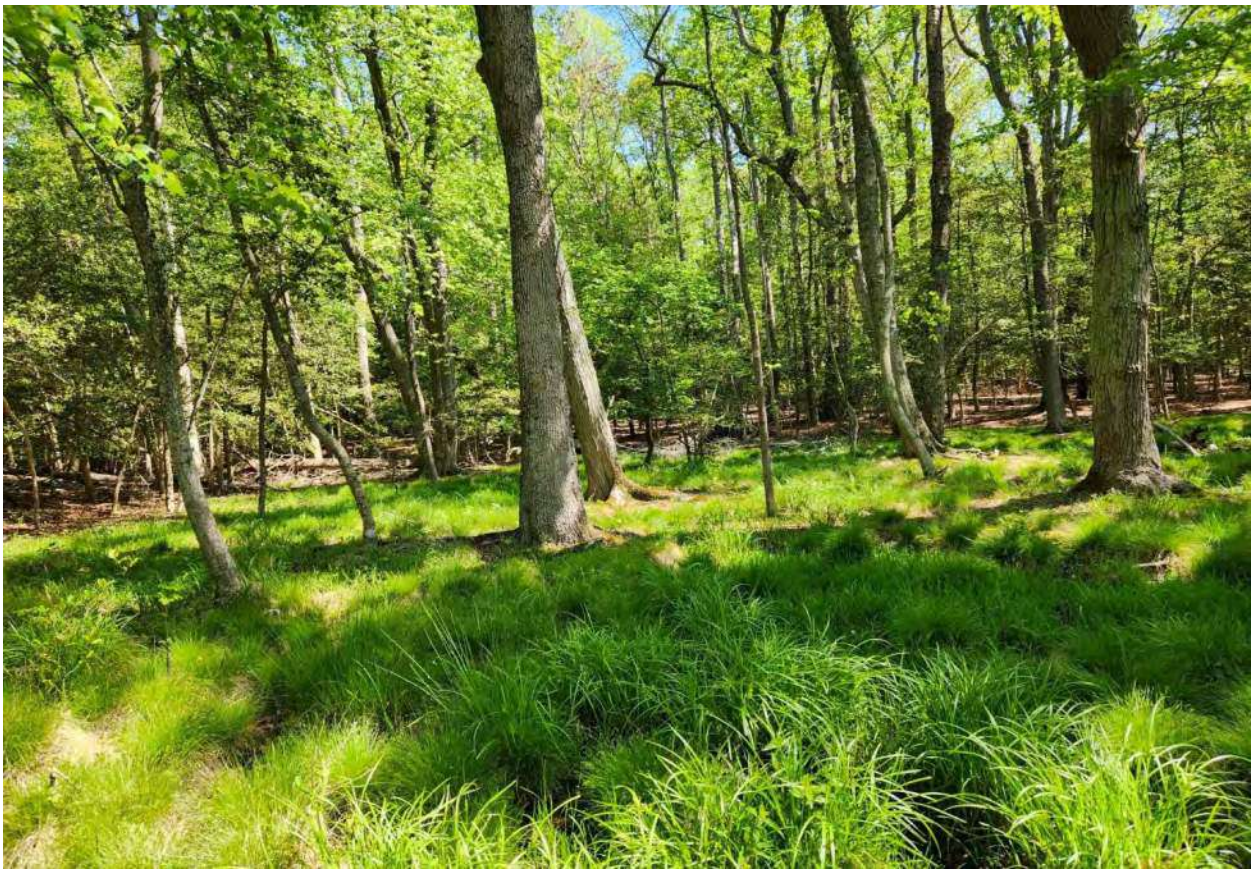
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at Data Point WET-1 in the south-central portion of the property.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.708934 Long: -75.151363 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 15 | yes | FACU |
| 2. *Quercus alba* | 30 | yes | FACU |
| 3. *Quercus rubra* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 15 | yes | FAC |
| 2. *Cornus florida* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 30 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 12 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 3-6 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-2 in the southeastern portion of the property.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.708819 Long: -75.151184 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ✓ No ___ |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 0.5" |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Nyssa sylvatica* | 10 | yes | FAC |
| 2. *Magnolia virginiana* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Vaccinium corymbosum* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus tenuis* | 10 | yes | FAC |
| 2. *Woodwardia areolata* | 5 | yes | OBL |
| 3. *Juncus effusus* | 5 | no | OBL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-20 | 10YR 3/1 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:

Forested wetland at Data Point WET-2 in the southeastern portion of the property.

Saturated soils encountered at WET-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-3

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.710365 Long: -75.151586 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DoA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the east-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-3

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 35 | yes | FACU |
| 2. *Liquidambar styraciflua* | 30 | yes | FAC |
| 3. *Ilex opaca* | 10 | no | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 75 = Total Cover | | |
| 50% of total cover: 37.5 | 20% of total cover: 15 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 45 | yes | FAC |
| 2. *Nyssa sylvatica* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 50 = Total Cover | | |
| 50% of total cover: 25 | 20% of total cover: 10 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Smilax rotundofolia* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 4-9 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 9-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-3 in the east-central portion of the property.

Soil profile at UPL-3.

United States Department of Agriculture

NRCS

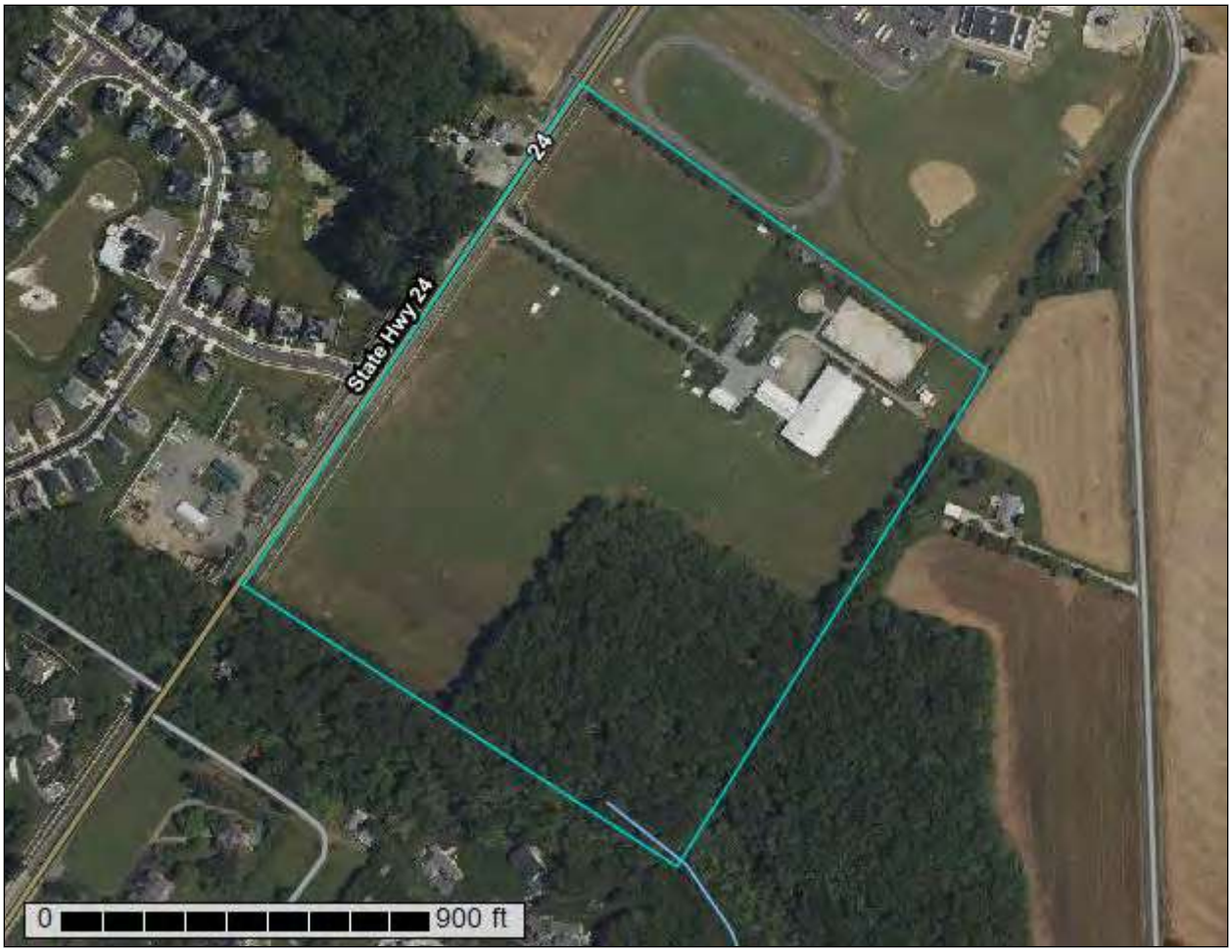
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Belmeade Farm, Lewes, DE




April 29, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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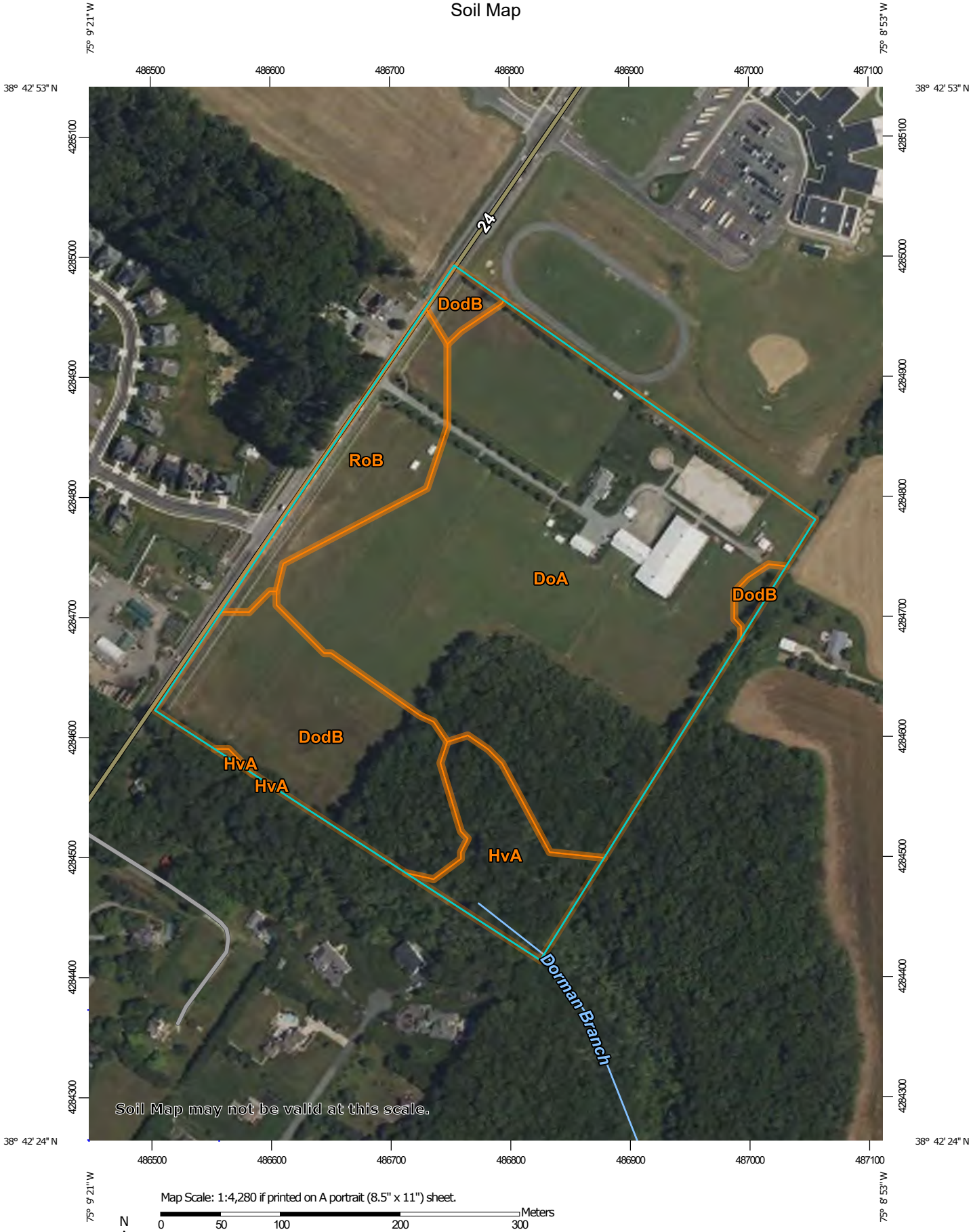
# Custom Soil Resource Report
## Soil Map




Map Scale: 1:4,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 23, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| DoA | Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area | 25.9 | 63.1% |
| DodB | Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area | 8.2 | 20.1% |
| HvA | Hurlock sandy loam, 0 to 2 percent slopes | 3.2 | 7.9% |
| RoB | Rosedale loamy sand, 2 to 5 percent slopes | 3.7 | 8.9% |
| **Totals for Area of Interest** | | **41.1** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## DoA—Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwd
*Elevation:* 0 to 190 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 250 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Knolls, flats, low hills
*Landform position (two-dimensional):* Summit, shoulder
*Landform position (three-dimensional):* Interfluve, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Parent material:* Loamy fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 1
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

### Minor Components

#### Galestown

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Ingleside

*Percent of map unit:* 5 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Footslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## DodB—Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwh
*Elevation:* 0 to 210 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 260 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Flats, knolls, low hills
*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Parent material:* Loamy fluviomarine deposits

**Typical profile**

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

**Properties and qualities**

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Galestown**

*Percent of map unit:* 10 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Hammonton**

*Percent of map unit:* 5 percent
*Landform:* Flats, broad interstream divides
*Landform position (two-dimensional):* Footslope, shoulder
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Ingleside**

*Percent of map unit:* 5 percent
*Landform:* Low hills, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex

*Hydric soil rating:* No

## HvA—Hurlock sandy loam, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qth9
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Hurlock, drained, and similar soils:* 42 percent
*Hurlock, undrained, and similar soils:* 38 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hurlock, Drained

#### Setting

*Landform:* Swales, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*Eg - 10 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Hurlock, Undrained

### Setting

*Landform:* Drainageways, depressions, swales, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A - 2 to 4 inches:* sandy loam
*Eg - 4 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Occasional
*Available water supply, 0 to 60 inches:* Moderate (about 7.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 5w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Minor Components

### Mullica, drained

*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, swales, flats
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Flats, drainageways
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

### Woodstown

*Percent of map unit:* 5 percent
*Landform:* Flats, fluviomarine terraces, broad interstream divides
*Landform position (three-dimensional):* Tread, rise
*Down-slope shape:* Linear

*Across-slope shape:* Linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## RoB—Rosedale loamy sand, 2 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qtjy
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Rosedale

#### Setting

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

#### Typical profile

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, fluviomarine terraces
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

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# APPENDIX B

# Fish and Wildlife Threatened and Endangered Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/20/2025 15:56:33 UTC
Project Code: 2025-0044405
Project Name: Belmeade Farm

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0044405
Project Name: Belmeade Farm
Project Type: New Constr - Above Ground
Project Description: Above ground development.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.71070505,-75.15219081081176,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

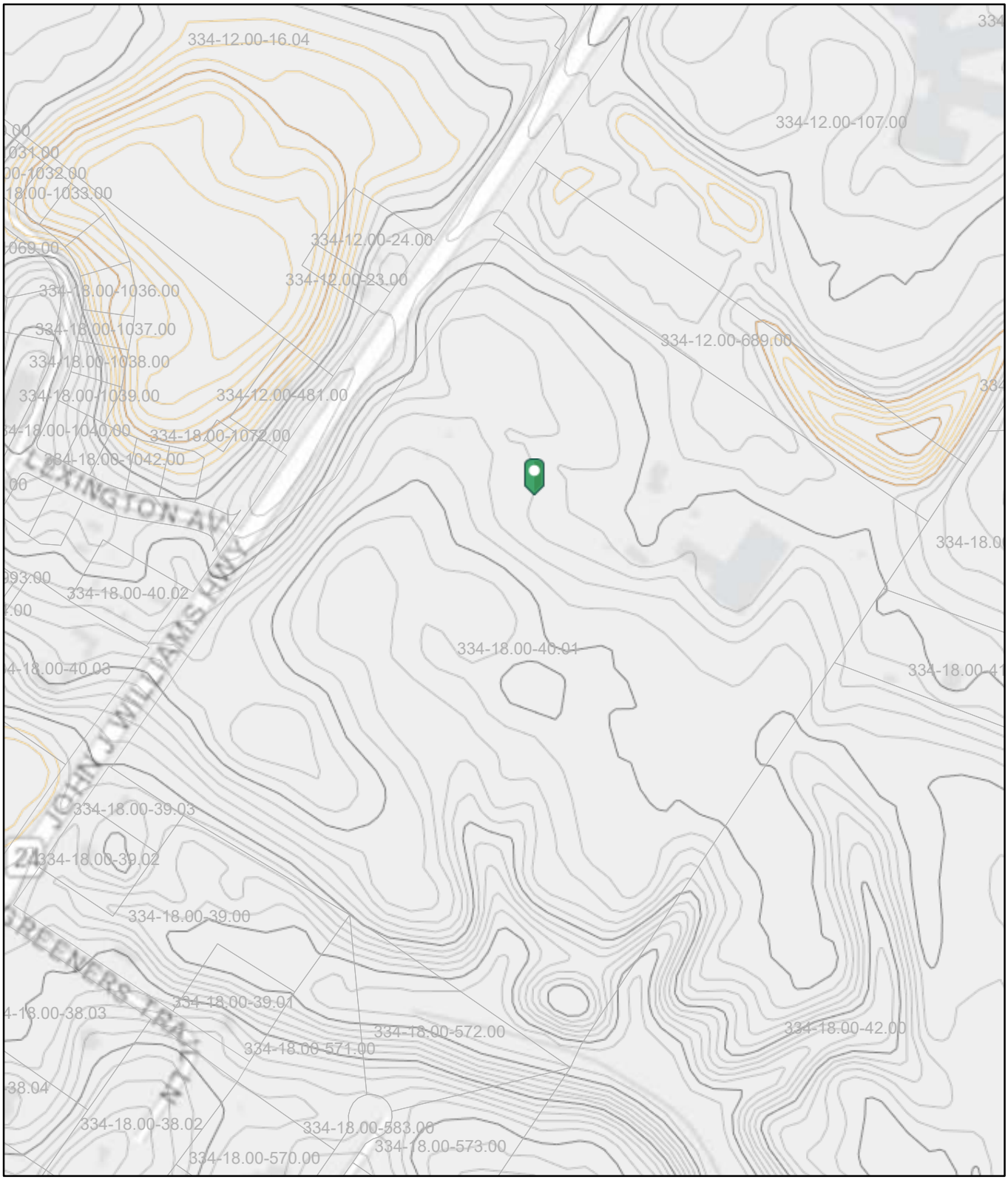
FRESHWATER FORESTED/SHRUB WETLAND

- PFO1R
- PFO1B

# APPENDIX C

# Existing Conditions Mapping

# Contours




10/23/2024, 3:49:14 PM

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Parcels

Sussex_Co

Depression Index

Depression Intermediate

Normal Index

Normal Intermediate

County of Sussex, DE, Delaware FirstMap, VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA, Delaware Geological Survey, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

DNREC Stormwater
2018

# FEMA Flood Plain

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1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Parcels

FEMA Flood Maps

AE

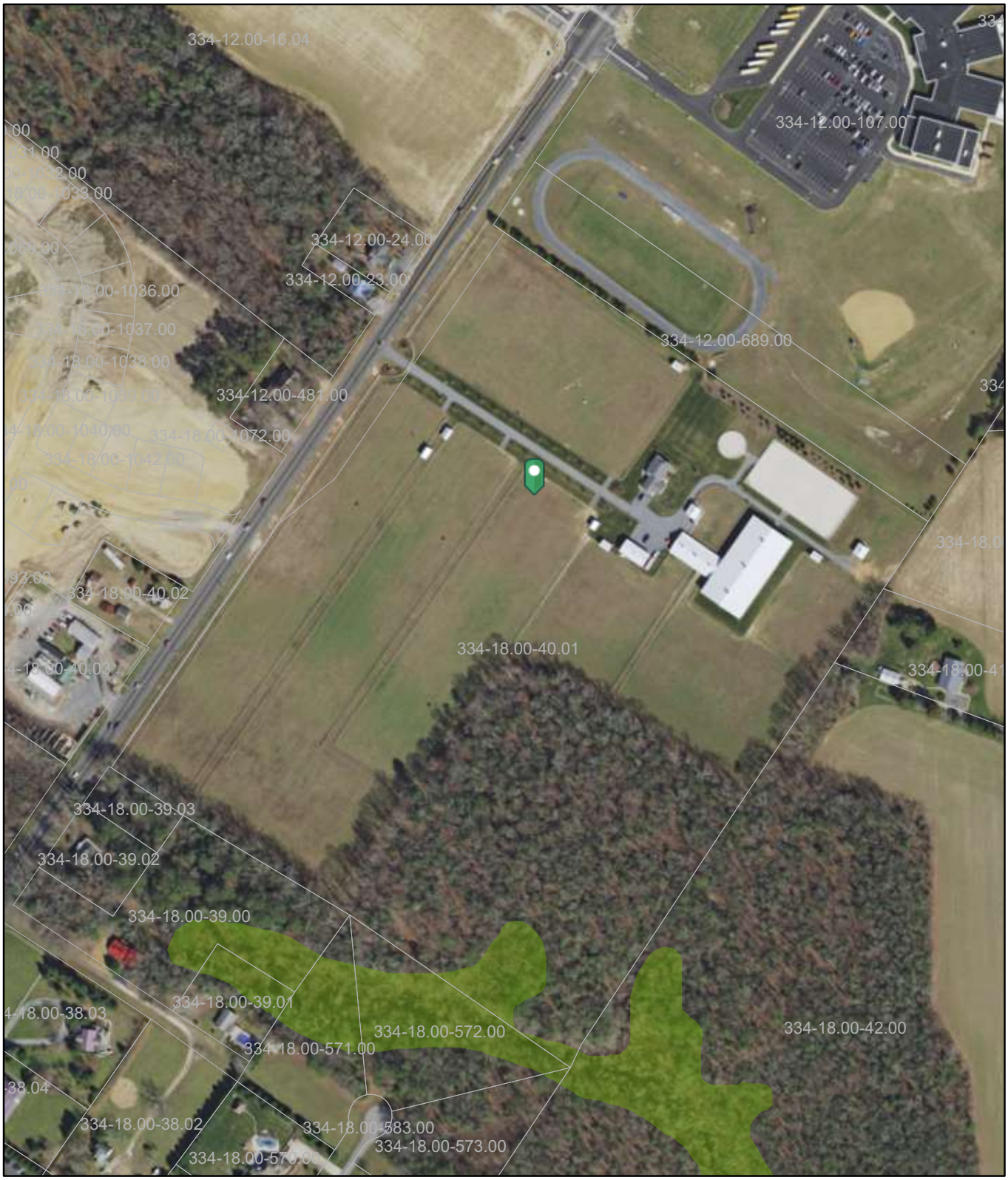
X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

FIRM Panel

FEMA, Surdex Corp

DNREC Stormwater
2018

# Head of Tide

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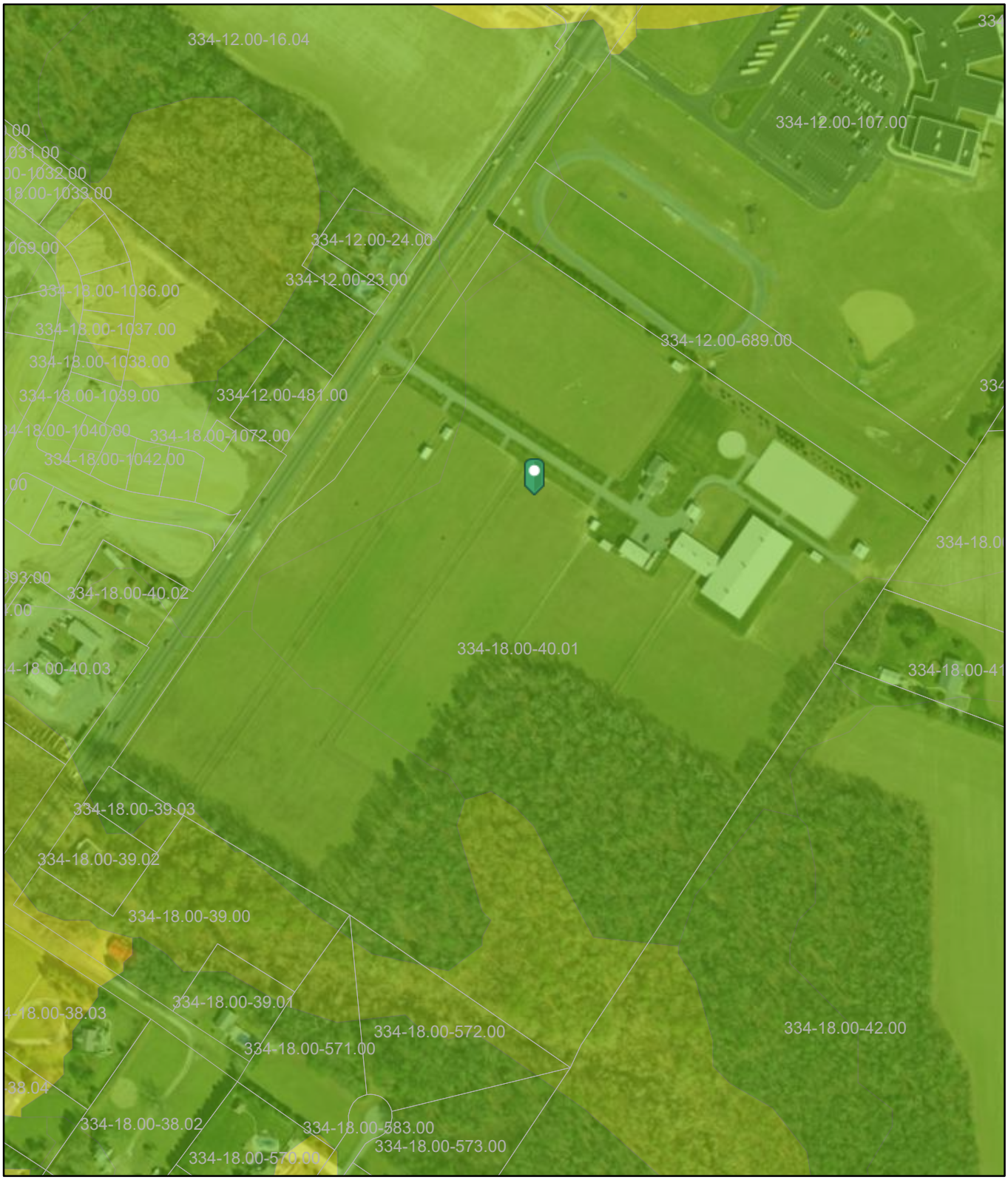
Parcels

Head of Tide Wetlands 2007

Surdex Corp

DNREC Stormwater
2018

# NRCS Soils

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0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Parcels

Soils Sussex County

A

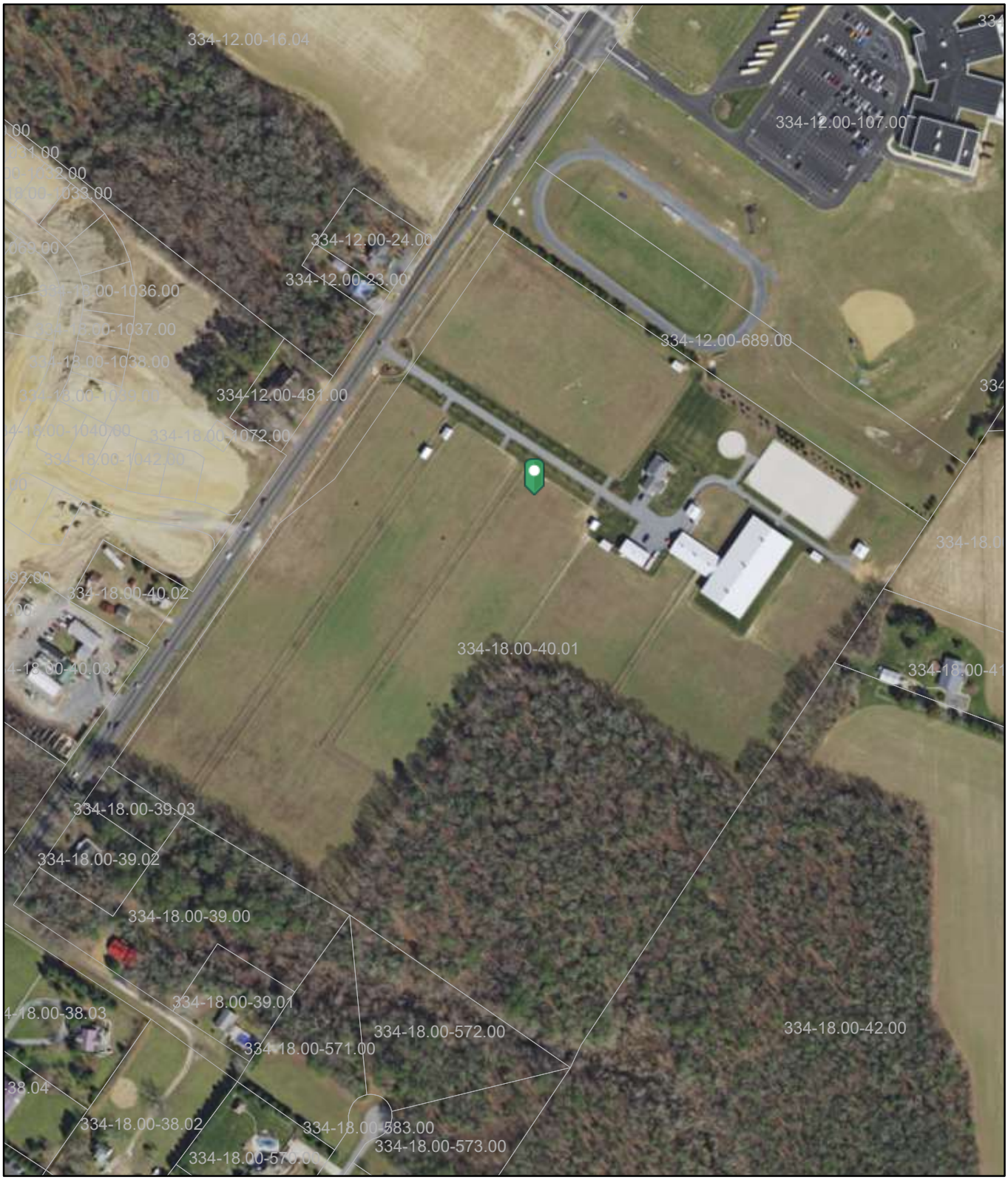
A/D

B

Surdex Corp

DNREC Stormwater
2018

# Site Location

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Parcels

Surdex Corp

DNREC Stormwater
2018

# State Wetlands Mapping

12/19/2024, 9:36:58 AM

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

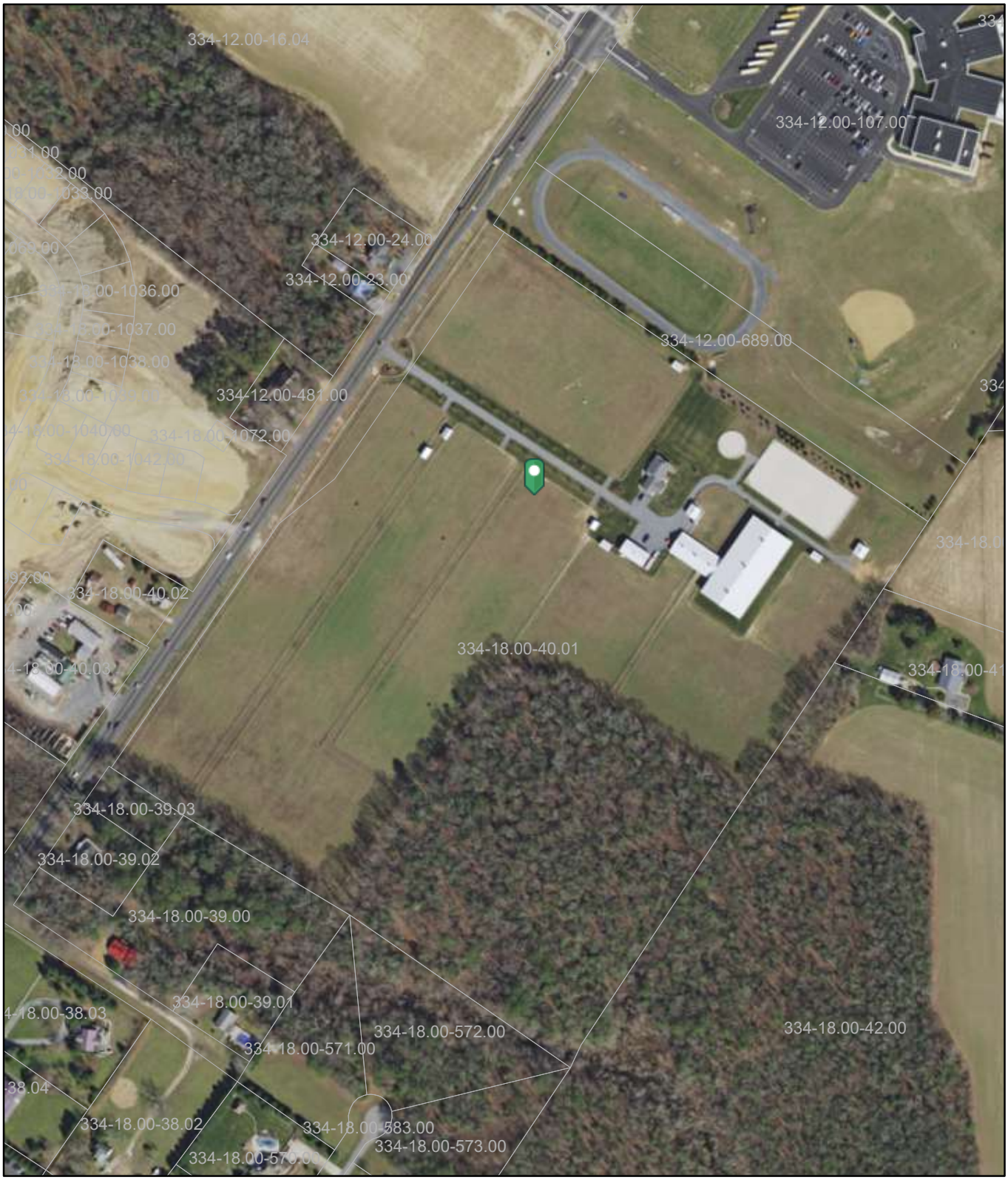
State Wetlands Mapping Project

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Parcels

Surdex Corp

DNREC Stormwater
2018

# Tax Ditch

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Parcels

Surdex Corp

DNREC Stormwater
2018

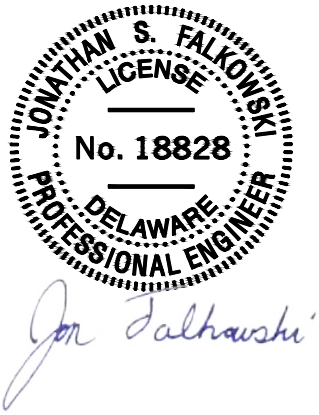
# ENVIRONMENTAL ASSESSMENT & PUBLIC FACILITIES EVALUATION REPORT (EAPFR)

**FOR**

## BELMEAD FARM LLC
## (CZ 2001)

Sussex County, Delaware

February 2025




Prepared by:

Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

# TABLE OF CONTENTS

**SECTION**

1.0 **APPLICATION**
- a. Rezoning Application
- b. Deed and Legal Description (Bk 5734 Pg 290)

2.0 **ENVIRONMENTAL ASSESSMENT AND PUBLIC FACILITIES EVALUATION**
- a. Summary in accordance with §115-194.3 – Coastal Area, Subparagraph B(2).

3.0 **APPENDIX**
- a. Site Location
- b. County Zoning Map
- c. Future Land Use Map
- d. Wetlands Delineation Report
- e. US Fish and Wildlife Service – Threatened and Endangered Species List
- f. DelDOT Service Level Evaluation Request Response Letter
- g. DelDOT Final Traffic Impact Study (TIS)

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# 1.0 Rezoning Application

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

November 23, 2022

Sussex County
Planning and Zoning
2 The Circle
Georgetown, DE 19947
Attn: Mr. Jamie Whitehouse

RE: Rezoning Application
**BELLE MEAD FARM**
John J Williams Hwy
Lewes, Delaware
2022079.00

Dear Mr. Whitehouse:

Please find attached Zoning Map Amendment Application and Fee for the property otherwise known as the Belle Mead Farm in Lewes, Delaware. As previously discussed with you, we will be following up the application with the required site plans and other documents at a later date. It was agreed that the submittal of the Zoning Map Application and Fee would be adequate to get this project into the queue for a hearing scheduling.

If you have any questions, please feel free to contact us at any time.

Kind regards,

J. Michael Riemann, PE
Becker Morgan Group
Vice President

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

PORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JACKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

www.beckermorgan.com

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
**302-855-7878 ph. 302-854-5079 fax**

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

20044(+/-) John J Williams Hwy - Belle Mead Farm - Route 24

**Type of Conditional Use Requested:**

**Tax Map #:** 334-18.00-40.01 & 334-18.00-40.06 **Size of Parcel(s):** 39.22 +/- ac.

**Current Zoning:** AR-1 **Proposed Zoning:** C4 **Size of Building:** TBD

**Land Use Classification:** COMMERCIAL

**Water Provider:** TIDEWATER **Sewer Provider:** SUSSEX COUNTY

**Applicant Information**

Applicant Name: BELMEAD FARM LLC
Applicant Address: 105 FOULK ROAD
City: WILMINGTON State: DE ZipCode: 19803
Phone #: 429-8700 E-mail: _____

**Owner Information**

Owner Name: BELMEAD FARM LLC
Owner Address: 105 FOULK ROAD
City: WILMINGTON State: DE Zip Code: 19803
Phone #: 429-8700 E-mail: _____

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: BECKER MORGAN GROUP, INC
Agent/Attorney/Engineer Address: 309 S. GOVERNORS AVE
City: DOVER State: DE Zip Code: 19904
Phone #: 734-7950 E-mail: MRIEMANN@BECKERMORGAN.COM

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

x **Completed Application**

x **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

x **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

x **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

x **DelDOT Service Level Evaluation Request Response**

x **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney*** Date: 11/22/22

***Signature of Owner*** Date: 11/14/2022

*For office use only:*

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

DelDOT

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm
cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

Document# 2022000032608 BK: 5734 PG: 290
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Consideration: $5,100,000.00 County/Town: $76,500.00 State: $127,500.00 Total: $204,000.00
Doc Surcharge Paid Town: SUSSEX COUNTY



TAX PARCEL #: 3-34-18.00-40.01

PREPARED BY & RETURN TO:
Parkowski, Guerke & Swayze, P.A.
19354C Miller Road
Rehoboth Beach, DE 19971
File No. 015-22/VGR

NO SURVEY WAS PERFORMED OR REQUESTED

**THIS DEED**, made this 3 day of June, 2022,

- BETWEEN -

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED** and **THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**, of 722 NE 2nd Street, Delray Beach, FL 33483, parties of the first part,

- AND -

**BELMEAD FARM, LLC**, a Delaware limited liability company, of 28855 Lewes Georgetown Hwy, Lewes, DE 19958, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of Ten Dollars and 00/100 ($10.00), lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

**ALL** that certain lot, piece and parcel of land lying and being in Lewes and Rehoboth Hundred, Sussex County and State of Delaware, lying and being along the southeastern right of way of State Route 24 (50 feet wide), more particularly described as follows, to wit:

**BEGINNING** at an iron pipe situate along the aforesaid southwesterly right of way of State Route 24, said point being the common boundary of these lands and lands now or formerly of Mudiwa and Preachess Vellah Munyikwa; thence by and with said right of way North 42 degrees 12 minutes 08 seconds East, 1,451.40 feet to a capped rebar; thence leaving the aforesaid right of way and running by and with lands now or formerly of Cape Henlopen School District South 47 degrees 36 minutes 26 seconds East, 1,205.68 feet to a found rebar; thence running by and with lands now or formerly of Alfred G. Best, Trustee, and lands now or formerly of Linda Elizabeth Best, South 40 degrees 01 minutes 32 seconds West, 365.05 feet to an iron pipe;

thence by and with other lands of Grantor, South 40 degrees 40 minutes 22 seconds West, 1,064.47 feet to a found rebar; thence by and with lands now or formerly of John and Deanna Hoover, North 48 degrees 38 minutes 42 seconds West, 611.81 feet to a found rebar; thence by and with lands now or formerly of Frank and Marlene Bracale, North 48 degrees 40 minutes 10 seconds West, 411.81 feet to an iron pipe; thence by and with lands now or formerly of Mudiwa and Preachess Vellah Munyikwa, North 48 degrees 36 minutes 49 seconds West, 224.47 feet to the point and place of Beginning, said to contain 40.61 acres of land as depicted on the Perimeter Survey prepared by Compass Point Associates dated January 17, 2011, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, Delaware.

**BEING** the same lands and premises which were conveyed unto Mark H. Ronald Trust dated 3/8/2007, as amended, Mark H. Ronald and Mary Ann Ronald, Trustees, either of whom may act independently, and Mary Ann Ronald Trust dated 3/8/2007, as amended, Mary Ann Ronald and Mark H. Ronald, Trustees, either of whom may act independently, by Deed of J.G. Townsend, Jr. & Co. dated January 28, 2011, and recorded February 1, 2011, in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 3862, Page 170.

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ TRUSTEE (SEAL)
**Mark H. Ronald, Trustee**

**THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ Trustee (SEAL)
**Mary Ann Ronald, Trustee**

Document# 2022000032608 BK: 5734 PG: 292
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Doc Surcharge Paid



STATE OF Florida, COUNTY OF Palm Beach: to-wit

**BE IT REMEMBERED**, that on 06/03, 2022, personally came before me, the subscriber, Mark H. Ronald, Trustee of the Mark H. Ronald Trust dated March 8, 2007, as amended, and Mary Ann Ronald, Trustee, of the Mary Ann Ronald Trust dated March 8, 2007, as amended, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

GIVEN under my Hand and Seal of Office the day and year aforesaid.

JUNAE MCPHERSON
Notary Public - State of Florida
Commission # HH 206991
My Comm. Expires Dec 13, 2025

Notary Public

My Commission Expires: 12/13/25

# 2.0 Environmental Assessment and Public Facility Evaluation Report

## Belmead Farm, LLC

| | |
|---|---|
| Tax Maps: | 334-18.00-40.01 □ 40.06 |
| Parcel Acreage: | □39.22 Acres |
| Existing Zoning: | AR-1: Agricultural Residential |
| Proposed Zoning: | C-4: Planned Commercial District |
| 2019 Future Land Use: | Commercial and Coastal Area |
| Site Investment Area: | Level 2, 3 □ 4 |
| Chapter 89 Water Source: | "Fair" Groundwater Recharge Area |
| | "No" Wellhead Protection Area |
| Wetlands: | Freshwater Forested □ Shrub Wetland (PFO1R) |
| Flood Zone: | Zone X – Map 10005C0334K; 03/16/2015 |
| Watershed: | Rehoboth Bay Watershed |
| TID: | Henlopen |
| Access / Road Frontage: | John J. Williams Hwy. (SR00024) |
| Sanitary Sewer Supplier: | Tier 2 – Sussex County Planning Area |
| Water Supplier: | Tidewater Utilities Inc. |

**§115-194.3 – Coastal Area, Subparagraph B (2).**

a) *Proposed drainage design and the effect on stormwater quality and quantity leaving the site, including methods for reducing the amount of phosphorous and nitrogen in the stormwater runoff and the control of any other pollutants such as petroleum hydrocarbons or metals*

The proposed development of the parcels will follow all applicable State and local stormwater management regulations and will meet or exceed quality and quantity management standards. Through the use of Green Technology Best Management Practices (GTBMP's), the proposed stormwater management facilities will reduce the phosphorous and nitrogen loading. The improvements are not anticipated to produce other pollutants such as petroleum hydrocarbons or metals. Should a commercial tenant require the need for petroleum pollutant measures, appropriate filtration will be utilized in accordance with State and local regulations.

b) *Proposed method of providing potable and, where appropriate, irrigation water and the effect on public or private water systems and groundwater, including an estimate of average peak demands.*

The parcels are located in Tidewater Utilities area and will serve the project's water source. The proposed water system design will be in accordance with all codes and regulations set forth by Sussex County, DHSS Office of Drinking Water and Tidewater. Tidewater's franchise area has been evaluated for groundwater impacts to ensure no adverse impacts. The anticipated water demand is 68,625 gallons/day.

c) *Proposed means of wastewater treatment and disposal with an analysis of the effect on the quality of groundwater and surface waters, including alternative locations for on site septic systems*

The parcels are located within Sewer Tier 2 – Sussex County Planning area and a future request to annex to the Tier 1 - Unified Sanitary Sewer District will be made as the parcels are directly adjacent to the Tier 1 District. It is anticipated that a gravity sewer collection system will be designed and installed to collect and convey wastewater. All sewer systems will be designed to follow all the codes and regulations of the Sussex County Ordinance.

d) *Analysis of the increase in traffic and the effect on the surrounding roadway system.*

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The Final TIS recommendations from DelDOT included development improvements as follows: frontage improvements, full movement signalized Site Entrance at the intersection of Lexington Ave. and DE Rt. 24 with auxiliary turn lanes, bicycle and pedestrian improvements and Henlopen TID fees to be paid as determined by DelDOT.

e) *The presence of any endangered or threatened species listed on federal or state registers and proposed habitat protection areas.*

A Rare Species Search per the United States Fish and Wildlife Service (USFWS) database for the likelihood of rare and endangered species was performed. Two potential species were identified based on the search. The tri-colored bat, which the USFWS usually suggests that if tree clearing is required within the breeding season, then a summer survey should be conducted to determine whether the bats are present. Tree clearing is usually restricted to the time period between Oct. 1 and March 31 to avoid impacts to the listed bat species. The Monarch Butterly requires specialized habitat (milkweed) for breeding. Suitable habitat for the species is not likely or anticipated to occur within the development area.

f) *The preservation and protection from loss of tidal or nontidal wetlands on the site.*

Freshwater Forested/Shrub Wetland habitat was identified on the subjected site. No wetlands will be disturbed with the proposed development and the County required buffers will be respected. A wetlands delineation report is included with the project packet.

g) *Provisions for open space as defined in § 115-4*

The project offers recreational facilities such as a clubhouse, swimming pool, play areas and walking paths. Several stormwater management facilities are proposed which have a demonstrated recreational value and provide scenic vistas, while providing wildlife corridors. The project will respect all buffers and maintain significant forested areas and will not disturb existing wetlands found on-site.

h) *A description of provisions of public and private infrastructure*

The project proposes a mix of both public and private infrastructure. Public infrastructure includes construction of water and sewer main that will be turned over to respective utility providers. In addition, significant improvements along DE Rt. 24 will be constructed, including auxiliary turn lanes, traffic signal with pedestrian crossings and a paved shared-use path, providing multi-modal transportation network paths. Private infrastructure includes roadways, sidewalks, parking, other utilities and stormwater management areas, etc. which will be privately owned and maintained.

i) *Economic, recreational or other benefits*

The project holds significant potential not only for job creation but also for addressing critical gaps in workforce development within Sussex County. By providing commercial job growth opportunity, economic development and affordable housing, the project aims to deliver much needed services and housing to the local community.

j) *The presence of any historic or cultural resources that are listed on the National Register of Historic Places*

No existing presence of historic or cultural resources were listed per the National Register of Historic Places.

k) *A description of how the proposed application and proposed mitigation measures are in conformance with the current Sussex County Comprehensive Plan*

The current Sussex County Comprehensive Plan includes a Future Land Use Map to help determine how land should be zoned, to ensure responsible development. The Future Land Use map in the plan indicates that the subject property has land use designation of "Commercial Area" and "Coastal Area." The parcels would otherwise be entirely identified as "Commercial Area" if not for a small portion of "Coastal Area" on parcel 40.01, which is not planned for development as it is located within a wetland area along Dorman Branch, in the southwestern most portion of the parcel.

As outlined in the Comprehensive Plan, Coastal Areas are areas that can accommodate development provided that special environmental concerns are addressed. As this area is

not intended to be developed, the development plan is consistent with the Comprehensive Plan for Coastal Areas. (Sussex County Comprehensive Plan, 4-15).

Commercial Areas include retail and service uses that are mainly located along higher functional classification roadways such as highways and arterials. Route 24 is classified by DelDOT as a "Principal Arterial". As opposed to small, traditional downtown areas that are often historic and pedestrian-friendly, Commercial Areas include commercial corridors, shopping centers, and other medium and large commercial vicinities geared towards vehicular traffic. In addition to primary shopping destinations, this area would also be the appropriate place to locate hotels, motels, car washes, auto dealerships, l and other medium and larger scale commercial uses not primarily targeted to the residents of immediately adjacent residential areas. These more intense uses should be located along main roads or near major intersections. Institutional and commercial uses may be appropriate depending on surrounding uses. Mixed-use buildings may also be appropriate for these areas (Sussex County Comprehensive Plan, 4-17). The development plan includes a mix of retail, service uses, medium scale commercial and mixed use buildings as is consistent with the Comprehensive Plan.

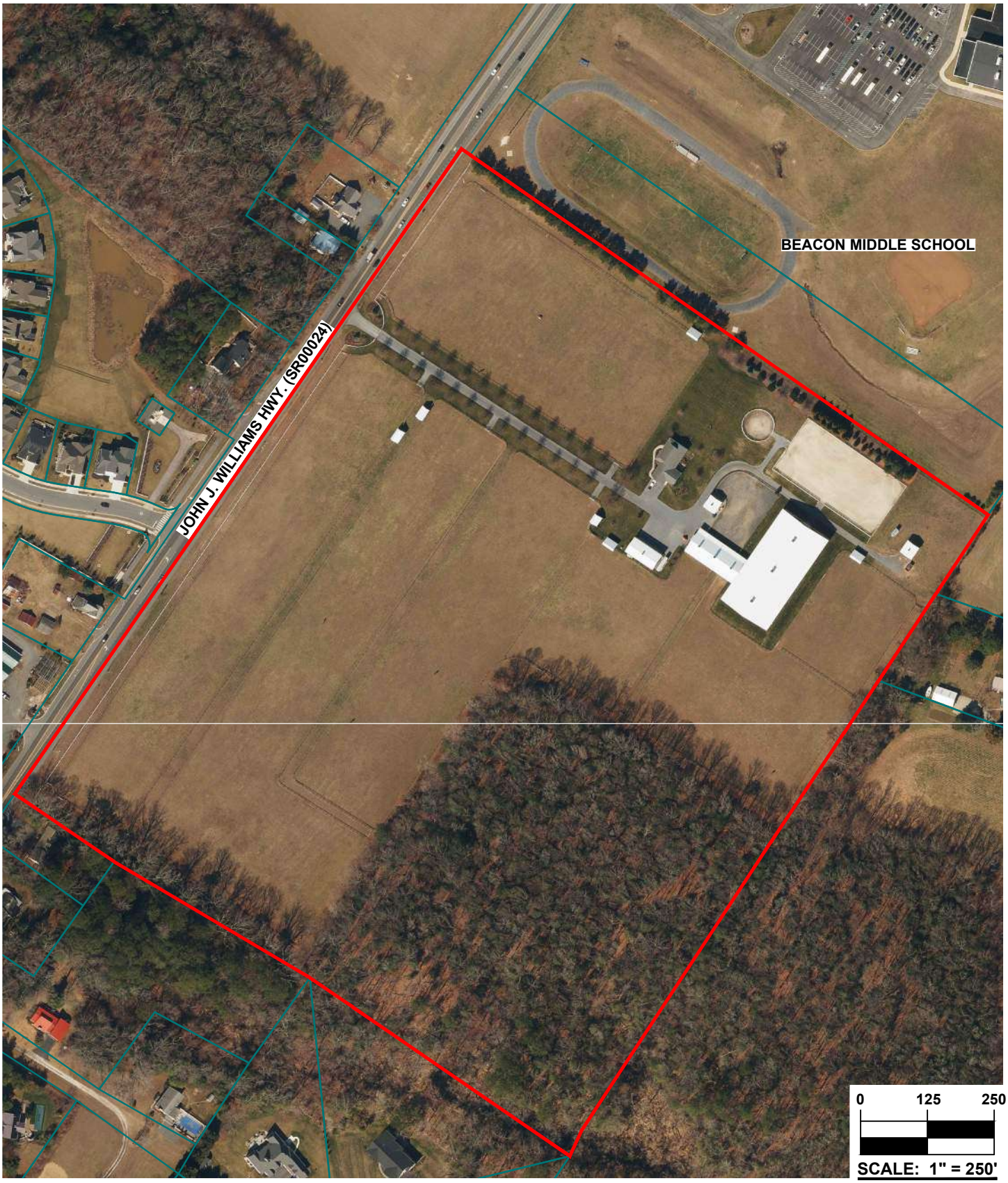
The proposed zoning of C-4: Planned Commercial District is consistent with the intended Future Land Use designation of Commercial Use as an applicable zoning district within the Growth Area. The C-4 zoning allows for a maximum of forty (40) percent of its developable area to consist of duplexes, townhouses or multifamily dwellings which helps promote development designed to support both residential and commercial uses as noted in 4.6.3.

The subject parcels are also located within the planned Henlopen Transportation Improvement District, which DelDOT is working alongside Sussex County to correspond with their Comprehensive Plan.

l) *Actions to be taken by the applicant to mitigate the detrimental impacts identified relevant to Subsection B(2)(a) through (k) of the manner in which they are consistent with the Comprehensive Plan.*

All mitigation measures, identified relevant to sections (a) through (k) are identified above in each respective section.

# 3.0 Appendix




LAYER STATE: LOCATIONS

**SITE LOCATION MAP**
**BELLE MEADE FARMS**

**REHOBOTH BEACH**
**SUSSEX COUNTY / DELAWARE**

BECKER MORGAN GROUP

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| DATE: | 12/23/24 |
| DRAWN BY: | J.N.K. |

**SITE**

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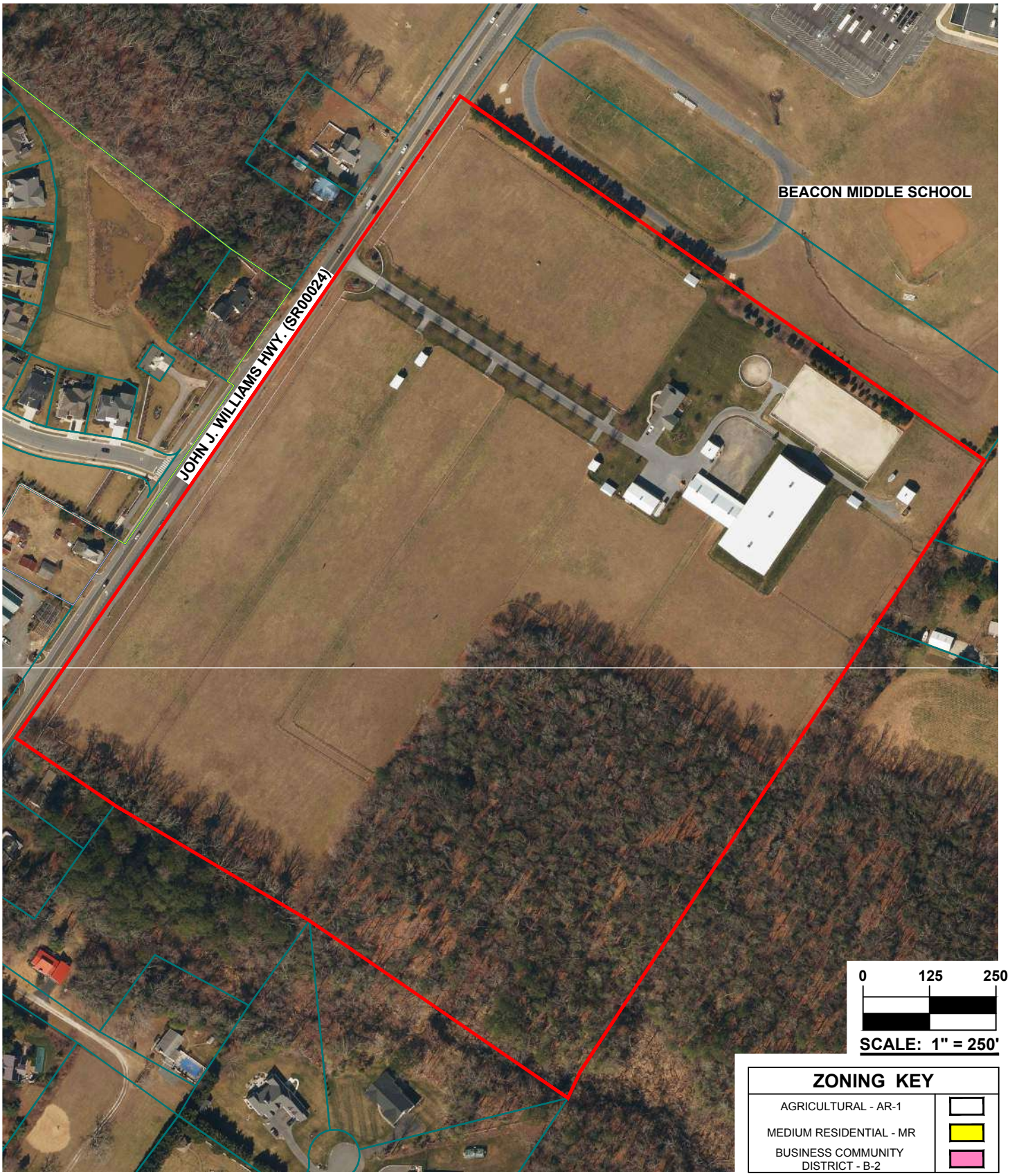


LAYER STATE: ZONING

**ZONING MAP**
**BELLE MEADE FARMS**

**REHOBOTH BEACH**
**SUSSEX COUNTY / DELAWARE**

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**ZONING**

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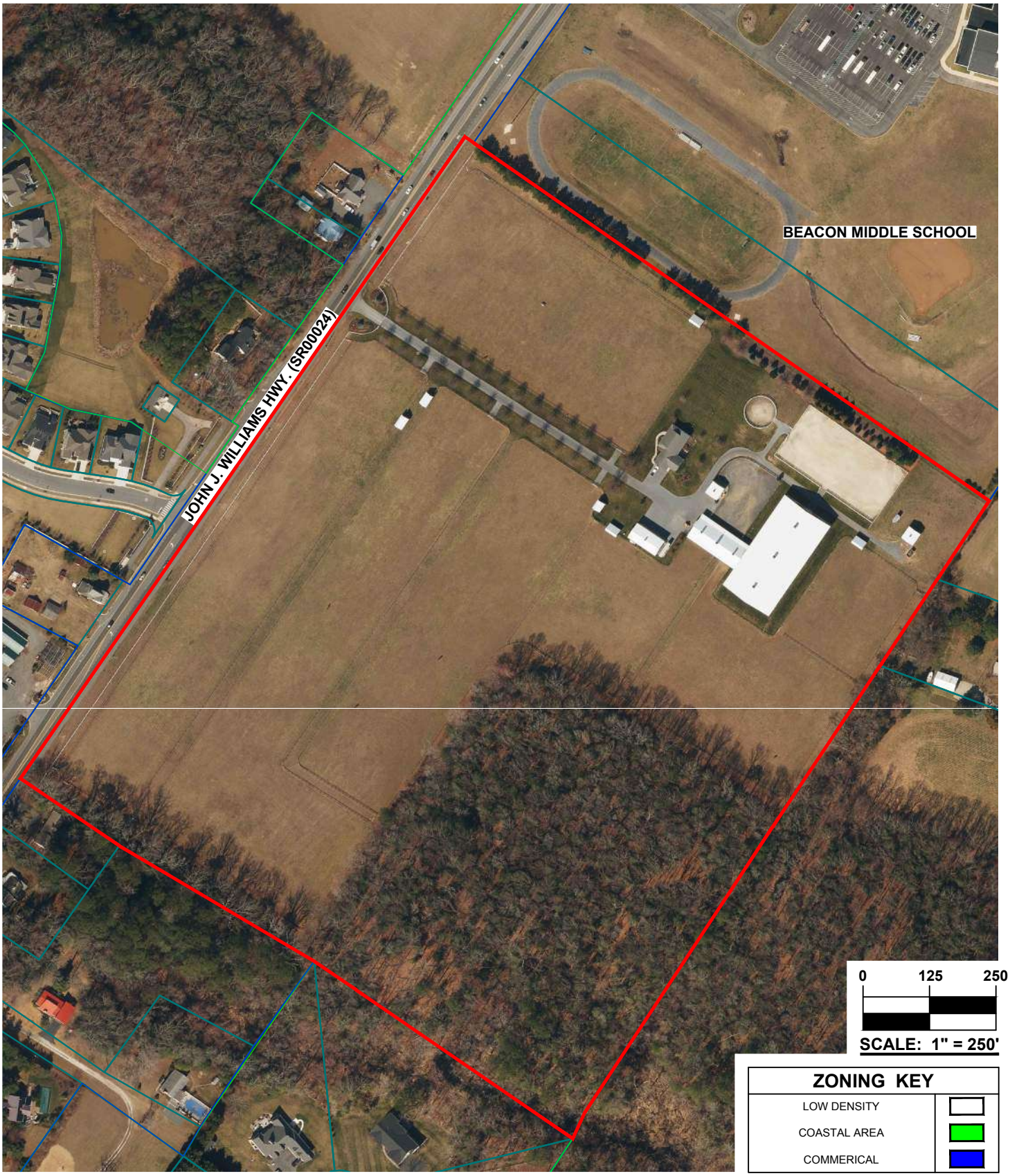


LAYER STATE: FUTURE LAND USE

**FUTURE LAND USE MAP**
**BELLE MEADE FARMS**

**REHOBOTH BEACH**
**SUSSEX COUNTY / DELAWARE**

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**FUTURE**

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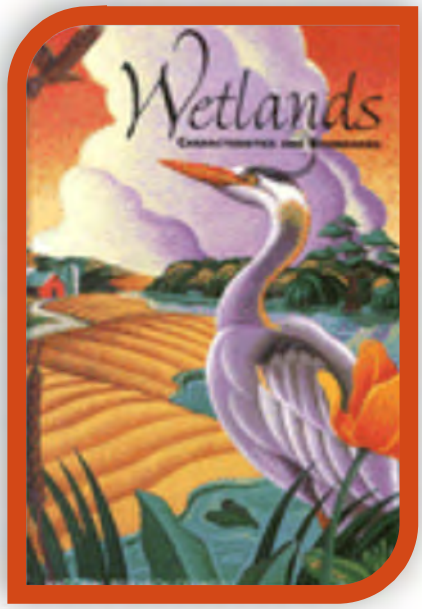
# Wetland Delineation Report

# Wetland Delineation – Belmead Farm, Lewes, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
April 30, 2023
Jim@WatershedEco.com

## Introduction




At the request of Becker Morgan Group, Inc., Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC reviewed background information and conducted a wetland delineation at the Belmead Farm, LLC. property and determined that palustrine forested wetlands were present in the southeastern portion of the property abutting a Dorman Branch. These wetlands and waters were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut the perennial stream Dorman Branch, a tributary to Love Creek and Rehoboth Bay, both Traditional Navigable Waterways. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The Navigable Waters Protection Rule (NWPR) became effective on June 22, 2020. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussions of Jurisdiction related to Waters and Wetlands in this report are based on the NWPR Section 404 of the Clean Water Act and as described in the definitions in this section as well as all guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction is established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on June 22, 2020 in the NWPR.

The NWPR defines four categories of WOTUS, 1. Territorial Seas and Traditional Navigable Waters, 2. Tributaries to 1., 3. Lakes and Ponds, and impoundments of Jurisdictional Waters and 4. Adjacent Wetlands. All other Waters are determined by the rule to be non-jurisdictional and the rule further clarifies exclusions which are not jurisdictional.

In this case we are interested in the jurisdictional status of mapped Waters in the form of non-tidal wetlands within the Subject Property. The mapped wetlands have been classified as adjacent wetlands. In the NWPR, adjacent wetlands are defined as follows: abutting, meaning to touch, or inundated by flooding from waters 1-3 above, separated only be a berm, bank or dune or an artificial dike or barrier. The NWPR further clarifies that an adjacent wetland must have a direct hydrologic surface connection to a water listed in 1-3 above in a typical year. The NWPR further clarifies that a tributary is a river or stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this definition in a typical year either directly or through one or more waters. A tributary must be intermittent or perennial. It is assumed that the mapped wetlands have a direct surface connection to Dorman Branch and would be regulated by the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule. At the present time the U.S. Army Corps of Engineers is following the 2023 Wetland Rules. The U.S. Army Corps of Engineers Philadelphia District and DNREC Subaqueous Lands Division should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 28855 Lewes Georgetown Highway in Lewes, Sussex County, Delaware. The Subject Property is located at Latitude and Longitude 38.711454and -75.152545 and is identified as Sussex County Tax Parcel No. 334-18.00-40.01 consisting of approximately 39.19 Acres.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of mowed pastures associated with equestrian use and woodlands in the southeast.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut Dorman Branch and drain southeasterly off-site to Love Creek, a tributary to Rehoboth Bay.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts palustrine forested wetlands in the southeastern portion of the subject property.

The USGS Mapping (Figure 3) depicts a blue-line stream identified as Dorman Branch in the southeastern portion of the property. The subject property is relatively flat with elevations ranging from 20 feet above sea level in the northwest to 10 feet asl in the southeast.

The National Hydrography Dataset map (Figure 4) depicts a blue-line stream feature with abutting palustrine forested wetlands in the southeastern portion of the property.

The 1937 aerial photo (Figure 5) depicts the property in agricultural use with woodlands in the southeast. The surrounding land use is predominantly agricultural and wooded with a few scattered residential properties.

The 1954 aerial photo (Figure 6) and 1968 imagery (Figure 7) depicts similar site conditions as the 1937 imagery. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts no significant changes within the subject property since 1968. Surrounding land use remains largely agricultural and wooded with residential development to the southwest and west.

The 2002 aerial photo (Figure 9) depicts no significant changes within the subject property or surrounding land since the 1992 imagery. Some site grading is apparent to the north.

The 2015 aerial photo (Figure 10) depicts a dwelling and barn have been constructed in the northeastern portion of the subject property. Woodlands remain in the southeast. New commercial development is apparent to the north and additional residential development is apparent to the south.

The 2022 aerial photo (Figure 11) depicts similar conditions as the 2015 imagery within the subject property. An additional residential subdivision has been constructed to the west.

The NRCS Soil Mapping (Figure 12) indicates the property is primarily underlain with well-drained Downer sandy loam (DoA and DodB), and Rosedale loamy sand (RoB). An area of poorly drained Hurlock sandy loam (HvA) is mapped within the woodlands in the southeastern portion of the property.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on April 26, 2023. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience.

## Results

Palustrine forested wetlands were observed in the southeastern portion of the property. These wetlands abut Dorman Branch which drains southeasterly off-site to Love Creek, a tributary to Rehoboth Bay, a Traditional Navigable Waterway. These wetlands would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of horse pastures with woodlands in the southeast.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

Typically, “blue-line” streams are regulated as State Subaqueous Lands. The perennial stream Dorman Branch is located inside of the delineated wetland boundary and would be regulated by DNREC as Subaqueous Lands

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco LLC. that federally jurisdictional palustrine forested wetlands are located within the southeastern portion of the subject property. These wetlands have a direct surface connection to Dorman Branch along the southern boundary of the property which drains off-site to Love Creek and Rehoboth Bay and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands mapped within the subject property.

Dorman Branch, along the southern property boundary would be regulated by DNREC as Subaqueous Lands. Dorman Branch was not delineated separately from the wetlands.

The mapped Waters can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

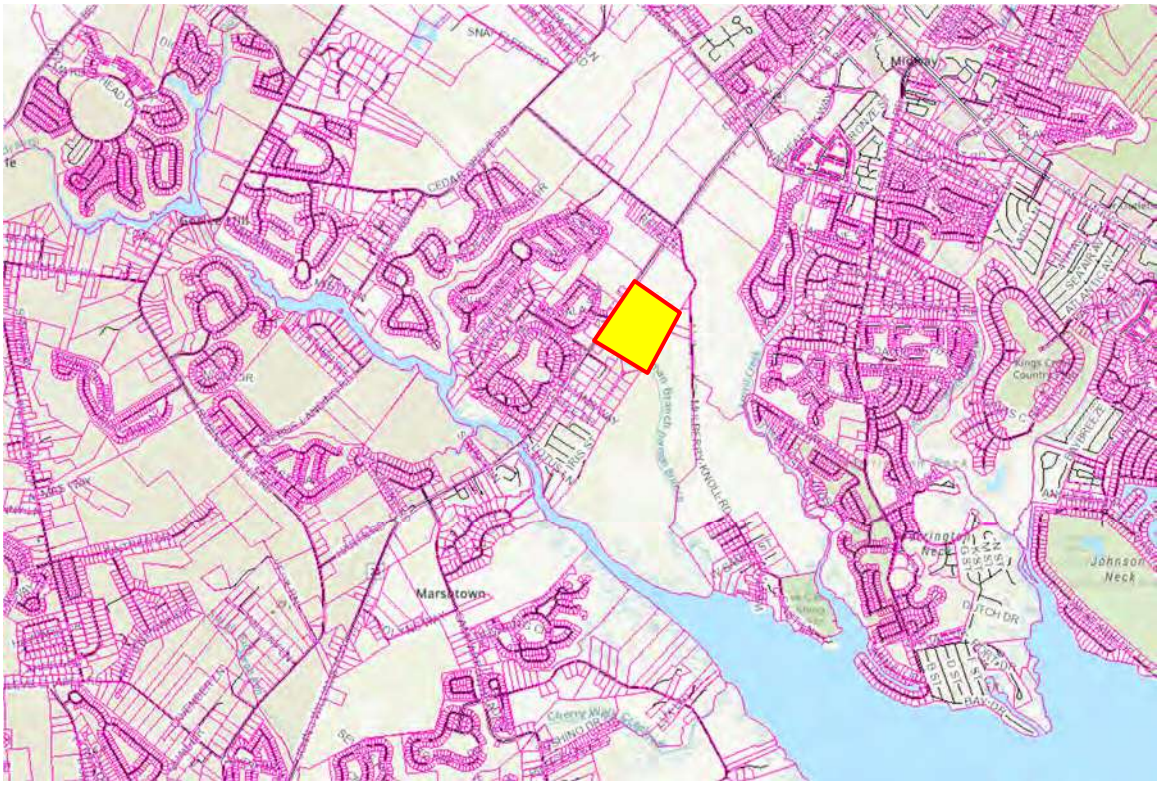



Figure 1: Location Map

Figure 2: National Wetland Inventory Map.

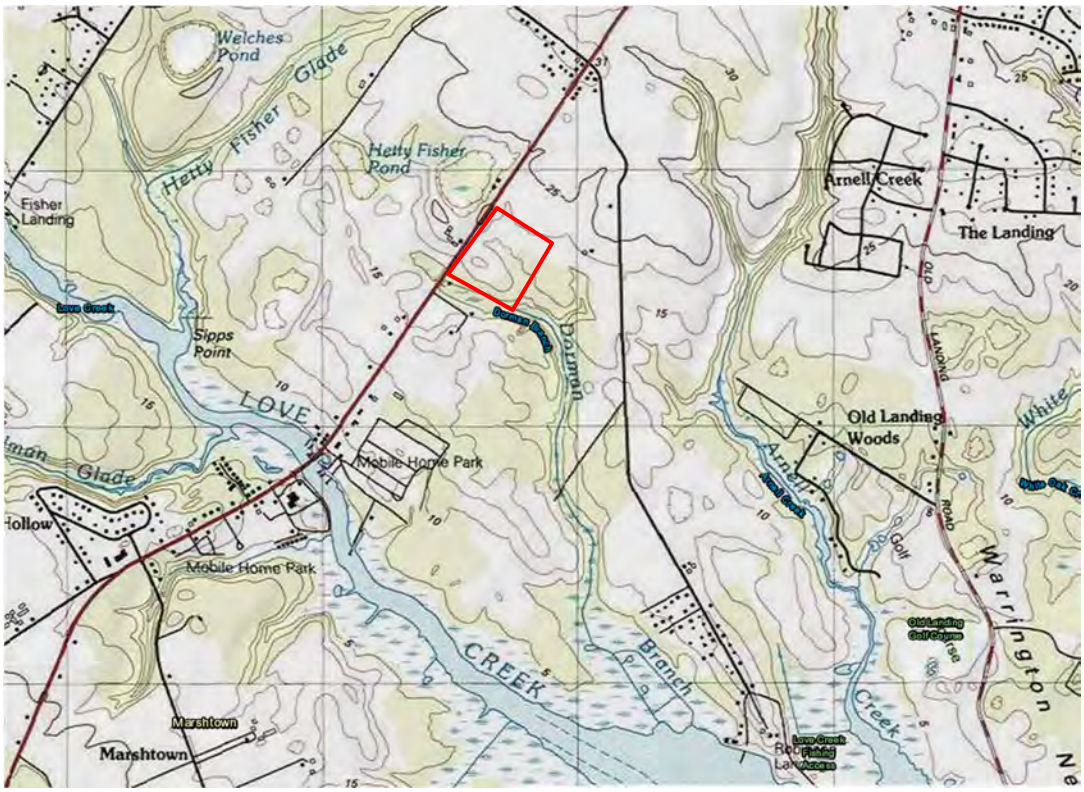



Figure 3: USGS Mapping.

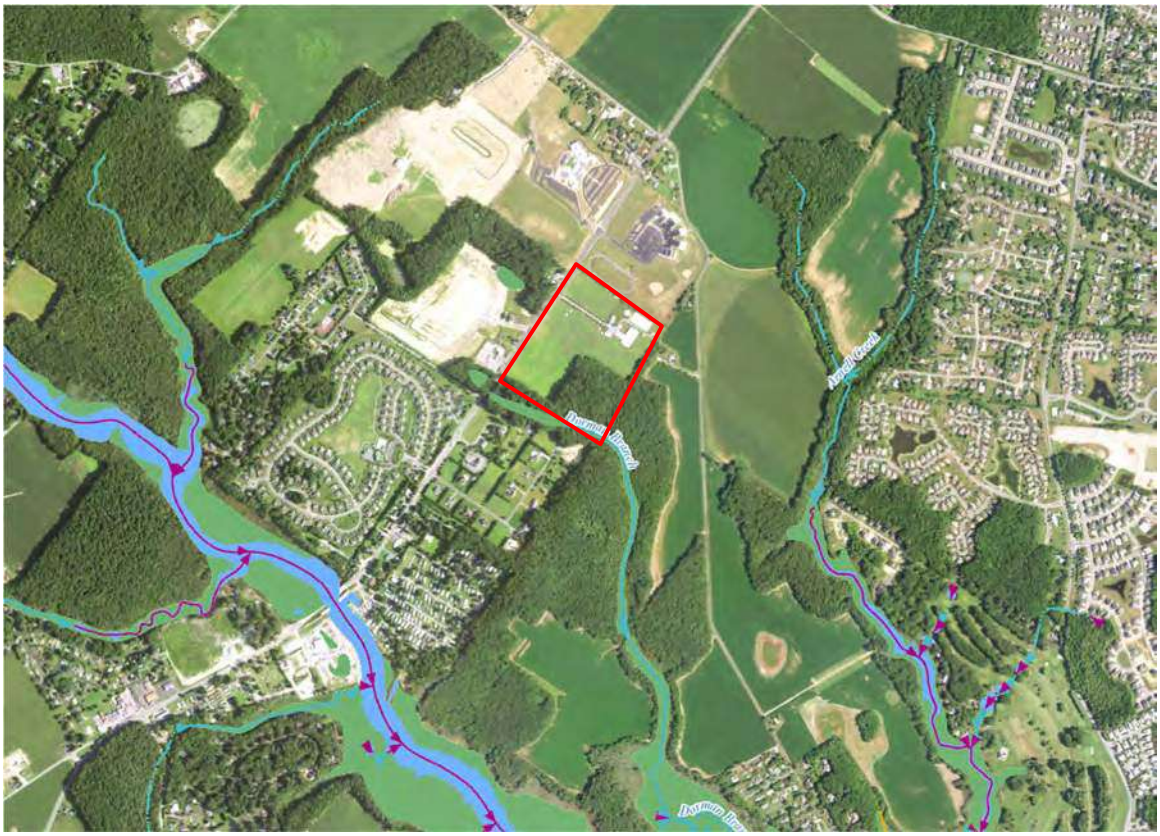


Figure 4: NHD Map.

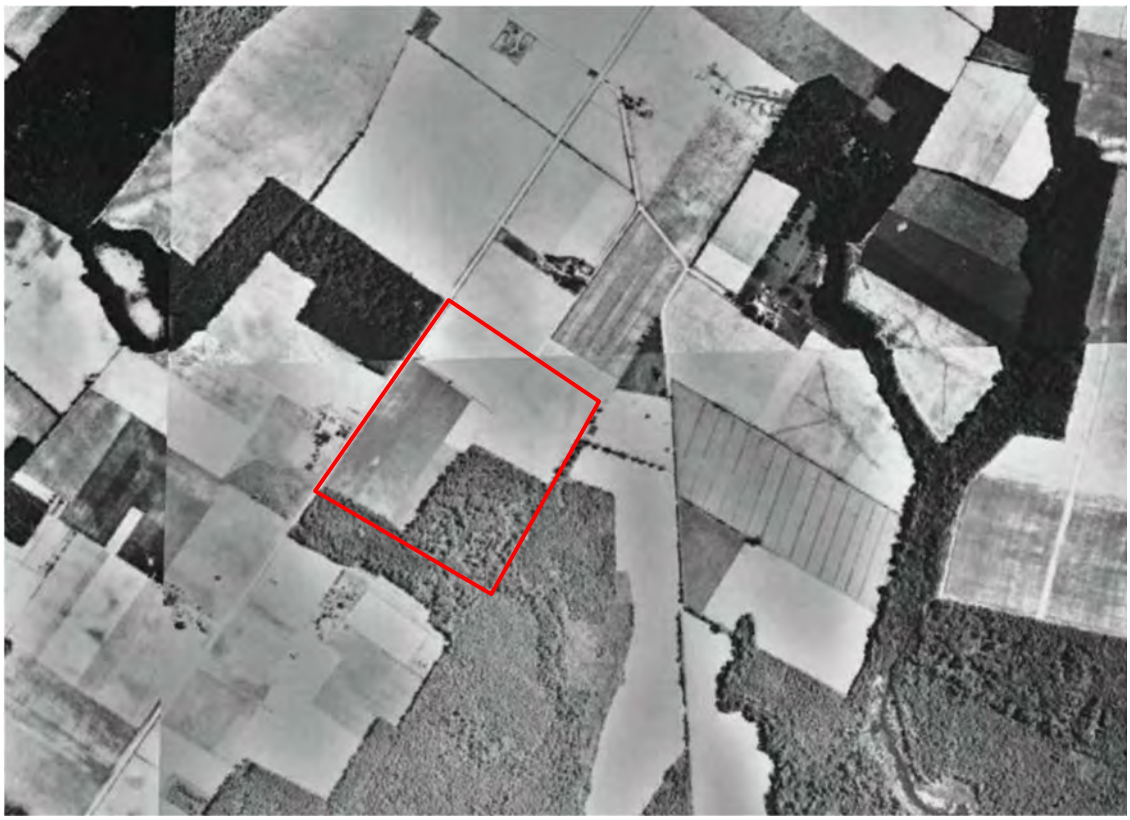


Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

Figure 10: 2015 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

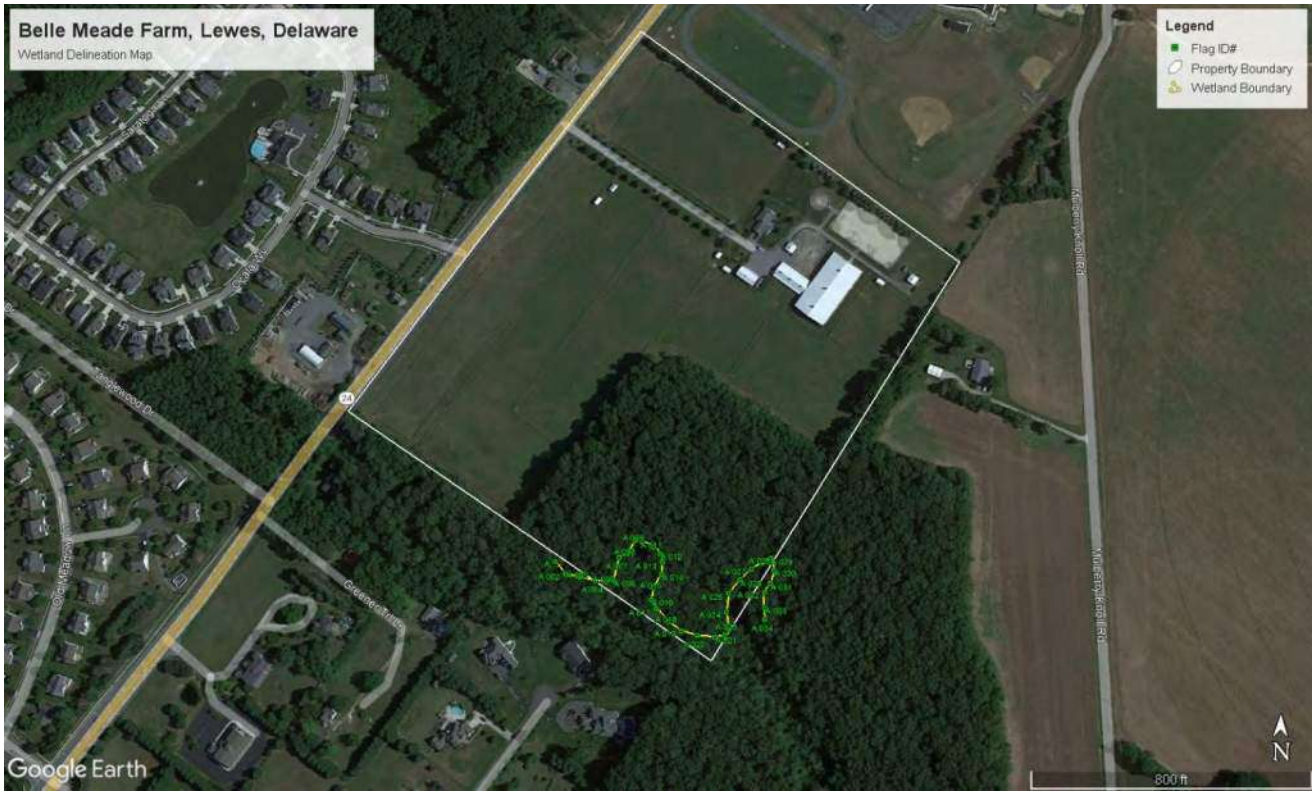



Figure 13: Wetland Delineation Map

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always o a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

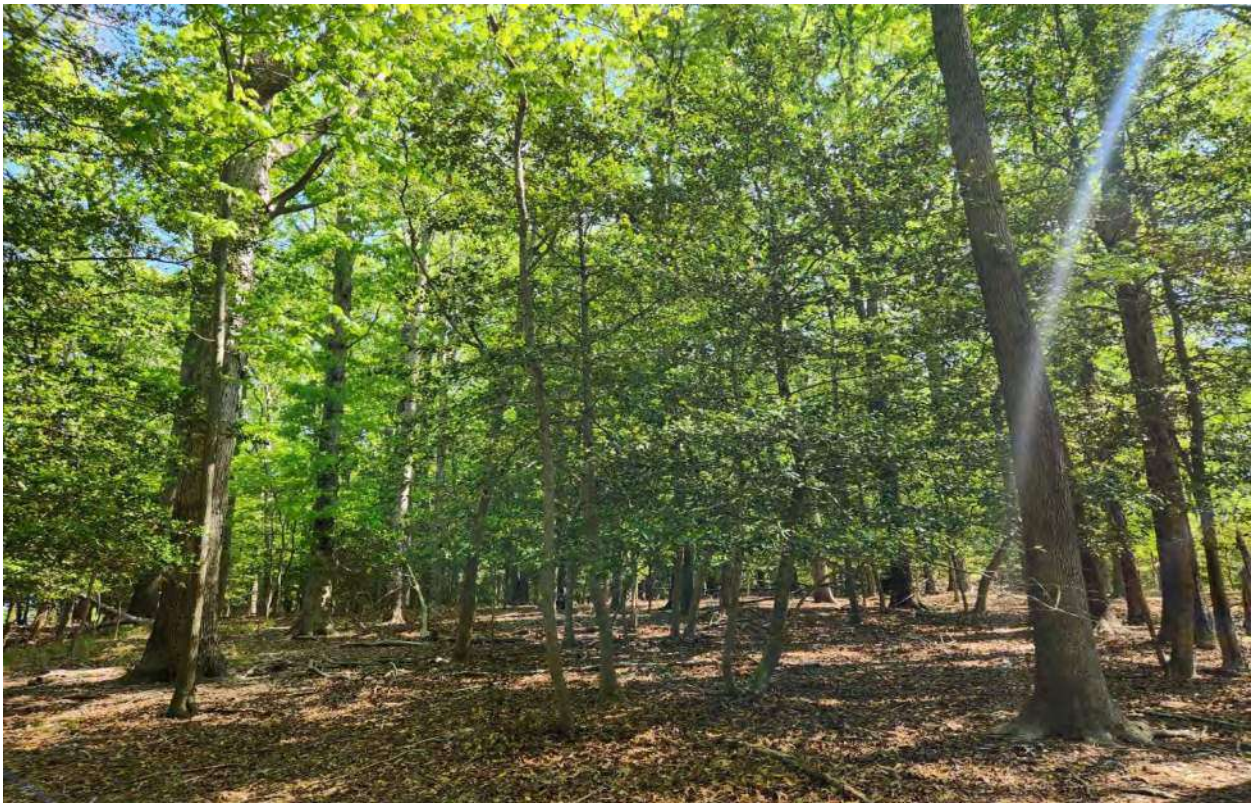
Paved driveway in the northwestern portion of the property, looking east.

Pasture surrounding barn in the northeastern portion of the property, looking northeast.

Pasture area in the north-central portion of the property, looking northeast.

Pasture bordering woodlands in the southwestern portion of the property, looking west.

Pasture area in the southwestern portion of the property, looking northeast.



Typical forested upland in the south-central portion of the property.

Forested wetland abutting Dorman Branch in the southeastern portion of the property.

Forested wetland in the southeastern portion of the property.

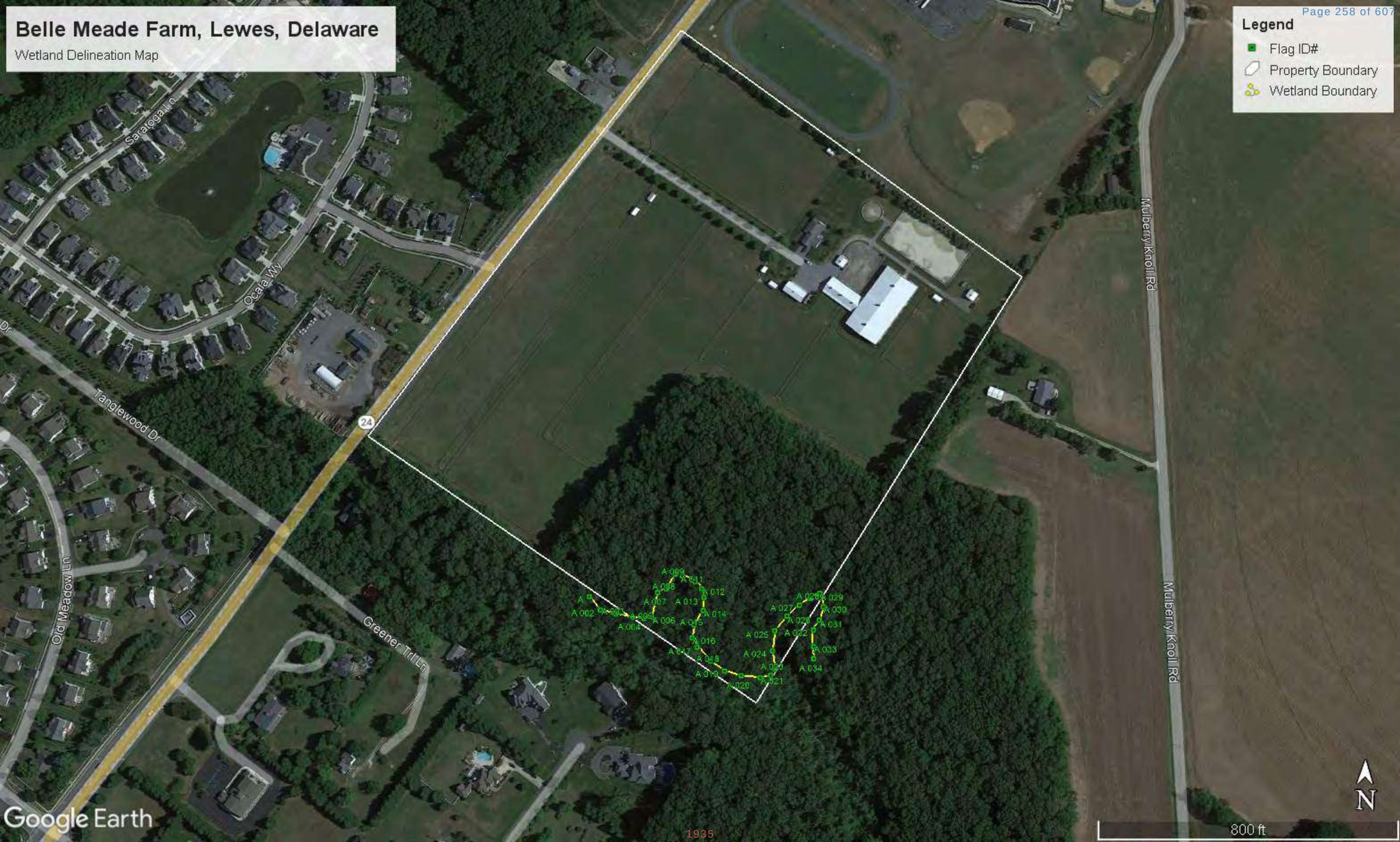
Forested upland in the southeastern portion of the property, looking northwest.

Pasture area bordering woodlands in the central portion of the subject property, looking south.

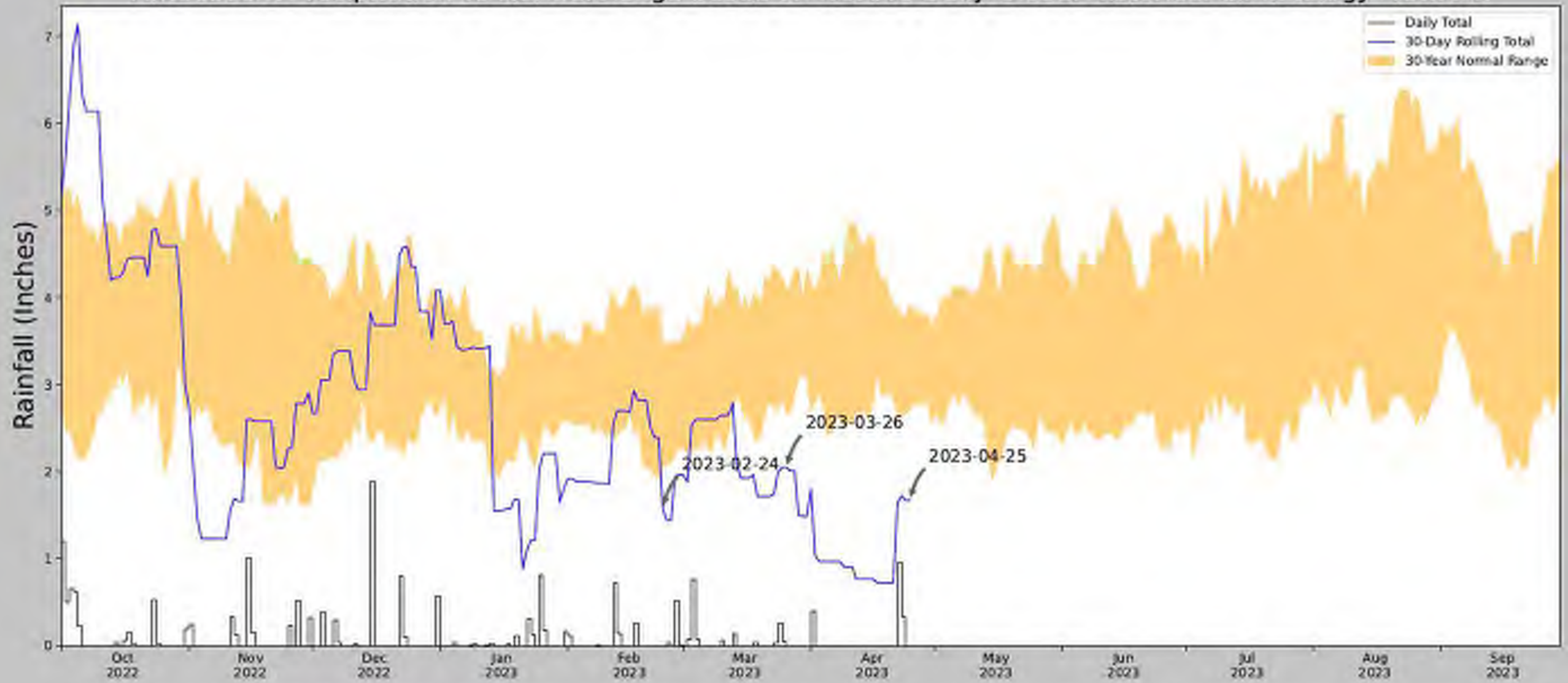
# Appendices

# Belle Meade Farm, Lewes, Delaware

Wetland Delineation Map



# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




| | |
|---|---|
| Coordinates | 38.711454, -75.152545 |
| Observation Date | 2023-04-25 |
| Elevation (ft) | 14.925 |
| Drought Index (PDSI) | Severe drought (2023-03) |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2023-04-25 | 2.712992 | 3.902362 | 1.669291 | Dry | 1 | 3 | 3 |
| 2023-03-26 | 2.679134 | 4.098032 | 2.047244 | Dry | 1 | 2 | 2 |
| 2023-02-24 | 2.05748 | 3.448032 | 1.57874 | Dry | 1 | 1 | 1 |
| Result | | | | | | | Drier than Normal - 6 |

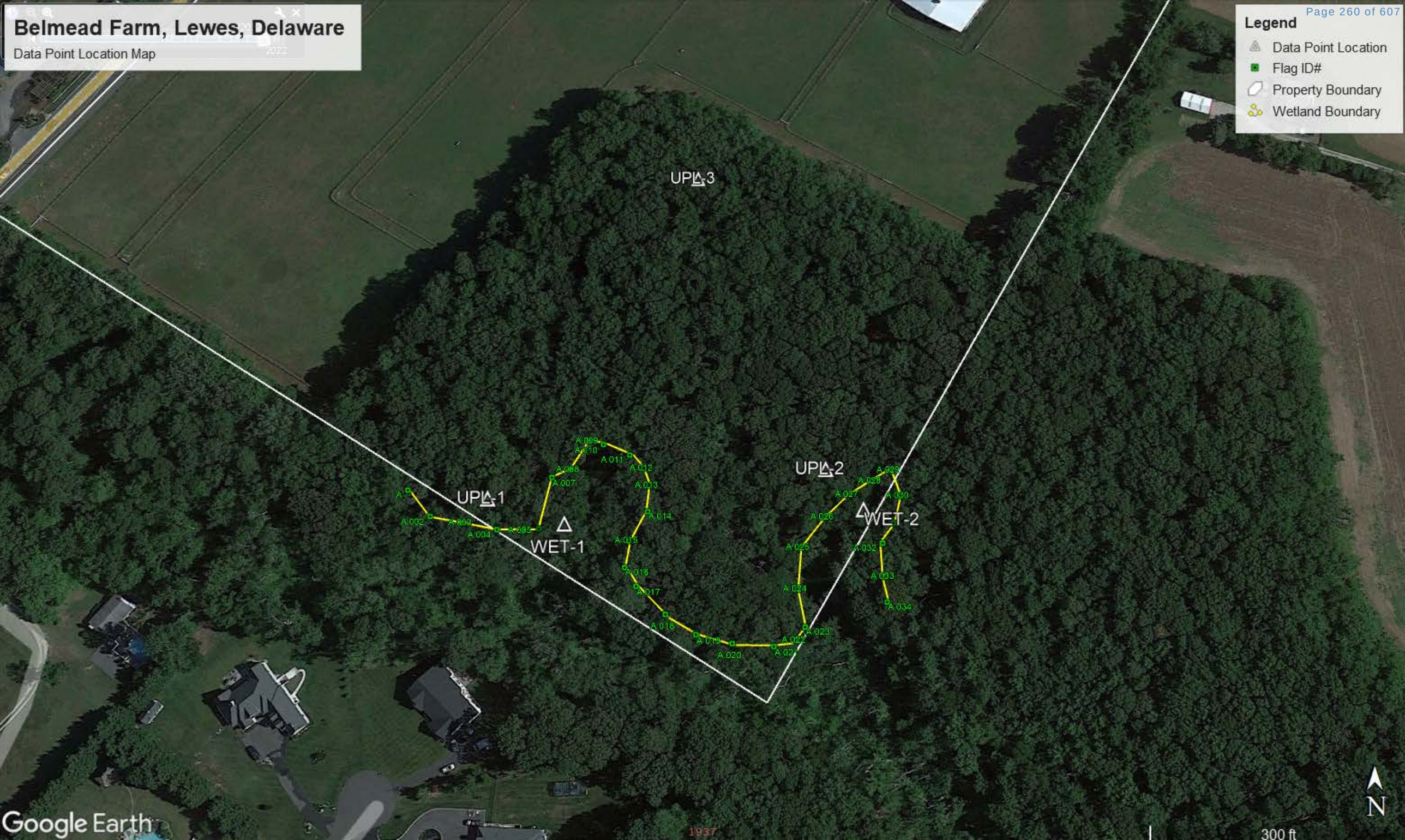
Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| GEORGETOWN-DELAWARE COASTAL AP | 38.6897, -75.3625 | 49.869 | 11.421 | 34.944 | 5.538 | 9080 | 88 |
| MILTON 3.8 SSE | 38.7271, -75.287 | 38.058 | 4.822 | 11.811 | 2.227 | 1 | 1 |
| GEORGETOWN 5 SW | 38.6333, -75.45 | 44.948 | 6.121 | 4.921 | 2.785 | 1940 | 0 |
| GEORGETOWN 5.8 W | 38.6972, -75.4931 | 35.105 | 7.062 | 14.764 | 3.282 | 1 | 0 |
| LEWES | 38.7842, -75.1581 | 9.843 | 12.806 | 40.026 | 6.275 | 331 | 0 |
| Linear Interpolation | N/A | N/A | N/A | N/A | N/A | 0 | 1 |

# Belmead Farm, Lewes, Delaware

Data Point Location Map



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-5 +

Subregion (LRR or MLRA): LRR T Lat: 38.709160 Long: -75.152600 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DodB) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liriodendron tulipifera* | 20 | yes | FACU |
| 2. *Quercus alba* | 25 | yes | FACU |
| 3. *Quercus rubra* | 20 | yes | FACU |
| 4. *Pinus taeda* | 20 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 85 = Total Cover | | |
| 50% of total cover: 42.5 | 20% of total cover: 17 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Quercus alba* | 10 | yes | FACU |
| 3. *Liquidambar styraciflua* | 5 | yes | FAC |
| 4. *Nyssa sylvatica* | 5 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Cornus florida* | 15 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 35 = Total Cover | | |
| 50% of total cover: 17.5 | 20% of total cover: 7 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | loamy sand | |
| 3-9 | 10YR 4/3 | 100 | | | | | loamy sand | |
| 9-20 | 10YR 4/6 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-1 in the south-central portion of the property.

Soil profile at UPL-1.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.709046 Long: -75.152399 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ___** |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 1" |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present? Yes ✓ No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | no | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Magnolia virginiana* | 5 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus effusus* | 10 | yes | OBL |
| 2. *Carex lurida* | 5 | no | OBL |
| 3. *Juncus tenuis* | 5 | no | FAC |
| 4. *Woodwardia areolata* | 10 | yes | OBL |
| 5. *Phragmites australis* | 10 | yes | FACW |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-8 | 10YR 2/1 | 100 | | | | | muck | saturated |
| 9-20 | 10YR 3/2 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

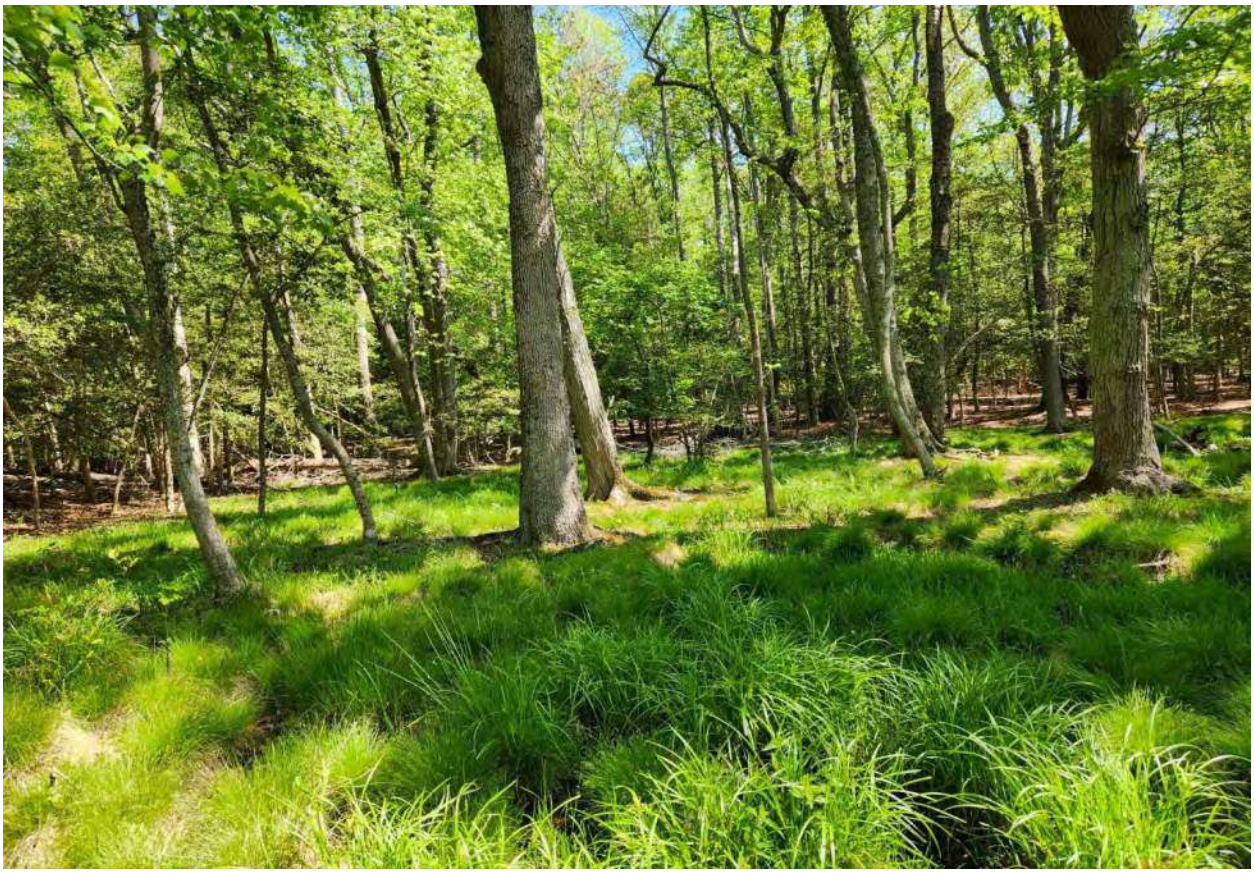
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at Data Point WET-1 in the south-central portion of the property.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.708934 Long: -75.151363 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 15 | yes | FACU |
| 2. *Quercus alba* | 30 | yes | FACU |
| 3. *Quercus rubra* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 15 | yes | FAC |
| 2. *Cornus florida* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 30 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 12 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 3-6 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-2 in the southeastern portion of the property.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.708819 Long: -75.151184 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ___ | **Is the Sampled Area within a Wetland?** Yes ✓ No ___ |
| Hydric Soil Present? | Yes ✓ | No ___ | |
| Wetland Hydrology Present? | Yes ✓ | No ___ | |

Remarks:

Forested wetland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ___ | Depth (inches): 0.5" |
| Water Table Present? | Yes ✓ | No ___ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ___ | Depth (inches): 0 |

**Wetland Hydrology Present?** Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Nyssa sylvatica* | 10 | yes | FAC |
| 2. *Magnolia virginiana* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Vaccinium corymbosum* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus tenuis* | 10 | yes | FAC |
| 2. *Woodwardia areolata* | 5 | yes | OBL |
| 3. *Juncus effusus* | 5 | no | OBL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-20 | 10YR 3/1 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:

Forested wetland at Data Point WET-2 in the southeastern portion of the property.

Saturated soils encountered at WET-2.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-3

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.710365 Long: -75.151586 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DoA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** Yes ____ No ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the east-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-3

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 35 | yes | FACU |
| 2. *Liquidambar styraciflua* | 30 | yes | FAC |
| 3. *Ilex opaca* | 10 | no | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 75 = Total Cover | | |
| 50% of total cover: 37.5 | 20% of total cover: 15 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 45 | yes | FAC |
| 2. *Nyssa sylvatica* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 50 = Total Cover | | |
| 50% of total cover: 25 | 20% of total cover: 10 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Smilax rotundofolia* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 4-9 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 9-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-3 in the east-central portion of the property.

Soil profile at UPL-3.

United States Department of Agriculture

NRCS

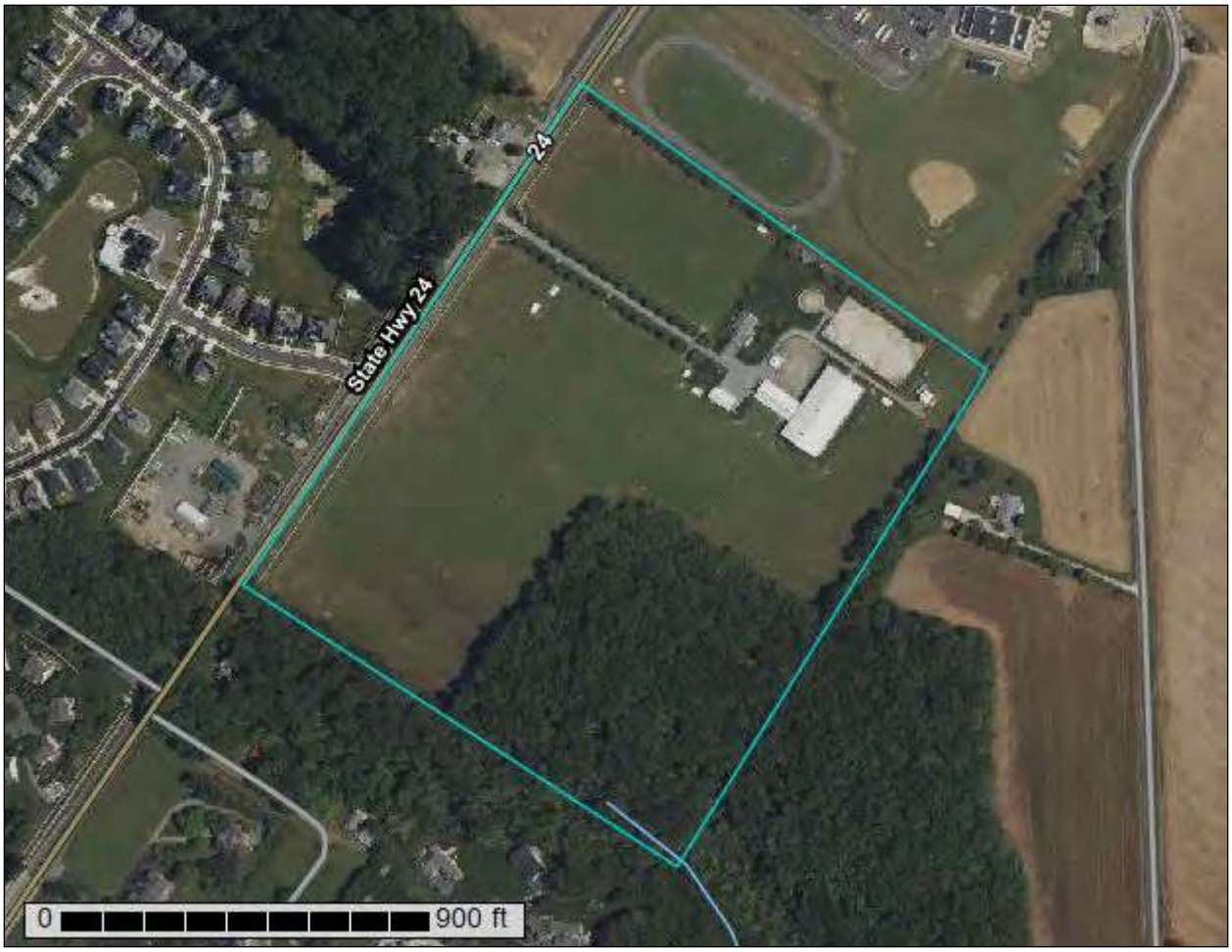
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Belmeade Farm, Lewes, DE




April 29, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

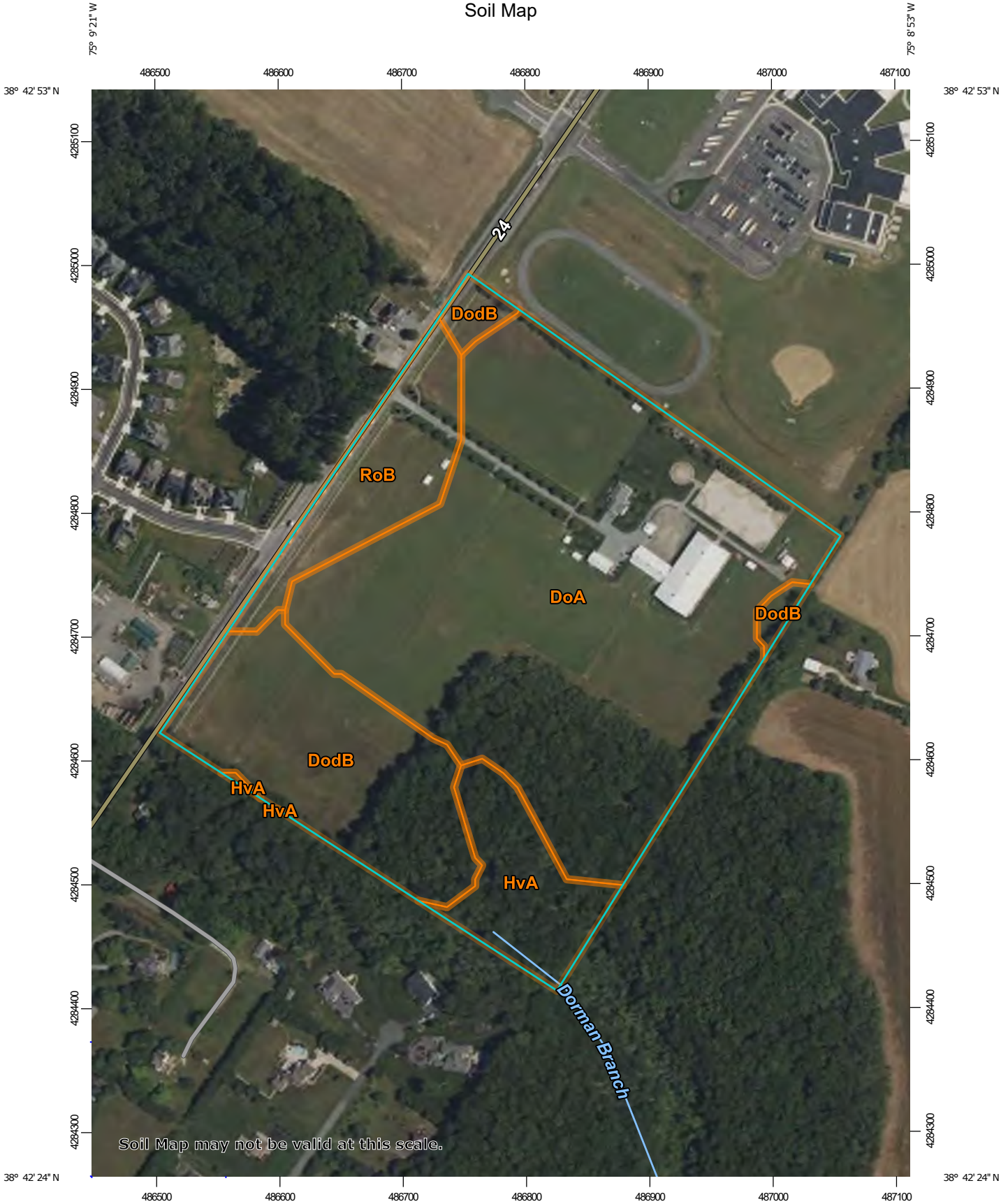
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:4,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 23, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| DoA | Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area | 25.9 | 63.1% |
| DodB | Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area | 8.2 | 20.1% |
| HvA | Hurlock sandy loam, 0 to 2 percent slopes | 3.2 | 7.9% |
| RoB | Rosedale loamy sand, 2 to 5 percent slopes | 3.7 | 8.9% |
| **Totals for Area of Interest** | | **41.1** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## DoA—Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwd
*Elevation:* 0 to 190 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 250 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Knolls, flats, low hills
*Landform position (two-dimensional):* Summit, shoulder
*Landform position (three-dimensional):* Interfluve, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Parent material:* Loamy fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 1
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

### Minor Components

#### Galestown

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Ingleside

*Percent of map unit:* 5 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Footslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## DodB—Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwh
*Elevation:* 0 to 210 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 260 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Flats, knolls, low hills
*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Parent material:* Loamy fluviomarine deposits

**Typical profile**

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

**Properties and qualities**

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Galestown**

*Percent of map unit:* 10 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Hammonton**

*Percent of map unit:* 5 percent
*Landform:* Flats, broad interstream divides
*Landform position (two-dimensional):* Footslope, shoulder
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Ingleside**

*Percent of map unit:* 5 percent
*Landform:* Low hills, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex

*Hydric soil rating:* No

## HvA—Hurlock sandy loam, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qth9
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Hurlock, drained, and similar soils:* 42 percent
*Hurlock, undrained, and similar soils:* 38 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hurlock, Drained

#### Setting

*Landform:* Swales, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*Eg - 10 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Hurlock, Undrained

### Setting

*Landform:* Drainageways, depressions, swales, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A - 2 to 4 inches:* sandy loam
*Eg - 4 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Occasional
*Available water supply, 0 to 60 inches:* Moderate (about 7.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 5w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Minor Components

### Mullica, drained

*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, swales, flats
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Flats, drainageways
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

### Woodstown

*Percent of map unit:* 5 percent
*Landform:* Flats, fluviomarine terraces, broad interstream divides
*Landform position (three-dimensional):* Tread, rise
*Down-slope shape:* Linear

*Across-slope shape:* Linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## RoB—Rosedale loamy sand, 2 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qtjy
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Rosedale

#### Setting

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

#### Typical profile

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

### Evesboro

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

### Galloway

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

### Klej

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

### Hambrook

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, fluviomarine terraces
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

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# Fish and Wildlife Threatened and Endangered Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 01/20/2025 15:56:33 UTC
Project Code: 2025-0044405
Project Name: Belmeade Farm

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0044405
Project Name: Belmeade Farm
Project Type: New Constr - Above Ground
Project Description: Above ground development.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.71070505,-75.15219081081176,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1R
- PFO1B

# DelDOT Service Level Evaluation Request Response Letter

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

DelDOT

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm
cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

# DelDOT Final Traffic Impact Study (TIS)

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

June 4, 2024
Revised: June 24, 2024

Christopher Duke, P.E.
Becker Morgan Group, Inc.
100 Discovery Blvd, Suite 102
Newark, DE 19713

Dear Mr. Duke:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Belle Meade** (Tax Parcel: 334-18.00-40.01) multi-use development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. This letter has been revised to clarify and to fix grammatical and formatting errors. The recommendation items and analysis results they are based on have not changed. On Page 1, a typo was fixed in the retail square footage. On Page 6, Item 3, turn lane lengths and minimum tapers and the name of the intersection in the body of Item 3 were added. DelDOT accepts this letter and concurs with the recommendations.

If you have any questions concerning this letter or the enclosed review letter, please contact me at Annamaria.Furmato@delaware.gov.

Sincerely,

Annamaria Furmato
TIS Group Project Engineer

AF:km
Enclosures
cc with enclosures: William Krapf, Capano Group, L.P.
David L. Edgell, Office of State Planning Coordination
Jamie Whitehouse, Sussex County Planning & Zoning
Andrew J. Parker, McCormick Taylor, Inc.
Tucker Smith, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Deputy Secretary / Director of Transportation Solutions (DOTS)
Mark Luszcz, Deputy Director, DelDOT Traffic, DOTS
Michael Simmons, Assistant Director, Project Development South, DOTS
Peter Haag, Chief Traffic Engineer, DelDOT Traffic, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, DelDOT Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Pamela Steinebach, Director, Planning
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination, Planning
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination, Planning
Sireen Muhtaseb, TIS Group Manager, Development Coordination, Planning
Philip Lindsey, TIS Group Project Engineer, Development Coordination, Planning
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning, Planning
Steve Bayer, Regional Transportation Planner, Statewide & Regional Planning

June 6, 2024

Ms. Annamaria Furmato
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
**Task No. 5A Subtask 08A – Belle Meade**

Dear Ms. Furmato:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Belle Meade development prepared by Becker Morgan Group, Inc. dated February 2024. Becker Morgan Group prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Belle Meade development, along the south side of Delaware Route 24 (Sussex Road 24), approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. The proposed development would consist of 125,000 square feet of retail space and 480 low-rise multi-family houses. One signalized access point is proposed on Delaware Route 24 opposite Lexington Avenue. Construction is anticipated to be completed in 2032.

The subject land is located on an approximately 38.33-acre parcel. The subject land is currently zoned AR-1 (Agricultural Residential) and the developer plans to rezone the land to C-4 (Planned Commercial).

**Relevant and On-Going Projects and Studies**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

McCORMICK TAYLOR

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

**Summary of Analysis Results**

Based on our review, we have the following comments and recommendations:

The following intersections exhibit level of service (LOS) deficiencies without the implementation of physical roadway and/or traffic control improvements:

| ***Intersection*** | ***Existing Traffic Control*** | ***Situations for which deficiencies occur*** |
|---|---|---|
| 1. SR 24 / Lexington Avenue / Site Entrance | Unsignalized | 2032 with development AM, PM, SAT (Case 3) |
| 4. SR 24 / Plantation Road / Warrington Road | Signalized | 2032 with development PM (Case 3) |
| 6. SR 24 / Bryn Mawr Drive | Unsignalized | 2032 without development PM and SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 9. Warrington Road / Old Landing Road | Unsignalized | 2022 Existing SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 10. Mulberry Knoll Road / Cedar Grove Road | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development PM and SAT (Case 3) |
| 12. SR 24 / Spencer Lane / Williams Way | Unsignalized | 2022 Existing PM and SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 13. SR 24 / Camp Arrowhead Road | Signalized | 2032 with development SAT (Case 3) |

| | | |
|---|---|---|
| 14. SR 24 / Harts Road | Unsignalized | 2022 Existing PM (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 16. SR 24 / Jolyns Way | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development SAT (Case 3) |

1. SR 24 / Lexington Avenue / Site Entrance (See Recommendations 2 and 3  Table 2, Page 22)
This unsignalized intersection experiences LOS deficiencies during the AM, PM, and Saturday peaks in Case 3. In Case 3 during the PM and Saturday peaks, the northbound and southbound approaches are expected to operate at LOS F with over 2,500 seconds of delay. The developer proposes to construct a traffic signal at this intersection to mitigate the LOS deficiency. A Traffic Signal Justification Study (TSJS) has been prepared by the Department demonstrating that the warrants for a traffic signal are met with Case 3 volumes. If the intersection were signalized with the lane configuration as proposed in the *SR 24, Love Creek to Mulberry Knoll* project, the intersection will still operate at LOS F in the Saturday peak. The Henlopen TID proposes to widen SR 24 through this intersection to provide two through lanes in each direction. With signalization and the TID improvements the intersection is expected to operate at LOS C or better during all three peak periods.

4. SR 24 / Plantation Road / Warrington Road (See Recommendation 4  Table 5, Page 25)
This signalized intersection experiences LOS deficiencies during the PM peak in Case 3. In Case 3 during the PM peak, the northbound approach is expected to operate at LOS F with 81.7 seconds of delay while the overall intersection will operate at LOS E with 60.8 seconds of delay. Queues on the northbound approach are expected to be over 838 feet long which exceeds the available storage. The Henlopen TID proposes to widen the Plantation Road and Warrington Road approaches to include two left-turn lanes, two through lanes, and one right turn lane. With the TID improvements at this intersection, the intersection is expected to operate at LOS D with 49.5 seconds of delay.

6. SR 24 / Bryn Mawr Drive (Table 7, Page 27)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peaks in Case 2 and the AM, PM, and Saturday Peaks in Case 3. In Case 3 during the PM peak, the southbound approach is expected to operate at LOS F with 62.5 seconds of delay and queues over 65 feet long. A signal could mitigate the LOS deficiencies at his intersection. However, a signal is not recommended because of the proximity to adjacent signals and the low minor street volumes. Bryn Mawr Drive is a private road and the delay is only experienced on the minor street approach without impact to Delaware Route 24.

9. Warrington Road / Old Landing Road (See Recommendation 4  Table 10, Page 30)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 during the PM peak, the intersection has failing LOS on three approaches with the overall intersection operating at LOS F with 69 seconds of delay. The Henlopen TID proposes a roundabout at this intersection which will mitigate the LOS deficiency.

10. Mulberry Knoll Road / Cedar Grove Road (See Recommendation 4  Table 11, Page 31)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 2 and the PM and Saturday peaks in Case 3. In Case 3 during the Saturday peak, the northbound Mulberry Knoll Road approach is expected to operate at LOS F with 837.7 seconds of delay and queues over 753 feet long. The developer recommends the construction of a dedicated eastbound right-turn lane on Cedar Grove Road. However, this improvement fails to fully mitigate the LOS deficiency. The Henlopen TID proposes a roundabout at this intersection.

12. SR 24 / Spencer Lane / Williams Way (See Recommendation 4  Table 13, Page 33)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peak hours in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3, during the PM peak, the southbound approach is expected to operate at LOS F with 505.6 seconds of delay and queues over 63 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection. With that improvement, the intersection continues to experience LOS deficiencies. It should be noted that the delay is only experienced on the minor street approach, which is a private road. A signal is not recommended at this intersection due to the low minor street volumes. Additionally, the northbound volume during all peak hours is less than 10 vehicles.

13. SR 24 / Camp Arrowhead Road (See Recommendation 4  Table 14, Page 34)
This signalized intersection experiences LOS deficiencies during the Saturday peak in Case 3. In Case 3 during the Saturday peak, the eastbound approach is expected to operate at LOS F with 95 seconds of delay and queues over 1,573 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection which mitigates the LOS deficiency.

14. SR 24 / Harts Road (See Recommendation 4  Table 15, Page 35)
This unsignalized intersection experiences LOS deficiencies during the PM peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 in the PM peak hour the southbound Harts Road approach is expected to operate at LOS F with 989.9 seconds of delay. The Henlopen TID proposes the elimination of this intersection.

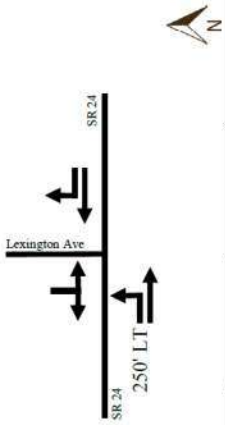
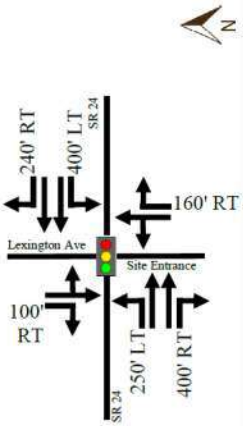
16. SR 24 / Jolyns Way (See Recommendation 4  Table 17, Page 37)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Cases 2 and 3. In Case 3 during the Saturday peak, the northbound Jolyns Way approach is expected to operate at LOS E with 45.3 seconds of delay and queues of less than one vehicle. It should be noted that the forecasted volume on this approach is five (5) vehicles in the Saturday peak hour. The Henlopen TID proposes to signalize this intersection, widen SR 24 to include two through lanes in each direction, and add a northern leg to the intersection that will connect to Robinsonville Road. These improvements will mitigate the LOS deficiencies.

**Development Improvements**

Should Sussex County approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan by note or illustration, unless a Design Deviation is requested and approved by the Department. All applicable agreements (i.e. letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development. The following items should be implemented at the same time as site construction once all agency approvals and permits are secured and completed in accordance with DelDOT's Standards and Specifications.

1. The developer shall improve the State-maintained Roads on which they front (Delaware Route 24), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

2. The developer should construct the full-movement Site Entrance on Delaware Route 24. The proposed configuration is shown in the table below.

| Approach | Current Configuration | | Approach | Proposed Configuration | |
|---|---|---|---|---|---|
| Eastbound SR 24 | One left turn lane and one through lane |   | Eastbound SR 24 | One left turn lane, two through lanes, and one right turn lane |   |
| Westbound SR 24 | One through lane and one right turn lane. | | Westbound SR 24 | One left turn lane, two through lanes, and one right turn lane | |
| Northbound | Approach does not exist. | | Northbound Site Entrance | One shared left / through lane and one right turn lane. | |
| Southbound Lexington Avenue | One shared left / right turn lane. Stop Control. | | Southbound Lexington Avenue | One shared left / through lane and one right turn lane. | |

At the proposed Site Entrance intersection, an eastbound right-turn lane is warranted on SR 24 based on DelDOT's Auxiliary Lane Worksheet, Figure 5.2.9.1-b. Initial recommended minimum turn lane length (excluding taper) is a 400-foot right-turn lane on eastbound SR 24. The westbound left-turn lane should be designed to accommodate the 95$^{th}$ percentile queues. Initial recommended minimum turn lane length (excluding taper) is a 400-foot left-turn lane on westbound SR 24. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

3. The developer should enter into a traffic signal agreement to design and construct a traffic signal with pedestrian crossings at the intersection of Site Entrance / Lexington Avenue and SR 24. SR 24 should be widened to include two 11-foot through lanes and 5-foot bicycle lanes in each direction within the extents of the site frontage. Beginning at the western extent of the site frontage, a minimum 150-foot eastbound lane addition taper should be provided to add the second eastbound through lane. Beginning west of the intersection, a minimum 495-foot westbound lane drop taper should be provided. At the signalized intersection there should be dedicated left-turn lanes and channelized right-turn lanes on each SR 24 approach, and on the northbound and southbound approaches there should be a shared left / through lane and a channelized right-turn lane. Initial recommended minimum turn lane lengths (excluding tapers) are a 250-foot eastbound left-turn lane, a 240-foot westbound right-turn lane, a 160-foot northbound right-turn lane, and a 100-foot southbound right-turn lane. At the signalized intersection the developer should also construct signalized pedestrian crossings on all approaches. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane

lengths and other design details during the site plan review. The developer will be granted credit against their TID fee for this work.

4. The developer shall pay the Henlopen TID fee. The developer should coordinate with DelDOT regarding the TID fee amount and payment terms.

5. The following bicycle and pedestrian improvements should be included:

   a. Per the DelDOT Development Coordination Manual section 5.2.9.2, bicycle lanes are required where right-turn lanes are being installed.

   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.

   c. Utility covers should be made flush with the pavement.

   d. A minimum 15-foot-wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontages along Delaware Route 24. Within the easement, a minimum of a 10-foot wide shared-use path should be constructed. The shared-use path should meet AASHTO and ADA standards and should have a minimum of a five-foot buffer from the roadway. At the property boundaries, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at or before both boundaries of the property.

   e. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.

   f. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five-feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. Internal sidewalks in the development should connect to the proposed shared-use path along the site frontages.

   g. Construct a bus stop pad on SR 24 within the site frontage. Bus stop pad should connect to shared use paths and sidewalks along the site frontage. Location, size, and type of bus pad will be determined through coordination with the Delaware Transit Corporation (DTC).

Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines*. These guidelines are available on DelDOT's website at http://deldot.gov/Publications/manuals/de mutcd/index.shtml.

Please note that this review generally focuses on capacity and level of service issues; additional safety and operational issues will be further addressed through DelDOT's site plan review process.

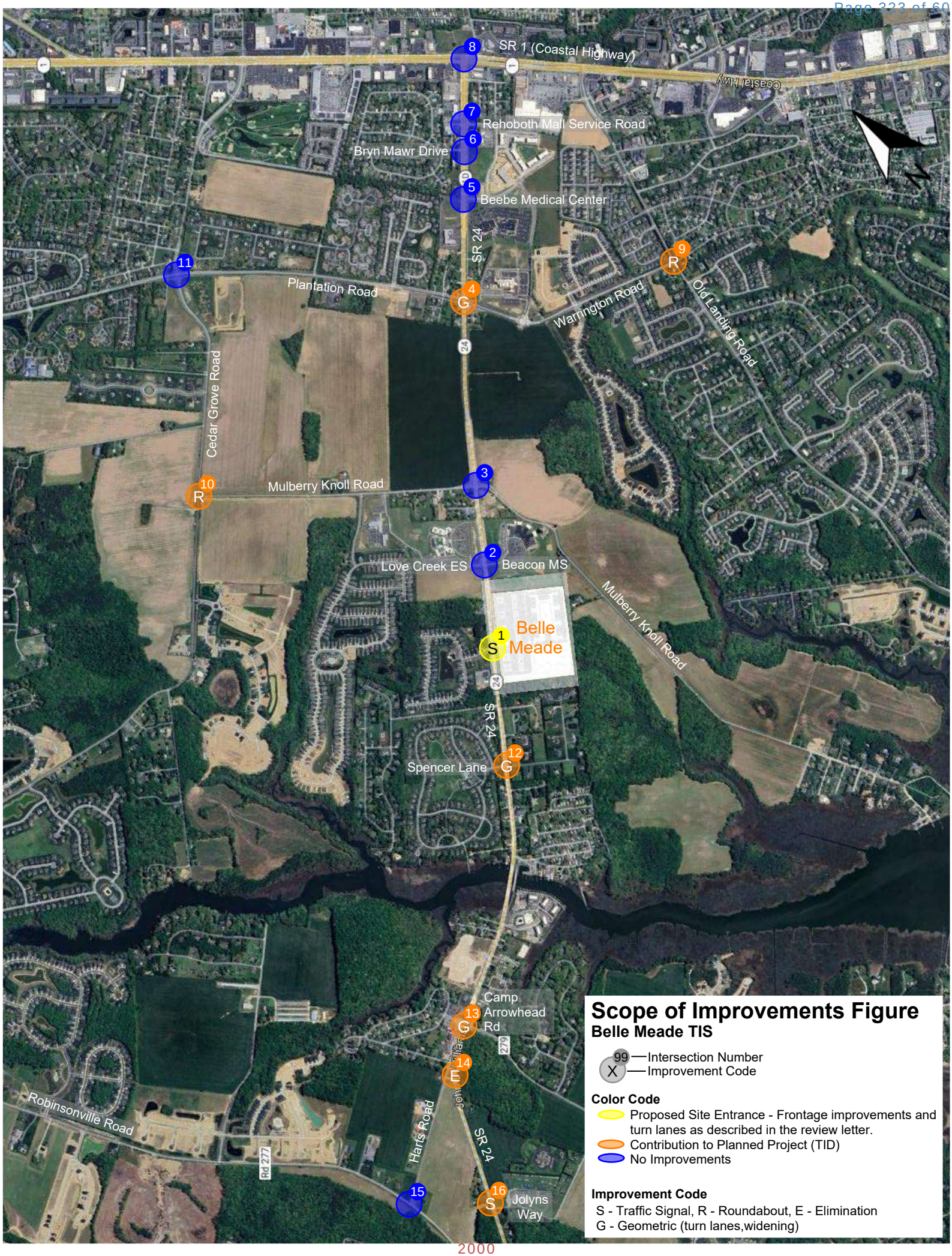
Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

**McCormick Taylor, Inc.**

Andrew J. Parker, PE, PTOE
Project Manager

Enclosure




## Scope of Improvements Figure

**Belle Meade TIS**

99 — Intersection Number
X — Improvement Code

**Color Code**

- Proposed Site Entrance - Frontage improvements and turn lanes as described in the review letter.
- Contribution to Planned Project (TID)
- No Improvements

**Improvement Code**

S - Traffic Signal, R - Roundabout, E - Elimination
G - Geometric (turn lanes,widening)

## General Information

**Report date:** February 2024
**Prepared by:** Becker Morgan Group, Inc
**Prepared for:** Capano Management, Inc.
**Tax parcel:** 334-18.00-40.01
**Generally consistent with DelDOT's Development Coordination Manual:** Yes

## Project Description and Background

**Description:** The proposed Belle Meade development consists of 125,000 square feet of retail space, 480 low-rise multi-family houses.
**Location:** The site is located along the south side of Delaware Route 24, approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. A site location map is included on page 11.
**Amount of land to be developed:** an approximately 38.33-acre parcel.
**Land use approval(s) needed:** The subject land is currently zoned AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial).
**Proposed completion year:** 2032
**Proposed access locations:** One full access point is proposed on Delawar Route 24 opposite Lexington Avenue.
**Average Daily Traffic Volumes (per DelDOT Traffic Summary 2022):**

- Delaware Route 24: 18,591 vehicles/day

Mulberry Knoll Road
SR 24
N
Mulberry Knoll Road
SR 24
Site Location Map
Proposed Entrance

## 2020 Delaware Strategies for State Policies and Spending

**Location with respect to the Strategies for State Policies and Spending Map of Delaware:**
The proposed Belle Meade development is located within Investment Level 2.

*Investment Level 2*
This investment level has many diverse characteristics. These areas can be composed of less developed areas within municipalities, rapidly growing areas in the counties that have or will have public water and wastewater services and utilities, areas that are generally adjacent to or near Investment Level 1 Areas, smaller towns and rural villages that should grow consistently with their historic character, and suburban areas with public water, wastewater, and utility services. These areas have been shown to be the most active portion of Delaware's developed landscape. They serve as transition areas between Level 1 and the more open, less populated areas. They generally contain a limited variety of housing types, predominantly detached single-family dwellings.

In Investment Level 2, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity.

Investments should encourage departure from the typical single-family-dwelling developments and promote a broader mix of housing types and commercial sites encouraging compact, mixed-use development where applicable. Overall, the State's intent is to use spending and management tools to promote well-designed development in these areas. Such development provides for a variety of housing types, user-friendly transportation systems, and provides essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community. Investment Level 2 areas are prime locations for designating "pre-permitted areas."

**Proposed Development's Compatibility with Strategies for State Policies and Spending:**
The proposed Belle Meade development falls within Investment Level 2 and is to be developed as 125,000 square feet of retail space, 480 low-rise multi-family houses. The proposed development is consistent with the character of Investment Level 2. It is therefore concluded that the proposed development appears to generally comply with the policies stated in the 2020 "Strategies for State Policies and Spending."

## Comprehensive Plan

**Sussex County Comprehensive Plan:**
*(Source: Sussex County Comprehensive Plan, March 2019)*

The Sussex County Comprehensive Plan Future Land Use Map indicates that the proposed Belle Meade site is planned for "Commercial" land use. It would appear that the proposed Belle Meade development generally fits within the intended land use for this location.

**Proposed Development's Compatibility with Comprehensive Plan:**
The proposed development appears to comply with the Sussex County Comprehensive Plan. The Belle Meade development is proposed on land that is planned for Commercial use. The land is

zoned as AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial). The proposed development generally aligns with both the Future Land Use Map and the proposed zoning.

**Relevant Projects in the DelDOT Capital Transportation Program**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

## Trip Generation

Trip generation for the proposed development was computed using comparable land uses and equations contained in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers (ITE). The following land use was utilized to estimate the amount of new traffic generated for this development:

- 480 low-rise multi-family dwelling units (ITE Land Use Code 220)
- 125,000 square-foot Retail Space (ITE Land Use Code 821)

**Table 1**
**Peak Hour Trip Generation**

| Land Use | Phase | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Saturday Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| LUC 220<br>LUC 821 | Gross | 173 | 211 | 384 | 249 | 211 | 460 | 336 | 315 | 651 |
| | Pass-by | 0 | 0 | 0 | 114 | 106 | 220 | 127 | 116 | 243 |
| **Total Trips** | | **173** | **211** | **384** | **363** | **317** | **680** | **463** | **431** | **894** |

## Overview of TIS

**Intersections examined:**

1) Site Entrance / Lexington Avenue / Delaware Route 24
2) Delaware Route 24 / Love Creek Elementary School / Beacon Middle School
3) Delaware Route 24 / Mulberry Knoll Road (Sussex Road 284)
4) Delaware Route 24 / Plantations Road / Warrington Road (Sussex Road 275)
5) Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)
6) Delaware Route 24 / Bryn Mawr Drive
7) Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way
8) Delaware Route 1 / Delaware Route 24
9) Warrington Road / Old Landing Road (Sussex Road 274)
10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)
11) Cedar Grove Road / Plantations Road
12) Delaware Route 24 / Spencer Lane / Williams Way
13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)
14) Delaware Route 24 / Harts Road (Sussex Road 277C)
15) Robinsonville Road (Sussex Road 277) / Harts Road
16) Delaware Route 24 / Jolyns Way (Sussex Road 289)

**Conditions examined:**

1) 2022 Existing (Case 1)
2) 2032 without development (Case 2)
3) 2032 with development (Case 3)

**Peak hours evaluated:** Weekday morning, evening, and Saturday mid-day peak hours

**Committed developments considered:**

1) Scenic Manor f.k.a. Estates at Mulberry Knoll (320 single-family detached houses)
2) V□M, LLC (5,000 square-foot super convenience store with gas pumps and a 12,000 square-foot office)
3) Belle Terre (269 single-family detached houses)
4) Arbor-Lyn (142 single-family detached houses)
5) Osprey Point (217 single-family detached houses)
6) Welshes Pond f.k.a. Fieldstone (247 single-family detached houses)
7) Wellesley (132 single-family detached houses)
8) Centre at Love Creek f.k.a. Pelican Landing (84,576 square-foot shopping center)
9) Marsh Island (139 single-family detached houses)
10) Chase Oaks f.k.a. Charter Oak (249 single-family detached houses)
11) Brentwood f.k.a. Coral Lakes (198 single-family detached houses)
12) Tanager Woods f.k.a. Street Property (173 single-family detached houses)
13) Middle Creek Preserve (313 single-family detached houses)
14) Hailey's Glen f.k.a. Kielbasa Property (68 single-family detached houses)
15) Beachtree Preserve (155 single-family detached houses)

**Intersection Descriptions**

1) **Site Entrance/Lexington Avenue & Delaware Route 24**
   **Type of Control:** Currently unsignalized and proposed to be signalized.
   **Eastbound Approach:** (DE 24) existing one left-turn lane and one through lane; proposed one left-turn, two through, and one right-turn lane.
   **Westbound Approach:** (DE 24) existing one through and one right-turn lane; proposed one left-turn, two through, and one right-turn lane.
   **Northbound Approach:** (Site Entrance) proposed one shared left-through and one right-turn lane.
   **Southbound Approach:** (Lexington Avenue) stop-controlled; currently one shared left/right-turn lane; proposed one shared left/through and one right-turn lane.

2) **Delaware Route 24 / Love Creek Elementary School / Beacon Middle School**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Beacon Middle School) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Love Creek Elementary School) one shared left/through lane and one right-turn lane.

3) **Delaware Route 24 & Mulberry Knoll Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Mulberry Knoll Road) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Mulberry Knoll Road) one shared left/through lane and one right-turn lane.

4) **Delaware Route 24 & Plantation Road / Warrington Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Warrington Road) one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane.
   **Southbound Approach:** (Plantation Road) one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane.

5) **Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)**
**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
**Northbound Approach:** (Beebe Road) one shared left/through lane and one right-turn lane.
**Southbound Approach:** (Entrance to Residence Inn) one shared left/through lane and one right turn lane.

6) **Delaware Route 24 / Bryn Mawr Drive**
**Type of Control:** three-leg stop controlled intersection.
**Eastbound Approach:** (DE 24) one left-turn lane and two through lanes.
**Westbound Approach:** (DE 24) one right-turn lane and two through lanes.
**Southbound Approach:** (Bryn Mawr Drive) stop-controlled; one shared left-right turn lane.

7) **Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way**
**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
**Northbound Approach:** (Rehoboth Mall Service Road) one shared left-through lane and one right turn lane.
**Southbound Approach:** (Hudson Way) one shared left-through lane and one right turn lane.

8) **Delaware Route 1 / Delaware Route 24**
**Type of Control:** signalized three-leg intersection.
**Eastbound Approach:** (DE 24) three left-turn lanes and two right-turn lanes.
**Northbound Approach:** (DE 1) two left-turn lanes and three through lanes.
**Southbound Approach:** (DE 1) one U-turn lane, three through lanes, and one right turn.

9) **Warrington Road / Old Landing Road (Sussex Road 274)**
**Type of Control:** all-way stop-controlled four-leg intersection.
**Eastbound Approach:** (Warrington Road) one left-turn lane and one shared through/right-turn lane.
**Westbound Approach:** (Strawberry Road) one shared left/through/right-turn lane.
**Northbound Approach:** (Old Landing Road) one shared left/through/right-turn lane.
**Southbound Approach:** (Old Landing Road) one shared left/through/right-turn lane.

**10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) one shared through/right-turn lane.
**Westbound Approach:** (Cedar Grove Road) one shared left-turn/through lane.
**Northbound Approach:** (Mulberry Knoll Road) stop-controlled; one shared left/right-turn lane.

**11) Cedar Grove Road / Plantation Road**
**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (Cedar Grove Road) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Plantation Road) one left-turn lane, one through lane, and one right-turn lane.
**Southbound Approach:** (Plantation Road) one left-turn lane, one through lane, and one right-turn lane.

**12) Delaware Route 24 / Spencer Lane / Williams Way**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Williams Way) stop-controlled; one shared left/through/right-turn lane.
**Southbound Approach:** (Spencer Lane) stop-controlled; one shared left/through lane and one right-turn lane.

**13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)**
**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Camp Arrowhead Road) one left-turn lane, one through lane, and one right-turn lane.
**Southbound Approach:** (Fairfield Road) one left-turn lane and one shared through/right-turn lane.

14) **Delaware Route 24 / Harts Road (Sussex Road 277C)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane and one through lane.
**Westbound Approach:** (DE 24) one through lane and one right-turn lane.
**Southbound Approach:** (Harts Road) stop-controlled; one right-turn lane and one left-turn lane.

15) **Robinsonville Road (Sussex Road 277) / Harts Road**
**Type of Control:** stop-controlled three-leg intersection.
**Westbound Approach:** (Harts Road) stop-controlled; one shared left/right-turn lane.
**Northbound Approach:** (Robinsonville Road) existing one shared through/right-turn lane.
**Southbound Approach:** (Robinsonville Road) existing one shared left-turn/through lane.

16) **Delaware Route 24 / Jolyns Way (Sussex Road 289)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one shared through/right-turn lane.
**Westbound Approach:** (DE 24) one shared left-turn/through lane.
**Northbound Approach:** (Jolyns Way) stop-controlled; one shared left/right-turn lane.

## Safety Evaluation

**Crash Data:** Delaware Crash Analysis Reporting System (CARS) data was provided in the TIS for the three-year period from January 1, 2021, through December 31, 2023. A total of 7 reportable crashes occurred within 0.1 miles of the site access. Three were rear-end, two were sideswipe, one was an angle, and one was a single-vehicle crash. None of the crashes caused any injury or involved pedestrians or bicyclists.

**Sight Distance:** The study area generally consists of relatively flat roadways and there are few visual obstructions. As always adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site accesses.

## Transit, Pedestrian, and Bicycle Facilities

**Existing transit service:** Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates one fixed-route transit bus route in the area of the proposed Belle Meade development. Route 215 Millsboro/Rehoboth runs along DE 24 with the nearest stops located west of the site at the Love Creek Marina and east of the site at Beebe Medical Center.

**Planned transit service:** Delaware Transit Corporation (DTC) has requested that the developer construct a bus stop pad on SR 24 within the site frontage. The location, size, and type of bus pad will be determined through coordination with DTC.

**Existing bicycle and pedestrian facilities**: According to DelDOT's Sussex County Bicycle Map, Delaware Route 24 is designated as a High-Traffic Regional Bicycle Route with a Bikeway. Plantation Road is designated as a High-Traffic Statewide Bicycle Route with a Bikeway. Recent

DelDOT projects along SR 24 have or are in the process of adding bicycle lanes along SR 24 between Love Creek and SR 1. The same projects have also added sidewalks or shared use paths along the same segment of SR 24, except for the segment between Mulberry Knoll Road and Plantation Road / Warrington Road.

**Planned bicycle and pedestrian facilities:** The developer should maintain the existing sidewalk or shared use path along the site frontage that was constructed by the "SR 24, Love Creek to Mulberry Knoll" project. In addition, a signalized pedestrian crossing of SR 24 should be included at the proposed signal at the intersection of SR 24 and Lexington Avenue.

**Previous Comments**

The initial scoping memorandum between the developer and DelDOT was dated December 9, 2022.

In a review letter dated October 6, 2023, DelDOT commented on the traffic counts and seasonally adjusted traffic volumes. The developer was asked to include additional committed developments that were originally included in the scoping memorandum. DelDOT also provided additional count data and directed the developer to update the volume figures.

In a second review letter dated October 30, 2023, DelDOT requested additional revisions to the committed development volumes due to construction detours in the area during the traffic counts. The developer was asked to address the noted issues and proceed with the Preliminary TIS.

In a third review letter dated December 28, 2023, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and distribution. The developer was then directed to resubmit the Preliminary TIS.

In a fourth review letter dated January 25, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and then resubmit the Preliminary TIS.

In a fifth review letter dated February 15, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to revise how growth factors were applied to volumes provided by the Henlopen TID and associated volume figures then resubmit the Preliminary TIS.

In a sixth review letter dated February 19, 2024, DelDOT noted that the Preliminary TIS was acceptable as submitted and directed the developer to proceed with the Final TIS.

It appears that all substantive comments from DelDOT's TIS Scoping Memorandum, Traffic Count Review, Preliminary TIS Review, and other correspondence were addressed in the Final TIS submission.

**General HCS Analysis Comments**
*(see table footnotes on the following pages for specific comments)*

1) Both the TIS and McCormick Taylor utilized Highway Capacity Software (HCS) version 2023 to complete the traffic analyses.

2) The TIS and McCormick Taylor generally used heavy vehicle percentages (HV%) from turning movement counts for existing and future conditions (as per DelDOT's Development Coordination Manual section 2.2.8.11.6.H). McCormick Taylor and the TIS assumed 3% HV for future movements and at the proposed site entrance.

3) The TIS and McCormick Taylor determined overall intersection peak hour factors (PHF) for each intersection based on the turning movement counts. Future PHFs were determined as per the DelDOT Development Coordination Manual section 2.2.8.11.6.F where applicable. The application of future PHFs in the TIS was inconsistent between intersections and volume scenarios.

4) For analyses of all intersections, McCormick Taylor and the TIS assumed 0% grade for all movements.

Table 2
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [1] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **1. SR 24 / Lexington Avenue / Site Entrance** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 – Left | A (8.1) | B (10.4) | A (8.7) | A (8.1) | B (10.5) | A (8.8) |
| Southbound Lexington Avenue | D (30.0) | E (42.7) | E (35.7) | D (30.5) | E (43.0) | E (36.3) |
| | | | | | | |
| 2032 No Build (Case 2) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (13.3) | B (10.5) | A (9.0) | B (13.2) | B (10.4) |
| Southbound Lexington Avenue | E (36.8) | F (90.0) | F (53.2) | F (108.0) | F (251.2) | F (150.1) |
| | | | | | | |
| 2032 Build (Case 3) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (12.8) | B (10.1) | A (9.0) | B (12.7) | B (10.1) |
| Westbound SR 24 – Left | B (13.9) | C (17.7) | D (34.9) | B (13.8) | C (16.6) | E (35.8) |
| Northbound Site Entrance | F (333.4) | F (3337.9) | F (10913) | F (1486.8) | F (17804.0) | F (44574.1) |
| Southbound Lexington Avenue | F (354.3) | F (2563.7) | F (6644.9) | F (3163.6) | F (13387.7) | [3] |
| | | | | | | |
| 2032 Build (Case 3) Signal [2] | | | | | | |
| Overall | - | - | - | B (14.1) | C (28.3) | F (92.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [4] | | | | | | |
| Overall | B (10.2) | B (11.6) | B (19.2) | B (12.0) | B (16.0) | C (25.0) |

[1] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[2] TIS modeled Case 2 and 3 with two through lanes in both eastbound and westbound directions on SR 24. MT modeled with one through lane in each direction based on the proposed condition in the SR 24, Love Creek to Mulberry Knoll Road Project.
[3] Capacity cannot be calculated as intersection volume exceeds HCM limitations.
[4] Henlopen TID proposes two through lanes in each direction along SR 24.

Table 3
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [5] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **2. SR 24 / Love Creek Elementary School / Beacon Middle School** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) [6] | | | | | | |
| Overall | A (9.6) | A (7.7) | A (2.0) | B (14.2) | B (10.4) | A (6.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (6.4) | A (4.6) | A (0.6) | B (10.3) | A (5.4) | C (20.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (5.9) | A (4.5) | A (0.8) | C (23.3) | A (7.3) | D (41.3) |

[5] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[6] TIS modeled intersection in Case 1 with one through lane in each direction. Existing conditions, following the completion of the SR 24, Love Creek to Mulberry Knoll Road Project, will have two through lanes in each direction along SR 24.

Table 4
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [7] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **3. SR 24 / Mulberry Knoll Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (8.8) | A (9.3) | B (18.1) | A (8.9) | A (8.3) | B (17.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (30.5) | D (46.0) | E (78.1) | B (19.9) | C (23.3) | C (28.5) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (37.0) | D (52.3) | F (85.0) | C (20.7) | C (24.9) | C (30.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID)[8] | | | | | | |
| Overall | - | - | - | B (17.1) | B (16.4) | C (23.5) |

[7] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[8] Henlopen TID proposes the addition of dedicated right-turn lanes on both minor street approaches. The turn lanes are modeled with 180-foot storage length.

Table 5
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [9] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **4. SR 24 / Plantation Road / Warrington Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | C (23.3) | C (31.8) | C (34.6) | D (36.6) | D (44.1) | D (50.4) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (26.1) | C (35.6) | D (39.0) | C (32.4) | D (53.6) | D (50.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (26.7) | D (37.5) | D (40.7) | C (31.5) | E (60.8) | D (54.8) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [10] | | | | | | |
| Overall | - | - | - | C (28.8) | D (49.5) | D (42.0) |

[9] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[10] The Henlopen TID conceptual design includes two left turn lanes, two through lanes, and one right turn lane on the Warrington Road and Plantation Road approaches.

Table 6
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [11] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **5. SR 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (1.5) | A (5.1) | A (1.3) | A (1.8) | A (9.4) | A (7.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (1.3) | A (3.8) | A (1.3) | A (1.3) | B (10.9) | B (11.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (1.3) | A (3.7) | A (1.3) | A (1.7) | B (11.1) | B (12.2) |

[11] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 7
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [12] Two-Way Stop-Control** | **LOS per TIS [13]** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **6. SR 24 / Bryn Mawr Drive** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | B (10.4) | B (11.4) | B (11.7) | A (8.5) | A (9.5) | A (8.8) |
| Southbound Bryn Mawr Drive | C (15.1) | C (20.1) | C (21.8) | C (18.7) | C (20.1) | C (23.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | B (12.4) | C (17.0) | C (18.1) | A (8.9) | B (11.3) | B (11.1) |
| Southbound Bryn Mawr Drive | C (17.4) | D (29.6) | D (33.7) | D (30.6) | E (49.5) | F (56.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | B (11.5) | B (14.1) | C (15.1) | A (9.1) | B (11.7) | B (11.7) |
| Southbound Bryn Mawr Drive | C (17.1) | D (25.7) | D (29.4) | E (35.8) | F (62.4) | F (75.2) |

[12] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[13] TIS modeled this intersection with three though lanes in each direction on SR 24 which does not match the existing or proposed conditions.

Table 8
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [14] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **7. SR 24 / Rehoboth Mall Service Road / Hudson Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (3.1) | A (8.0) | A (5.4) | A (3.8) | B (10.7) | A (5.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (2.5) | A (6.0) | A (4.3) | A (2.5) | A (7.4) | A (5.0) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (2.4) | A (5.7) | A (4.1) | A (3.2) | A (7.1) | A (4.2) |

[14] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 9
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [15] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **8. SR 24 / SR 1** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (19.7) | C (23.0) | D (39.2) | B (17.8) | C (22.9) | C (24.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | D (43.2) | D (52.2) | E (77.3) | C (23.6) | C (32.1) | C (29.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (46.2) | E (56.5) | F (83.9) | C (29.8) | D (35.1) | C (33.1) |

[15] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 10
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [16] All-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **9. Warrington Road / Old Landing Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound Warrington Road | D (31.6) | C (23.3) | F (116.1) | D (28.4) | C (20.4) | F (102.7) |
| Westbound Strawberry Way | A (9.5) | A (9.6) | B (11.1) | A (9.6) | A (9.7) | B (11.2) |
| Northbound Old Landing Road | C (15.7) | B (12.9) | C (22.5) | C (15.6) | B (12.8) | C (22.3) |
| Southbound Old Landing Road | B (12.3) | C (20.3) | D (31.6) | B (12.3) | C (20.0) | D (31.2) |
| Overall | C (22.9) | C (20.0) | F (66.0) | C (21.2) | C (18.7) | F (60.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound Warrington Road | F (130.4) | F (131.1) | F (336.8) | F (75.9) | F (51.7) | F (216.8) |
| Westbound Strawberry Way | B (10.7) | B (12.1) | B (12.9) | B (10.8) | B (12.1) | B (13.0) |
| Northbound Old Landing Road | C (22.4) | c (20.2) | E (42.8) | C (22.1) | C (20) | E (42.4) |
| Southbound Old Landing Road | C (15.2) | F (88.0) | F (103.2) | C (15.1) | F (89.9) | F (101.8) |
| Overall | F (76.7) | F (91.8) | F (192.0) | E (48.5) | F (60.2) | F (138.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound Warrington Road | F (161.0) | F (155.6) | F (380.1) | F (115.3) | F (62.0) | F (243.9) |
| Westbound Strawberry Way | B (10.8) | B (12.2) | B (13.0) | B (10.9) | B (12.3) | B (13.1) |
| Northbound Old Landing Road | C (23.4) | C (20.9) | E (46.7) | C (23.1) | C (20.8) | E (46.3) |
| Southbound Old Landing Road | C (16.1) | F (105.0) | F (128.6) | C (16.0) | F (103.4) | F (127.6) |
| Overall | F (93.3) | F (108.9) | F (221.0) | F (57.0) | F (69.8) | F (159.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Roundabout | | | | | | |
| Overall | B (10.6) | B (11.7) | C (20.4) | B (10.6) | B (11.7) | C (20.4) |

[16] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 11
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [17] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **10. Mulberry Knoll Road / Cedar Grove Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.2) | A (7.6) | A (9.8) | A (8.1) | A (7.6) | A (9.9) |
| Northbound Mulberry Knoll Road | B (11.5) | B (11.1) | C (20.5) | B (11.8) | B (11.1) | C (20.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.3) | A (8.9) | A (8.3) | B (12.3) |
| Northbound Mulberry Knoll Road | C (20.1) | D (32.5) | F (614.3) | C (20.1) | D (32.5) | F (614.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (22.3) | E (40.4) | F (837.7) | C (22.3) | E (40.4) | F (837.7) |
| | | | | | | |
| 2032 Build (Case 3) w/ improvements [18] | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (19.3) | D (33.9) | F (581.4) | C (19.3) | D (33.9) | F (581.4) |
| | | | | | | |
| 2032 Build (Case 3) Roundabout [19] | | | | | | |
| Overall | - | - | - | A (6.9) | A (6.7) | C (18.0) |

[17] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[18] The TIS proposes to construct a dedicated eastbound right-turn lane on Cedar Grove Road.
[19] Henlopen TID proposes a roundabout at this intersection.

Table 12
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [20] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **11. Cedar Grove Road / Plantation Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (18.3) | B (18.3) | C (31.2) | B (17.6) | B (17.7) | C (34.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | B (19.8) | C (22.5) | D (41.4) | B (18.8) | C (21.0) | C (34.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (20.2) | C (23.3) | D (44.4) | B (19.1) | B (21.9) | D (44.8) |

[20] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 13
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [21] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **12. SR 24 / Spencer Lane / Williams Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.6) | B (10.4) | A (8.6) | A (8.6) | B (10.4) | A (8.6) |
| Westbound SR 24 - Left | A (9.8) | A (8.9) | B (10.0) | A (9.8) | A (8.9) | B (10.0) |
| Northbound Williams Way | C (24.3) | F (56.0) | D (31.2) | C (24.3) | F (56.0) | D (31.2) |
| Southbound Spencer Lane | C (24.3) | E (44.1) | E (40.6) | C (24.3) | E (44.1) | E (40.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (12.9) | B (10.2) | A (9.6) | B (13.5) | B (10.4) |
| Westbound SR 24 - Left | B (11.5) | B (10.6) | B (12.3) | B (11.5) | B (10.9) | B (12.7) |
| Northbound Williams Way | F (52.4) | F (220.3) | F (97.8) | F (52.4) | F (284.6) | F (115.8) |
| Southbound Spencer Lane | F (65.8) | F (233.6) | F (221.1) | F (65.8) | F (330.5) | F (291.9) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | A (10.0) | B (13.5) | B (10.8) | A (10.0) | B (14.2) | B (11.0) |
| Westbound SR 24 - Left | B (11.9) | B (11.1) | B (13.3) | B (11.9) | B (11.4) | B (13.8) |
| Northbound Williams Way | F (65.5) | F (305.4) | F (148.5) | F (65.5) | F (406.1) | F (181.6) |
| Southbound Spencer Lane | F (91.3) | F (535.2) | F (408.7) | F (91.3) | F (505.6) | F (547.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [22] | | | | | | |
| Eastbound SR 24 - Left | - | - | - | B (10.4) | B (14.5) | B (11.1) |
| Westbound SR 24 - Left | - | - | - | B (12.0) | B (11.5) | B (13.9) |
| Northbound Williams Way | - | - | - | E (41.9) | F (130.2) | F (86.1) |
| Southbound Spencer Lane | - | - | - | D (33.3) | F (176.2) | F (117.7) |

[21] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[22] Henlopen TID proposes left-turn lanes, two through lanes, and right turn lanes on both SR 24 approach at this intersection.

Table 14
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [23] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **13. SR 24 / Camp Arrowhead Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (10.5) | B (13.7) | B (14.6) | B (12.4) | B (15.8) | B (16.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (27.4) | E (59.5) | F (88.3) | B (10.6) | B (17.8) | B (18.2) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (45.3) | F (89.5) | F (129.1) | B (12.3) | D (38.9) | E (58.6) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [24] | | | | | | |
| Overall | - | - | - | A (6.5) | B (11.0) | B (12.2) |

[23] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[24] Henlopen TID proposes an additional through lane in both directions of SR 24.

Table 15
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [25] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **14. SR 24 / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.4) | A (9.4) | A (8.5) | A (8.2) | A (9.5) | A (8.5) |
| Southbound Harts Road | C (16.8) | E (37.7) | D (31.7) | C (18.6) | E (38.6) | D (32.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.3) | B (11.5) | A (9.9) | A (9.3) | B (11.5) | A (9.9) |
| Southbound Harts Road | F (109.5) | F (648.1) | F (541.0) | F (109.5) | F (648.1) | F (541.0) |
| | | | | | | |
| 2032 Build (Case 3) [26] | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (11.9) | B (10.4) | A (9.6) | B (11.9) | B (10.4) |
| Southbound Harts Road | F (198.1) | F (989.8) | F (982.7) | F (198.1) | F (989.8) | F (982.7) |

[25] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[26] Henlopen TID proposes the removal of this intersection.

Table 16
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [27] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **15. Robinsonville Road / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Harts Road | B (10.1) | B (13.2) | B (12.7) | B (10.1) | B (13.2) | B (12.7) |
| Southbound Robinsonville Road - Left | A (7.8) | A (7.6) | A (7.9) | A (7.8) | A (7.6) | A (7.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Harts Road | B (11.5) | A (25.1) | C (19.8) | B (11.8) | A (29.5) | C (19.8) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.2) | A (8.7) | A (8.2) | A (8.3) | A (8.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Harts Road | B (11.7) | D (29.7) | C (23.2) | B (12.0) | D (29.7) | C (20.5) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.3) | A (8.8) | A (8.3) | A (8.3) | A (8.7) |

[27] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 17
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [28] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **16. SR 24 / Jolyns Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound SR 24 - Left | A (8.7) | A (8.3) | A (9.1) | A (9.0) | A (8.3) | A (9.1) |
| Northbound Jolyns Way | C (16.0) | C (15.6) | C (20.8) | C (16.6) | C (16.1) | C (20.8) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound SR 24 - Left | A (9.4) | A (9.1) | B (10.2) | A (9.4) | A (9.1) | B (10.2) |
| Northbound Jolyns Way | C (22.2) | C (24.5) | E (37.1) | C (22.2) | C (24.5) | E (37.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound SR 24 - Left | A (9.6) | A (9.3) | B (10.6) | A (9.6) | A (9.3) | B (10.6) |
| Northbound Jolyns Way | C (24.3) | D (27.5) | E (45.3) | C (24.3) | D (27.5) | E (45.3) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [29] | | | | | | |
| Overall | - | - | - | A (1.5) | A (1.6) | A (1.4) |

[28] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[29] Henlopen TID proposes to signalize this intersection with two through lanes and dedicated turn lanes in each direction along SR 24, extending Jolyns Way north of SR 24 to connect to Robinsonville Road forming a northern leg of the intersection, and adding dedicated right turn lanes on both Jolyns Way approaches. The capacity analysis for the Case 3 with TID results above modeled the intersection without the proposed northern leg because traffic volumes have not been prepared for this condition.

# Off-Site Improvements – Opinion of Cost

The Final TIS recommendations from DelDOT included development improvements as follows: frontage improvements, full movement signalized Site Entrance at the intersection of Lexington Ave. and DE Rt. 24 with auxiliary turn lanes, bicycle and pedestrian improvements and Henlopen TID fees to be paid as determined by DelDOT.

Based on the 2025 rate schedule the project's contribution to the Henlopen TID is estimated at approximately □2,800,000.00.

In addition to the TID, the project's frontage improvements, as recommended by the Traffic Impact Study, are estimated at approximately □1,400,000.00

There are no off-site drainage, sewer, or water costs anticipated with the project scope. Impact fees to the appropriate infrastructure owner's will be calculated at the time of payment, based on the most currently adopted rate schedules.

**STATE OF DELAWARE**
**OFFICE OF MANAGEMENT AND BUDGET**
**OFFICE OF STATE PLANNING COORDINATION**

February 20, 2025

Jon Falkowski
Becker Morgan Group, Inc.
309 S. Governors Ave.
Dover, DE 19904

RE: PLUS review – 2025-01-06; Belle Mead

Dear Mr. Falkowski:

Thank you for meeting with State agency planners on January 22, 2025, to discuss Belle Mead C4 Master Plan. According to the information received, you are seeking review of a proposed rezoning and site plan for a mixed-use development on 40 acres, featuring 480 multifamily rental units and 125,000 square feet of commercial development. The property is currently zoned AR-1 (Agricultural Residential District), with a proposed rezoning to C-4 (Planned Commercial District), and is primarily classified as State Strategies Level 2, with Levels 3-5 in the back corner of the site.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

## Strategies for State Policies and Spending

This project is located primarily in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending. There is also some level 3, 4, and Out of Play on the site; however, from the application and site plan it does not appear that you will disturb the areas in levels 4 and 5. This site is also located in the Coastal area of the Sussex County comp plan and within the Henlopen TID

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending; therefore, the Office of State Planning Coordination has no objections to this master plan provided it meets the relevant codes and ordinances of the county.

122 Martin Luther King Jr. Blvd. South – Haslet Armory · Third Floor · Dover, DE 19901
Phone (302)739-3090 · Fax (302) 739-5661 · www. stateplanning.delaware.gov

## Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Section 1.7 of the Development Coordination Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis, based on the expected trip generation this project will require a Traffic Impact Study (TIS). This process was completed on June 6, 2024 and will direct site access and any necessary off-site improvements.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage. By this regulation, this dedication is to provide a minimum of 50 feet of right-of-way from the physical centerline of Rt. 24. The following right-of-way dedication note is required, "**An X-foot wide strip of right-of-way from the centerline is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.

    - Depiction of all existing entrances within 300 feet of the proposed entrances on John J. Williams Highway (Rt. 24).

- Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 50 feet from the ultimate State right-of-way along all State maintained roads.

- Section 3.5.4.2 of the Development Coordination Manual addresses requirements for Shared Use Paths (SUP) and sidewalks. For projects in Level 1 and 2 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is required. DelDOT anticipates requiring a SUP along the site frontage on Burbage Road.

- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Development Coordination Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

DART First State – Contact Jared Kauffman 302-576-6062

- Improve the soon to be implemented northbound stop (ID 4166) to a shelter pad

- It is recommended to place bicycle parking throughout the commercial area and free covered bicycle parking for the apartment residents.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

**Stormwater Management**
The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, (select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Hydrologic Soils Group**
Hydrologic Soil Group D, poorly drained soils, have been identified in the south corner of the site. These soil types could worsen existing drainage issues if present and are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins. These practices must meet minimum infiltration requirements.

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation.

Contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Wastewater Disposal Systems – Small Systems (Septic)**
An expired permit (permit # 219467) exists for this site in the Small System Branch database. The On Site Regulations are listed within Section 5 (Small Systems) or Section 6 (Large Systems) of the Regulations Governing the Design, Installation and Operation of the On-site Wastewater Treatment and Disposal Systems at: https://documents.dnrec.delaware.gov/Water/Septics/delaware-on-site-regulations-with-exhibits.pdf. A list of licensed Class D soil scientists can be found at the following website: https://data.delaware.gov/Energy-and-Environment/Class-D-Site-Evaluator-Licensees-Based-on-Licensed/s3gu-gt88/data_preview

- The applicant must follow current regulations to properly abandon these systems.
- Contact the DNREC Commercial and Government Services Section to discuss requirements for properly abandoning these systems.

Contact: DNREC Commercial and Government Services Section at (302) 739-9947.
Website: https://dnrec.delaware.gov/water/residential/septic-systems/

**Wastewater Disposal Systems – Large Systems**
For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

**Wetlands and Waterways**
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the south corner of the site, as well as a potential blue line stream (Dorman Branch) located in the south corner. The application indicates that wetlands have been delineated. The application states that the project does not propose direct impacts to the wetlands/waterways.

State Requirements:

- If plans change and wetlands are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.
- Include all streams and waterways on site plans.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

**Special Flood Hazard Area**
According to the newest Flood Insurance Rate Maps (FIRM), a portion of this parcel is situated within a Special Flood Hazard Area, specifically within the mapped 100-year floodplain (1% annual chance of flooding). The Special Flood Hazard Area identified on the site lies within zone AE. In lands contained within the 100-year floodplain, the National Flood Insurance Program's floodplain management regulations must be enforced through the local floodplain ordinance, which can have higher standards. Although rental units are proposed outside of the Special Flood Hazard Area (SFHA), the property owner may still be required by lenders to purchase flood insurance, based on the proximity to the SFHA. Additionally, because this property will offer rentals, the property manager may require tenants to obtain flood insurance policies.

- The applicant must comply with the local floodplain ordinance and regulations applicable to development or construction within the 100-year floodplain. In determining the boundary of the floodplain, use the most recent FIRM maps available, which can be found at https://floodplanning.dnrec.delaware.gov/

Contact: DNREC Shoreline and Waterway Management Section at (302) 608-5500.
Website: https://dnrec.delaware.gov/watershed-stewardship/waterways/floodplains/

**Electric Vehicle Charging Requirements**
Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or

2. The final site plan is approved on or after January 1, 2025 (multi-family).

Requirements are summarized below. Consult the Delaware Code directly for further details.

Multi-family Dwellings, effective 2025:

- The developer of a multi-family residential dwelling shall install electric vehicle parking spaces, where at least 5% of the total parking spaces for the multi-family residential dwelling must be electric vehicle capable parking spaces.

- In addition, a developer of a multi-family residential dwelling shall provide at least one electric vehicle charging infrastructure parking space in an area available for use by all residents of the multi-family residential dwelling (example: community centers).

- Construction documents must indicate the location of proposed electric vehicle charging infrastructure parking spaces and electric vehicle capable parking spaces.

- Parking space dimensions must comply with the county or municipal building code applicable to the multi-family residential dwelling.

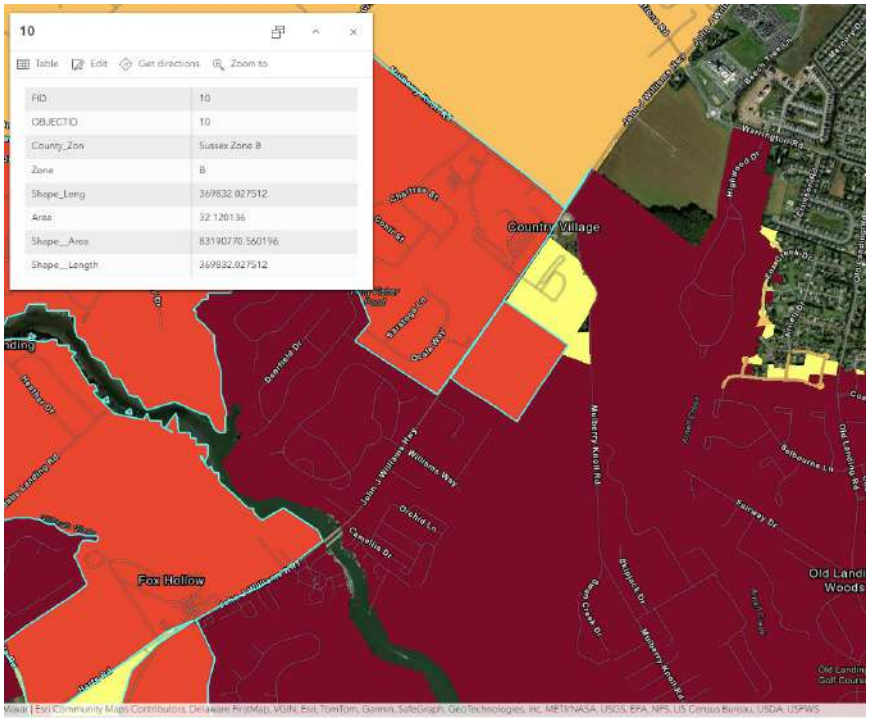
<u>Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325</u>

**Proposed Project Parcel Flood Concern**

- The majority of this parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**. However, there is a 100-year flood zone located to along the southern portions of the parcel. According to the submitted sketch, no facilities are being constructed within a flood zone.

**Parcel Status within County Evacuation Zone Location**

- The parcel is located within Sussex County's Evacuation Zone B.




**Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant**

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

<u>State Historic Preservation Office – Contact Carlton Hall 302-736-7400</u>

- Nearest water source is the edge of Dorman Branch. According to the plans provided the construction is avoiding the out-of-play zone. Soils are well drained. There is a

historic archaeological site on the northern adjacent parcel. There are precontact archaeological sites further down the branch in similar contexts.

- The Delaware State Historic Preservation Office recommends an archaeological survey prior to any ground disturbing activities at least in the southern half of the parcel.

  If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394
This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

**Fire Protection Water Requirements**:

- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)

- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

**Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.

- Buildings greater than 10,000 sq. ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.

- Show Fire Lanes and Sign Detail as shown in DSFPR

**Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from John J Williams Highway must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

**Required Notes**:

- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations.”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

## Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

**Removal of Mature Forest withing Key Wildlife Habitat and Delaware Ecological Network**
The preliminary plan proposes the elimination of approximately 5 of 10 acres of forest on the site. An analysis of historical data indicates that the forest area located on the southern portion of the site has likely maintained some degree of forest cover since 1937 and could be considered mature forest. Mature forests possess the potential for rare, threatened, or endangered species that rely on this type of habitat. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

The forested wetlands on this property are mapped as a Key Wildlife Habitat in the Delaware Wildlife Action Plan because it is part of a large wetland complex/large forest block that can support an array of plant and animal species across the landscape.

- Removing forested areas for development, especially mature forests, should be avoided to the greatest extent possible.

- The forested area on this site occurs within the Delaware Ecological Network, a statewide network of interconnected lands having significant ecological value. Avoid disturbance within

these habitats.

- In general, contiguous forest and connected areas of natural habitat are more beneficial to wildlife, allowing for safer movement from one area to another while reducing roadway mortality.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

**Vegetated Buffer Zones**

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of forested wetlands on the south corner of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to these species, the following is recommended:

- Do not disturb forested wetlands. Maintain an upland buffer of at least 100 feet along all wetlands, waterways, and sensitive habitats, including those containing existing forest or natural vegetative cover.

- Maintain habitat connections to undeveloped open space, which are especially important for species movement across the landscape.

- Vegetated buffer zones should be identified outside of the Limit of Disturbance on the engineering plans.

- Maintain vegetated buffer zones as native species meadows or forest.

- Vegetated buffer zones should be deeded as community open space and not contained within any lot lines. Signage should be installed at the edge and within the buffer zones to deter residents from encroaching into these common areas.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/conservation/

**Stormwater Management**

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing trees, wetlands, and passive open space.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: https://www.sussexconservation.org/

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

**Drainage**

- All existing drainage ditches on the property should be evaluated for function and cleaned, if needed, prior to the construction of the project.

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/

**Water Quality**

This site lies within the Rehoboth Bay Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Implement vegetated buffers with a width of at least 100 feet around all water features on or adjacent to the site.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable. Break up large parking lots with planted islands.

- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.

- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. https://dnrec.alpha.delaware.gov/watershed-stewardship/

**Sea Level Rise and Flooding**

The south corner of this site is vulnerable to permanent inundation from sea level rise. By 2050, mean sea levels are projected to rise by 0.7 – 1.9 feet; by end of century sea levels are projected to increase by 1.7 – 5.0 feet. In addition to permanent inundation, as mean sea levels rise, the frequency and severity of tidal flooding events is expected to increase.

- In areas within 5 feet of expected sea level rise, avoid construction of permanent structures and infrastructure. If this is not possible, the developer should consider designing structures to a higher standard to avoid potential future flood damage and loss.

- All infrastructure and structures on the site should incorporate the effects of sea level rise through the expected lifespan of the structures. This may include increasing freeboard of structures, ensuring that critical infrastructure is elevated to withstand future sea level rise, construction of flood control measures, and incorporating green infrastructure for flood control.

Contact: DNREC Climate and Sustainability Section at (302) 735-3480.
Website: https://dnrec.delaware.gov/coastal-programs/planning-training/adapting-to-sea-level-rise/

**Sustainable Practices**

- Incorporate nonmotorized connectivity and install bicycle racks and covered bike storage where feasible to help facilitate non-vehicular travel modes.

- Use renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an

increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

**Population**

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 202, though, with development, this will undoubtedly change. The 12 adjacent blocks aggregated bring the area to a total population of 1197.

**FEMA National Risk Index**

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.

Expected Annual Loss
× Social Vulnerability
÷ Community Resilience
= Risk Index

- According to FEMA's National Risk Index, the parcel **is** considered **relatively low** for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated as **relatively moderate** whereas its social vulnerability is rated as **very low.**

**Renewable Energy Commitment**

- Regarding energy use and consumption, the census tract utilizes **electricity** as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

- Lastly, in reference to the county evacuation zones, DEMA encourages this information be made readily available to any and all persons residing there. This can be done simply through pamphlets or a neighborhood sign.

<u>Delaware State Housing Authority - Contact Rachel Alfano 302-739-4263</u>

- DSHA supports this proposal for 480 multi-family residential units as well as commercial space on 40.01 acres located on Route 4 in Sussex County. This proposal is consistent with State Strategy Investment levels 2-5.

- According to DSHA's Housing Reform Map, this project is in an Area of Opportunity where diverse housing types should be supported. This means the area has high-quality schools, supportive infrastructure, and the capacity to support diverse and affordable housing types. This is a high-density project for market-rate units that should continue to support the balance of housing type and affordability.

If you have questions or would like more information on the above recommendations, please feel free to e-mail at Rachel.Alfano@Delaware.gov.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394
Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason, therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

David L. Edgell, AICP
Director, Office of State Planning Coordination

Attachments:

- Sussex County Community Development & Housing Comments

BRANDY BENNETT NAUMAN
DIRECTOR OF COMMUNITY
DEVELOPMENT & HOUSING
(302) 855-7777 T
(302) 854-5397 F
bnauman@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

January 30, 2025

Mr. Jon Falkowski
Becker Morgan Group, Inc.
309 S. Governors Ave.
Dover, DE 19904

RE: PLUS Review (PLUS 2025-01-06) – Belle Mead

Dear Mr. Falkowski,

Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations.

For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: www.sussexcountyde.gov/affordable-and-fair-housing-resource-center. The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County.

The Community Development  Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state, and county sources, as well as private funding sources that also promote affordable housing in Sussex County. **Please visit www.sussexcountyde.gov/housing-trust-fund for information on the County's Housing Trust Fund.**

**Further, the County's newly approved Work Force Housing Zoning Ordinance permits up to 12 units per acre, by right, in eligible areas for projects that set aside 25% of the total units for affordable rentals. For more information on eligibility and design criteria, please review the Ordinance at www.sussexcountyde.gov/affordably-priced-rental-units . The application can be found on the Planning & Zoning website at https://sussexcountyde.gov/sites/default/files/forms/SussexCountyRentalProgram_Application.pdf .**

Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes.

On behalf of Sussex County, we look forward to cooperating with you and your project as it moves forward.

Thank you,

Brandy B. Nauman
*Director*

TIDEWATER UTILITIES, INC.
A Middlesex Water Company Affiliate

March 6, 2025

Becker Morgan Group, Inc.
Attn: Chad Carter
309 South Governors Ave.
Dover, DE 19904

**RE: <u>Willing & Able Letter – (Tax Parcel Number: 334-18.00-40.01 & 40.06)</u>**

Dear Mr. Friedman:

Tidewater Utilities, Inc. (Tidewater) is willing and able to serve public water, *including fire protection*, to the following parcel(s) identified as Tax Map Parcel Numbers 334-18.00-40.01 & 40.06. This parcel is located within Tidewater's existing water Certificate of Public Convenience and Necessity franchise area.

Please feel free to contact me at 302-747-1304 if you have any questions or concerns regarding this matter. Tidewater looks forward to meeting the water needs of this project.

Sincerely,

Kelly R. Bailey

Kelly Bailey
Manager of Contract Administration

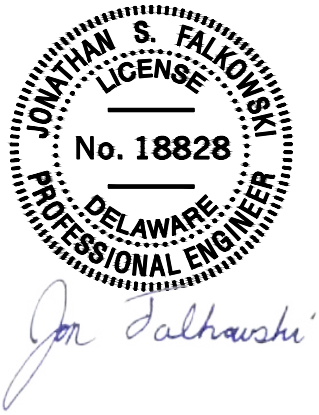
# ENVIRONMENTAL ASSESSMENT & PUBLIC FACILITIES EVALUATION REPORT (EAPFR)

**FOR**

## BELMEAD FARM LLC
## (CZ 2001)

Sussex County, Delaware

February 2025




Prepared by:

Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

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- a. Rezoning Application
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- a. Site Location
- b. County Zoning Map
- c. Future Land Use Map
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- f. DelDOT Service Level Evaluation Request Response Letter
- g. DelDOT Final Traffic Impact Study (TIS)

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# 1.0 Rezoning Application

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

November 23, 2022

Sussex County
Planning and Zoning
2 The Circle
Georgetown, DE 19947
Attn: Mr. Jamie Whitehouse

RE: Rezoning Application
**BELLE MEAD FARM**
John J Williams Hwy
Lewes, Delaware
2022079.00

Dear Mr. Whitehouse:

Please find attached Zoning Map Amendment Application and Fee for the property otherwise known as the Belle Mead Farm in Lewes, Delaware. As previously discussed with you, we will be following up the application with the required site plans and other documents at a later date. It was agreed that the submittal of the Zoning Map Application and Fee would be adequate to get this project into the queue for a hearing scheduling.

If you have any questions, please feel free to contact us at any time.

Kind regards,

J. Michael Riemann, PE
Becker Morgan Group
Vice President

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

PORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JACKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

www.beckermorgan.com

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
**302-855-7878 ph. 302-854-5079 fax**

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

20044(+/-) John J Williams Hwy - Belle Mead Farm - Route 24

**Type of Conditional Use Requested:**

**Tax Map #:** 334-18.00-40.01 & 334-18.00-40.06 **Size of Parcel(s):** 39.22 +/- ac.

**Current Zoning:** AR-1 **Proposed Zoning:** C4 **Size of Building:** TBD

**Land Use Classification:** COMMERCIAL

**Water Provider:** TIDEWATER **Sewer Provider:** SUSSEX COUNTY

**Applicant Information**

Applicant Name: BELMEAD FARM LLC
Applicant Address: 105 FOULK ROAD
City: WILMINGTON State: DE ZipCode: 19803
Phone #: 429-8700 E-mail: _____

**Owner Information**

Owner Name: BELMEAD FARM LLC
Owner Address: 105 FOULK ROAD
City: WILMINGTON State: DE Zip Code: 19803
Phone #: 429-8700 E-mail: _____

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: BECKER MORGAN GROUP, INC
Agent/Attorney/Engineer Address: 309 S. GOVERNORS AVE
City: DOVER State: DE Zip Code: 19904
Phone #: 734-7950 E-mail: MRIEMANN@BECKERMORGAN.COM

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

x **Completed Application**

x **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

x **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

x **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

x **DelDOT Service Level Evaluation Request Response**

x **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney*** Date: 11/22/22

***Signature of Owner*** Date: 11/14/2022

*For office use only:*

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

DelDOT

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm
cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

Document# 2022000032608 BK: 5734 PG: 290
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Consideration: $5,100,000.00 County/Town: $76,500.00 State: $127,500.00 Total: $204,000.00
Doc Surcharge Paid Town: SUSSEX COUNTY

TAX PARCEL #: 3-34-18.00-40.01

PREPARED BY & RETURN TO:
Parkowski, Guerke & Swayze, P.A.
19354C Miller Road
Rehoboth Beach, DE 19971
File No. 015-22/VGR

NO SURVEY WAS PERFORMED OR REQUESTED

**THIS DEED**, made this 3 day of June, 2022,

- BETWEEN -

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED** and **THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**, of 722 NE 2nd Street, Delray Beach, FL 33483, parties of the first part,

- AND -

**BELMEAD FARM, LLC**, a Delaware limited liability company, of 28855 Lewes Georgetown Hwy, Lewes, DE 19958, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of Ten Dollars and 00/100 ($10.00), lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

**ALL** that certain lot, piece and parcel of land lying and being in Lewes and Rehoboth Hundred, Sussex County and State of Delaware, lying and being along the southeastern right of way of State Route 24 (50 feet wide), more particularly described as follows, to wit:

**BEGINNING** at an iron pipe situate along the aforesaid southwesterly right of way of State Route 24, said point being the common boundary of these lands and lands now or formerly of Mudiwa and Preachess Vellah Munyikwa; thence by and with said right of way North 42 degrees 12 minutes 08 seconds East, 1,451.40 feet to a capped rebar; thence leaving the aforesaid right of way and running by and with lands now or formerly of Cape Henlopen School District South 47 degrees 36 minutes 26 seconds East, 1,205.68 feet to a found rebar; thence running by and with lands now or formerly of Alfred G. Best, Trustee, and lands now or formerly of Linda Elizabeth Best, South 40 degrees 01 minutes 32 seconds West, 365.05 feet to an iron pipe;

thence by and with other lands of Grantor, South 40 degrees 40 minutes 22 seconds West, 1,064.47 feet to a found rebar; thence by and with lands now or formerly of John and Deanna Hoover, North 48 degrees 38 minutes 42 seconds West, 611.81 feet to a found rebar; thence by and with lands now or formerly of Frank and Marlene Bracale, North 48 degrees 40 minutes 10 seconds West, 411.81 feet to an iron pipe; thence by and with lands now or formerly of Mudiwa and Preachess Vellah Munyikwa, North 48 degrees 36 minutes 49 seconds West, 224.47 feet to the point and place of Beginning, said to contain 40.61 acres of land as depicted on the Perimeter Survey prepared by Compass Point Associates dated January 17, 2011, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, Delaware.

**BEING** the same lands and premises which were conveyed unto Mark H. Ronald Trust dated 3/8/2007, as amended, Mark H. Ronald and Mary Ann Ronald, Trustees, either of whom may act independently, and Mary Ann Ronald Trust dated 3/8/2007, as amended, Mary Ann Ronald and Mark H. Ronald, Trustees, either of whom may act independently, by Deed of J.G. Townsend, Jr. & Co. dated January 28, 2011, and recorded February 1, 2011, in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 3862, Page 170.

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ TRUSTEE (SEAL)
**Mark H. Ronald, Trustee**

**THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ Trustee (SEAL)
**Mary Ann Ronald, Trustee**

Document# 2022000032608 BK: 5734 PG: 292
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Doc Surcharge Paid

STATE OF Florida, COUNTY OF Palm Beach: to-wit

**BE IT REMEMBERED**, that on 06/03, 2022, personally came before me, the subscriber, Mark H. Ronald, Trustee of the Mark H. Ronald Trust dated March 8, 2007, as amended, and Mary Ann Ronald, Trustee, of the Mary Ann Ronald Trust dated March 8, 2007, as amended, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

GIVEN under my Hand and Seal of Office the day and year aforesaid.

JUNAE MCPHERSON
Notary Public - State of Florida
Commission # HH 206991
My Comm. Expires Dec 13, 2025

Notary Public

My Commission Expires: 12/13/25

# 2.0 Environmental Assessment and Public Facility Evaluation Report

## Belmead Farm, LLC

| | |
|---|---|
| Tax Maps: | 334-18.00-40.01 □ 40.06 |
| Parcel Acreage: | □39.22 Acres |
| Existing Zoning: | AR-1: Agricultural Residential |
| Proposed Zoning: | C-4: Planned Commercial District |
| 2019 Future Land Use: | Commercial and Coastal Area |
| Site Investment Area: | Level 2, 3 □ 4 |
| Chapter 89 Water Source: | "Fair" Groundwater Recharge Area |
| | "No" Wellhead Protection Area |
| Wetlands: | Freshwater Forested □ Shrub Wetland (PFO1R) |
| Flood Zone: | Zone X – Map 10005C0334K; 03/16/2015 |
| Watershed: | Rehoboth Bay Watershed |
| TID: | Henlopen |
| Access / Road Frontage: | John J. Williams Hwy. (SR00024) |
| Sanitary Sewer Supplier: | Tier 2 – Sussex County Planning Area |
| Water Supplier: | Tidewater Utilities Inc. |

**§115-194.3 – Coastal Area, Subparagraph B (2).**

a) *Proposed drainage design and the effect on stormwater quality and quantity leaving the site, including methods for reducing the amount of phosphorous and nitrogen in the stormwater runoff and the control of any other pollutants such as petroleum hydrocarbons or metals*

The proposed development of the parcels will follow all applicable State and local stormwater management regulations and will meet or exceed quality and quantity management standards. Through the use of Green Technology Best Management Practices (GTBMP's), the proposed stormwater management facilities will reduce the phosphorous and nitrogen loading. The improvements are not anticipated to produce other pollutants such as petroleum hydrocarbons or metals. Should a commercial tenant require the need for petroleum pollutant measures, appropriate filtration will be utilized in accordance with State and local regulations.

b) *Proposed method of providing potable and, where appropriate, irrigation water and the effect on public or private water systems and groundwater, including an estimate of average peak demands.*

The parcels are located in Tidewater Utilities area and will serve the project's water source. The proposed water system design will be in accordance with all codes and regulations set forth by Sussex County, DHSS Office of Drinking Water and Tidewater. Tidewater's franchise area has been evaluated for groundwater impacts to ensure no adverse impacts. The anticipated water demand is 68,625 gallons/day.

c) *Proposed means of wastewater treatment and disposal with an analysis of the effect on the quality of groundwater and surface waters, including alternative locations for on site septic systems*

The parcels are located within Sewer Tier 2 – Sussex County Planning area and a future request to annex to the Tier 1 - Unified Sanitary Sewer District will be made as the parcels are directly adjacent to the Tier 1 District. It is anticipated that a gravity sewer collection system will be designed and installed to collect and convey wastewater. All sewer systems will be designed to follow all the codes and regulations of the Sussex County Ordinance.

d) *Analysis of the increase in traffic and the effect on the surrounding roadway system.*

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The Final TIS recommendations from DelDOT included development improvements as follows: frontage improvements, full movement signalized Site Entrance at the intersection of Lexington Ave. and DE Rt. 24 with auxiliary turn lanes, bicycle and pedestrian improvements and Henlopen TID fees to be paid as determined by DelDOT.

e) *The presence of any endangered or threatened species listed on federal or state registers and proposed habitat protection areas.*

A Rare Species Search per the United States Fish and Wildlife Service (USFWS) database for the likelihood of rare and endangered species was performed. Two potential species were identified based on the search. The tri-colored bat, which the USFWS usually suggests that if tree clearing is required within the breeding season, then a summer survey should be conducted to determine whether the bats are present. Tree clearing is usually restricted to the time period between Oct. 1 and March 31 to avoid impacts to the listed bat species. The Monarch Butterly requires specialized habitat (milkweed) for breeding. Suitable habitat for the species is not likely or anticipated to occur within the development area.

f) *The preservation and protection from loss of tidal or nontidal wetlands on the site.*

Freshwater Forested/Shrub Wetland habitat was identified on the subjected site. No wetlands will be disturbed with the proposed development and the County required buffers will be respected. A wetlands delineation report is included with the project packet.

g) *Provisions for open space as defined in § 115-4*

The project offers recreational facilities such as a clubhouse, swimming pool, play areas and walking paths. Several stormwater management facilities are proposed which have a demonstrated recreational value and provide scenic vistas, while providing wildlife corridors. The project will respect all buffers and maintain significant forested areas and will not disturb existing wetlands found on-site.

h) *A description of provisions of public and private infrastructure*

The project proposes a mix of both public and private infrastructure. Public infrastructure includes construction of water and sewer main that will be turned over to respective utility providers. In addition, significant improvements along DE Rt. 24 will be constructed, including auxiliary turn lanes, traffic signal with pedestrian crossings and a paved shared-use path, providing multi-modal transportation network paths. Private infrastructure includes roadways, sidewalks, parking, other utilities and stormwater management areas, etc. which will be privately owned and maintained.

i) *Economic, recreational or other benefits*

The project holds significant potential not only for job creation but also for addressing critical gaps in workforce development within Sussex County. By providing commercial job growth opportunity, economic development and affordable housing, the project aims to deliver much needed services and housing to the local community.

j) *The presence of any historic or cultural resources that are listed on the National Register of Historic Places*

No existing presence of historic or cultural resources were listed per the National Register of Historic Places.

k) *A description of how the proposed application and proposed mitigation measures are in conformance with the current Sussex County Comprehensive Plan*

The current Sussex County Comprehensive Plan includes a Future Land Use Map to help determine how land should be zoned, to ensure responsible development. The Future Land Use map in the plan indicates that the subject property has land use designation of "Commercial Area" and "Coastal Area." The parcels would otherwise be entirely identified as "Commercial Area" if not for a small portion of "Coastal Area" on parcel 40.01, which is not planned for development as it is located within a wetland area along Dorman Branch, in the southwestern most portion of the parcel.

As outlined in the Comprehensive Plan, Coastal Areas are areas that can accommodate development provided that special environmental concerns are addressed. As this area is

not intended to be developed, the development plan is consistent with the Comprehensive Plan for Coastal Areas. (Sussex County Comprehensive Plan, 4-15).

Commercial Areas include retail and service uses that are mainly located along higher functional classification roadways such as highways and arterials. Route 24 is classified by DelDOT as a "Principal Arterial". As opposed to small, traditional downtown areas that are often historic and pedestrian-friendly, Commercial Areas include commercial corridors, shopping centers, and other medium and large commercial vicinities geared towards vehicular traffic. In addition to primary shopping destinations, this area would also be the appropriate place to locate hotels, motels, car washes, auto dealerships, l and other medium and larger scale commercial uses not primarily targeted to the residents of immediately adjacent residential areas. These more intense uses should be located along main roads or near major intersections. Institutional and commercial uses may be appropriate depending on surrounding uses. Mixed-use buildings may also be appropriate for these areas (Sussex County Comprehensive Plan, 4-17). The development plan includes a mix of retail, service uses, medium scale commercial and mixed use buildings as is consistent with the Comprehensive Plan.

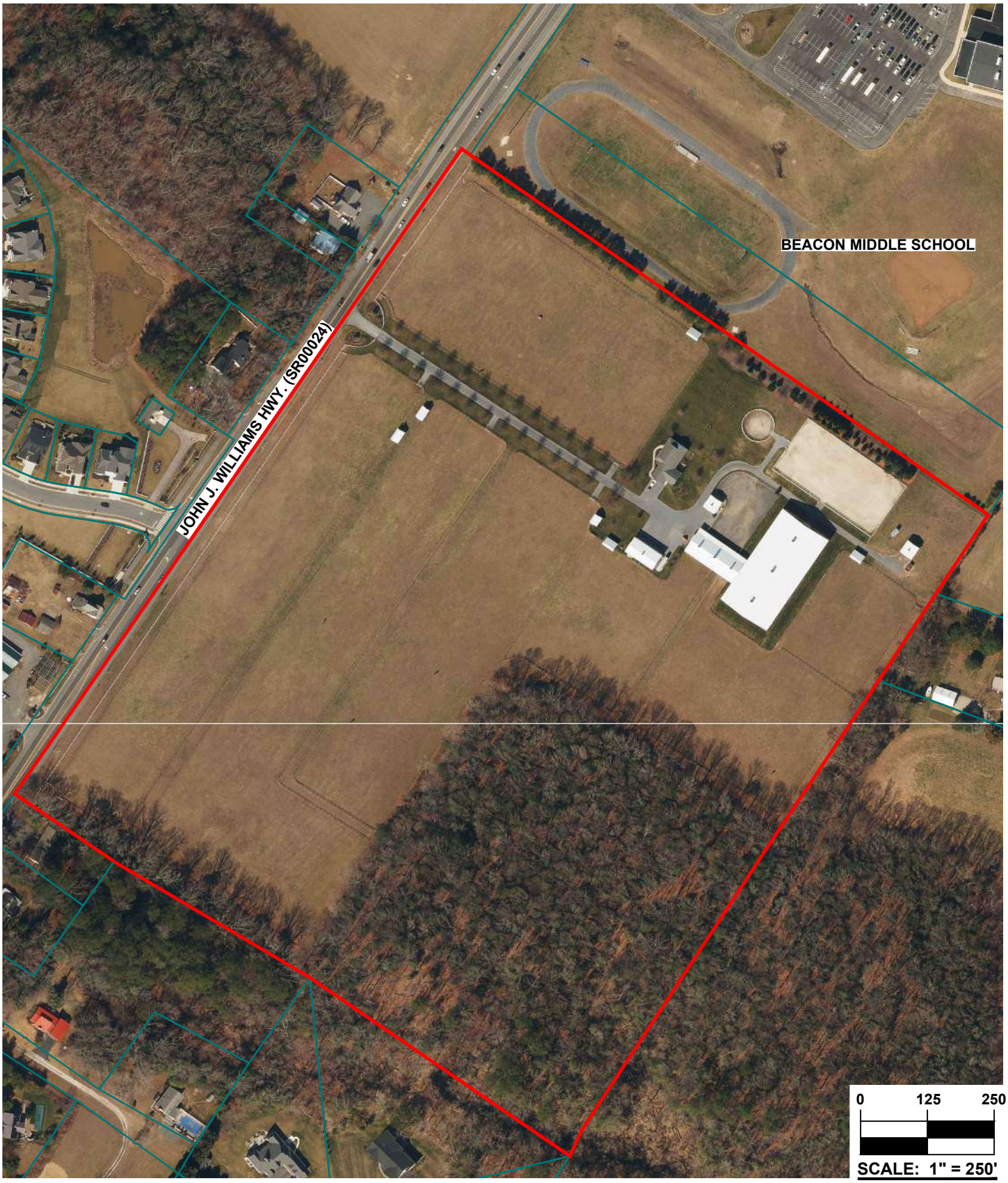
The proposed zoning of C-4: Planned Commercial District is consistent with the intended Future Land Use designation of Commercial Use as an applicable zoning district within the Growth Area. The C-4 zoning allows for a maximum of forty (40) percent of its developable area to consist of duplexes, townhouses or multifamily dwellings which helps promote development designed to support both residential and commercial uses as noted in 4.6.3.

The subject parcels are also located within the planned Henlopen Transportation Improvement District, which DelDOT is working alongside Sussex County to correspond with their Comprehensive Plan.

l) *Actions to be taken by the applicant to mitigate the detrimental impacts identified relevant to Subsection B(2)(a) through (k) of the manner in which they are consistent with the Comprehensive Plan.*

All mitigation measures, identified relevant to sections (a) through (k) are identified above in each respective section.

# 3.0 Appendix




LAYER STATE: LOCATIONS

## SITE LOCATION MAP
# BELLE MEADE FARMS

REHOBOTH BEACH
SUSSEX COUNTY / DELAWARE

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

| | |
|---|---|
| BMG: | 2022079.00 |
| SCALE: | 1" = 250' |
| DATE: | 12/23/24 |
| DRAWN BY: | J.N.K. |

**SITE**

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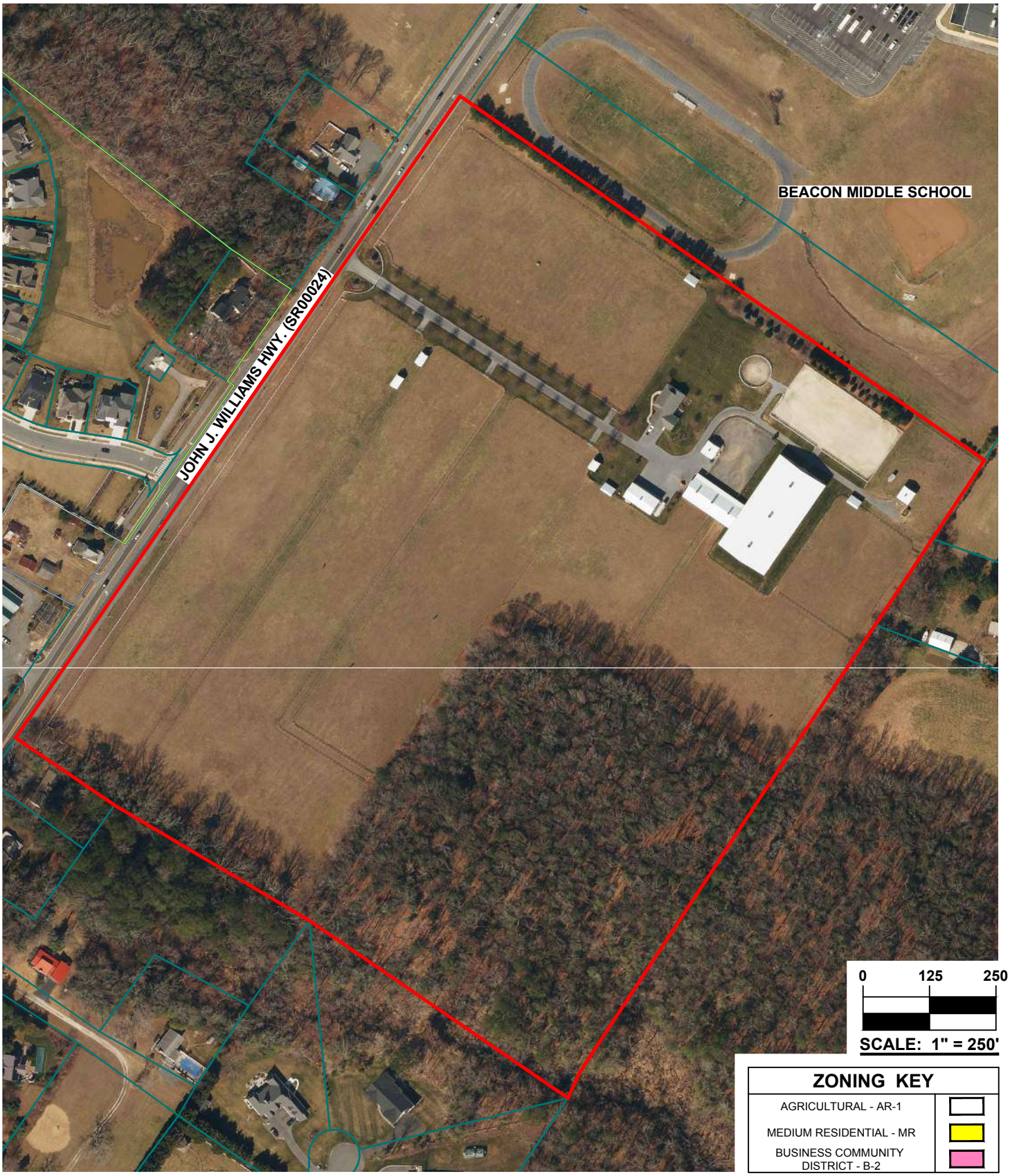


LAYER STATE: ZONING

## ZONING MAP
# BELLE MEADE FARMS

REHOBOTH BEACH
SUSSEX COUNTY / DELAWARE

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Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 250'
DATE: 12/23/24
DRAWN BY: J.N.K.

**ZONING**

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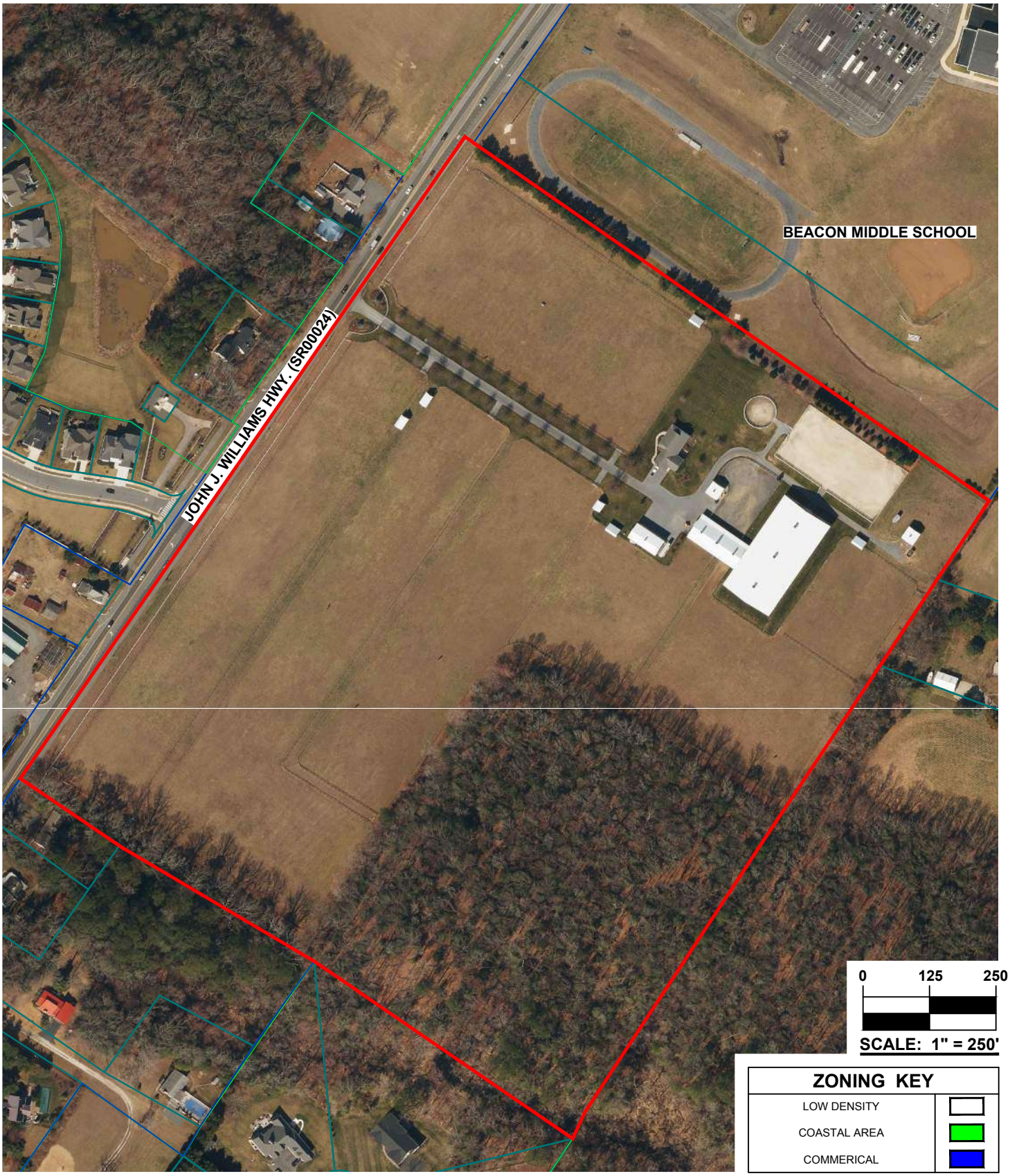


LAYER STATE: FUTURE LAND USE

# FUTURE LAND USE MAP
# BELLE MEADE FARMS

REHOBOTH BEACH
SUSSEX COUNTY / DELAWARE

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SCALE: 1" = 250'
DATE: 12/23/24
DRAWN BY: J.N.K.

**FUTURE**

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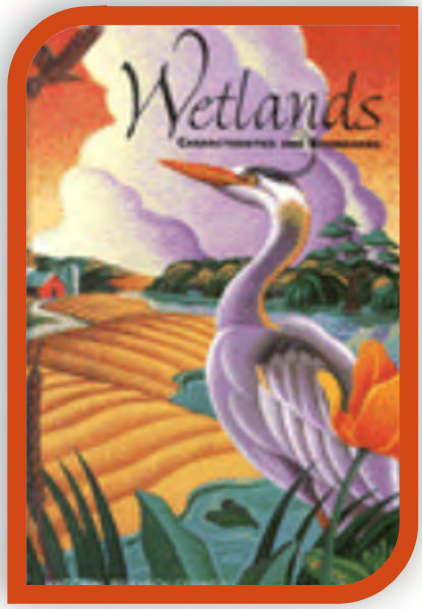
# Wetland Delineation Report

# Wetland Delineation – Belmead Farm, Lewes, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
April 30, 2023
Jim@WatershedEco.com

## Introduction




At the request of Becker Morgan Group, Inc., Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC reviewed background information and conducted a wetland delineation at the Belmead Farm, LLC. property and determined that palustrine forested wetlands were present in the southeastern portion of the property abutting a Dorman Branch. These wetlands and waters were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut the perennial stream Dorman Branch, a tributary to Love Creek and Rehoboth Bay, both Traditional Navigable Waterways. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The Navigable Waters Protection Rule (NWPR) became effective on June 22, 2020. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussions of Jurisdiction related to Waters and Wetlands in this report are based on the NWPR Section 404 of the Clean Water Act and as described in the definitions in this section as well as all guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction is established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on June 22, 2020 in the NWPR.

The NWPR defines four categories of WOTUS, 1. Territorial Seas and Traditional Navigable Waters, 2. Tributaries to 1., 3. Lakes and Ponds, and impoundments of Jurisdictional Waters and 4. Adjacent Wetlands. All other Waters are determined by the rule to be non-jurisdictional and the rule further clarifies exclusions which are not jurisdictional.

In this case we are interested in the jurisdictional status of mapped Waters in the form of non-tidal wetlands within the Subject Property. The mapped wetlands have been classified as adjacent wetlands. In the NWPR, adjacent wetlands are defined as follows: abutting, meaning to touch, or inundated by flooding from waters 1-3 above, separated only be a berm, bank or dune or an artificial dike or barrier. The NWPR further clarifies that an adjacent wetland must have a direct hydrologic surface connection to a water listed in 1-3 above in a typical year. The NWPR further clarifies that a tributary is a river or stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this definition in a typical year either directly or through one or more waters. A tributary must be intermittent or perennial. It is assumed that the mapped wetlands have a direct surface connection to Dorman Branch and would be regulated by the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule. At the present time the U.S. Army Corps of Engineers is following the 2023 Wetland Rules. The U.S. Army Corps of Engineers Philadelphia District and DNREC Subaqueous Lands Division should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 28855 Lewes Georgetown Highway in Lewes, Sussex County, Delaware. The Subject Property is located at Latitude and Longitude 38.711454and -75.152545 and is identified as Sussex County Tax Parcel No. 334-18.00-40.01 consisting of approximately 39.19 Acres.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of mowed pastures associated with equestrian use and woodlands in the southeast.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut Dorman Branch and drain southeasterly off-site to Love Creek, a tributary to Rehoboth Bay.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts palustrine forested wetlands in the southeastern portion of the subject property.

The USGS Mapping (Figure 3) depicts a blue-line stream identified as Dorman Branch in the southeastern portion of the property. The subject property is relatively flat with elevations ranging from 20 feet above sea level in the northwest to 10 feet asl in the southeast.

The National Hydrography Dataset map (Figure 4) depicts a blue-line stream feature with abutting palustrine forested wetlands in the southeastern portion of the property.

The 1937 aerial photo (Figure 5) depicts the property in agricultural use with woodlands in the southeast. The surrounding land use is predominantly agricultural and wooded with a few scattered residential properties.

The 1954 aerial photo (Figure 6) and 1968 imagery (Figure 7) depicts similar site conditions as the 1937 imagery. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts no significant changes within the subject property since 1968. Surrounding land use remains largely agricultural and wooded with residential development to the southwest and west.

The 2002 aerial photo (Figure 9) depicts no significant changes within the subject property or surrounding land since the 1992 imagery. Some site grading is apparent to the north.

The 2015 aerial photo (Figure 10) depicts a dwelling and barn have been constructed in the northeastern portion of the subject property. Woodlands remain in the southeast. New commercial development is apparent to the north and additional residential development is apparent to the south.

The 2022 aerial photo (Figure 11) depicts similar conditions as the 2015 imagery within the subject property. An additional residential subdivision has been constructed to the west.

The NRCS Soil Mapping (Figure 12) indicates the property is primarily underlain with well-drained Downer sandy loam (DoA and DodB), and Rosedale loamy sand (RoB). An area of poorly drained Hurlock sandy loam (HvA) is mapped within the woodlands in the southeastern portion of the property.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on April 26, 2023. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience.

## Results

Palustrine forested wetlands were observed in the southeastern portion of the property. These wetlands abut Dorman Branch which drains southeasterly off-site to Love Creek, a tributary to Rehoboth Bay, a Traditional Navigable Waterway. These wetlands would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of horse pastures with woodlands in the southeast.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

Typically, “blue-line” streams are regulated as State Subaqueous Lands. The perennial stream Dorman Branch is located inside of the delineated wetland boundary and would be regulated by DNREC as Subaqueous Lands

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco LLC. that federally jurisdictional palustrine forested wetlands are located within the southeastern portion of the subject property. These wetlands have a direct surface connection to Dorman Branch along the southern boundary of the property which drains off-site to Love Creek and Rehoboth Bay and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands mapped within the subject property.

Dorman Branch, along the southern property boundary would be regulated by DNREC as Subaqueous Lands. Dorman Branch was not delineated separately from the wetlands.

The mapped Waters can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

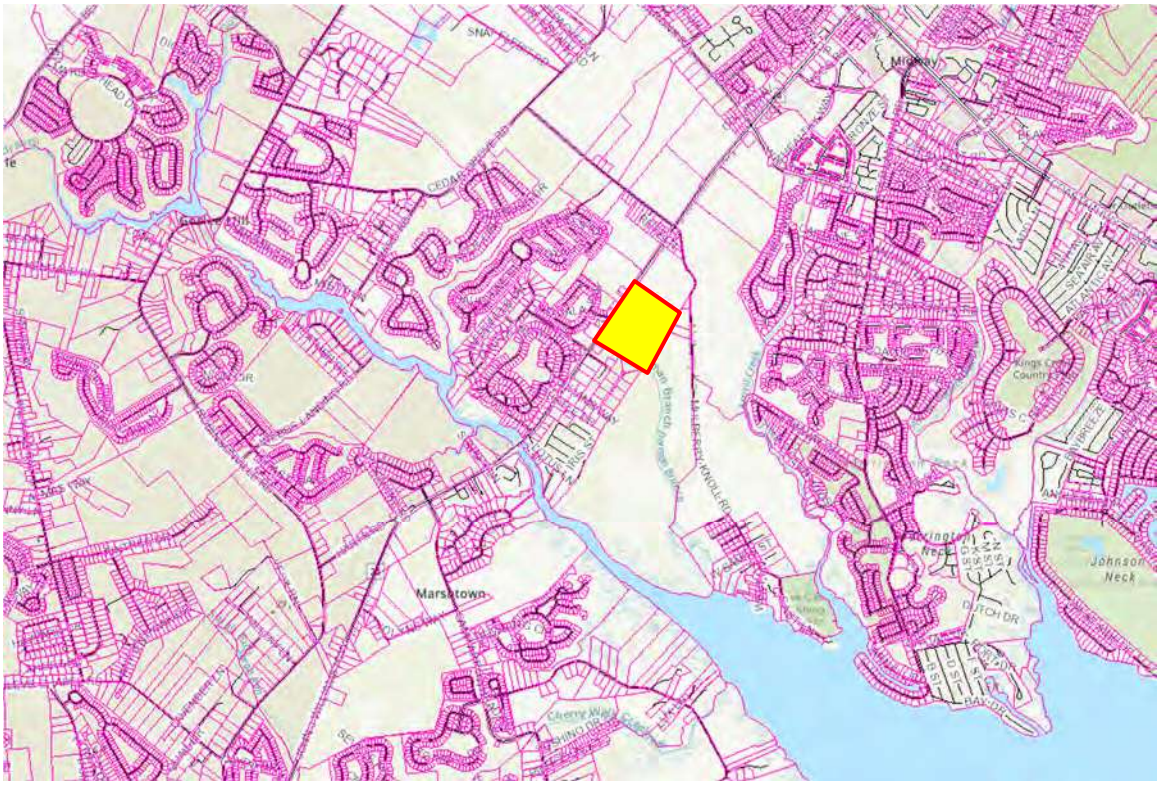



Figure 1: Location Map

Figure 2: National Wetland Inventory Map.

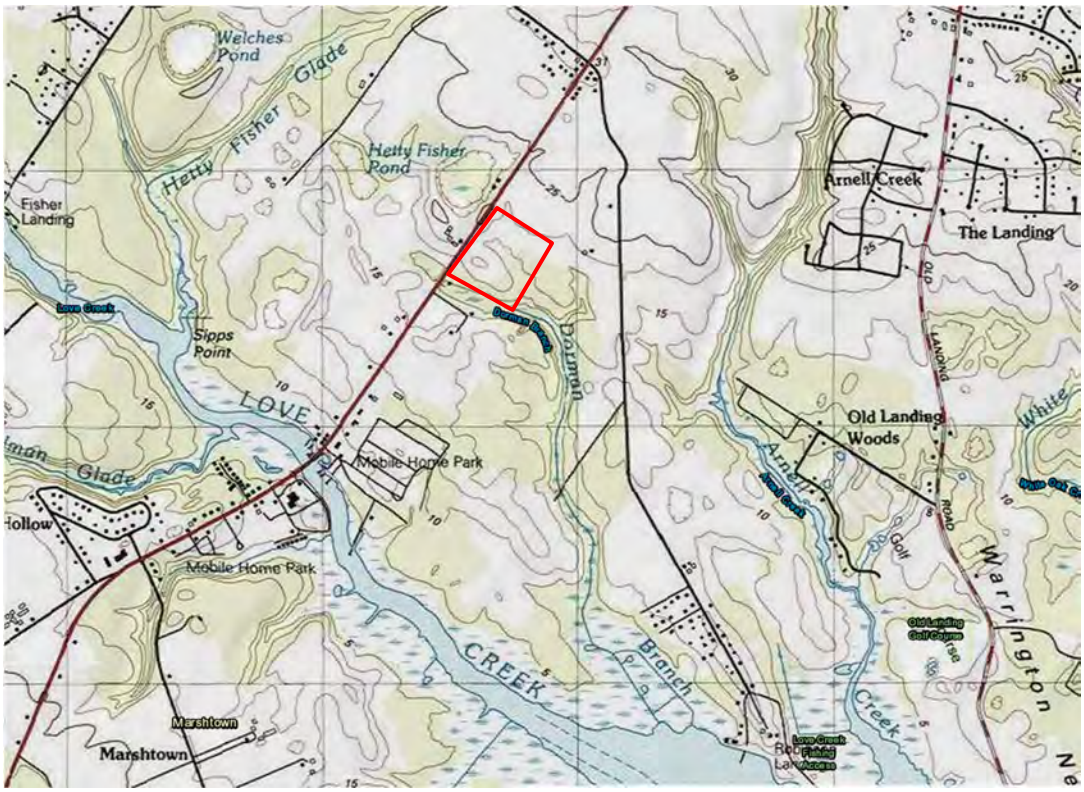



Figure 3: USGS Mapping.

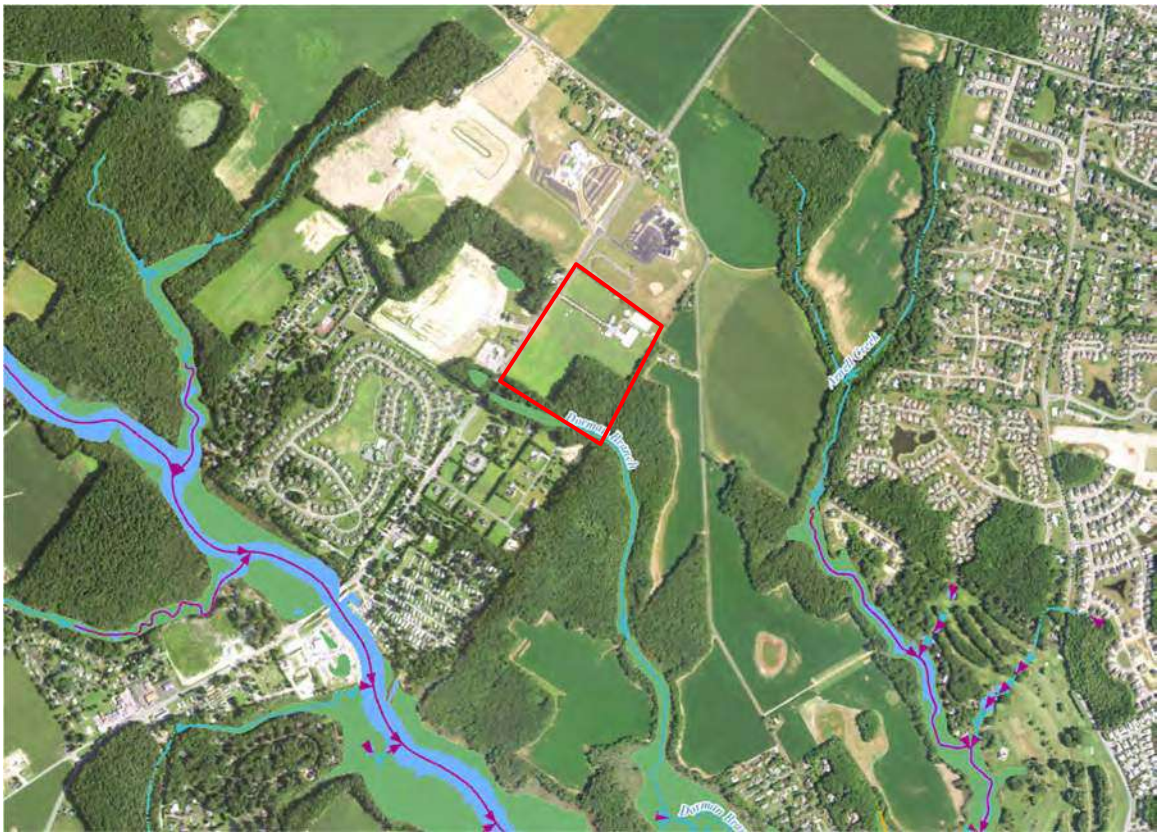


Figure 4: NHD Map.

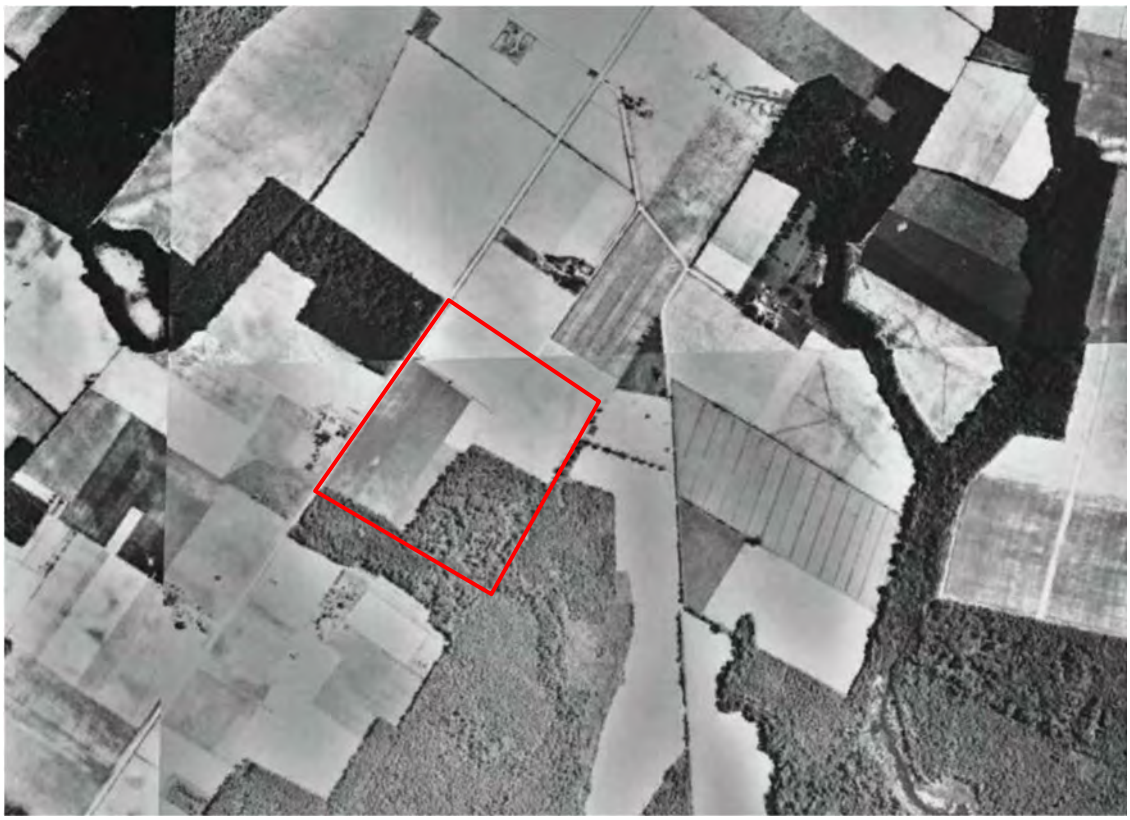


Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

Figure 10: 2015 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

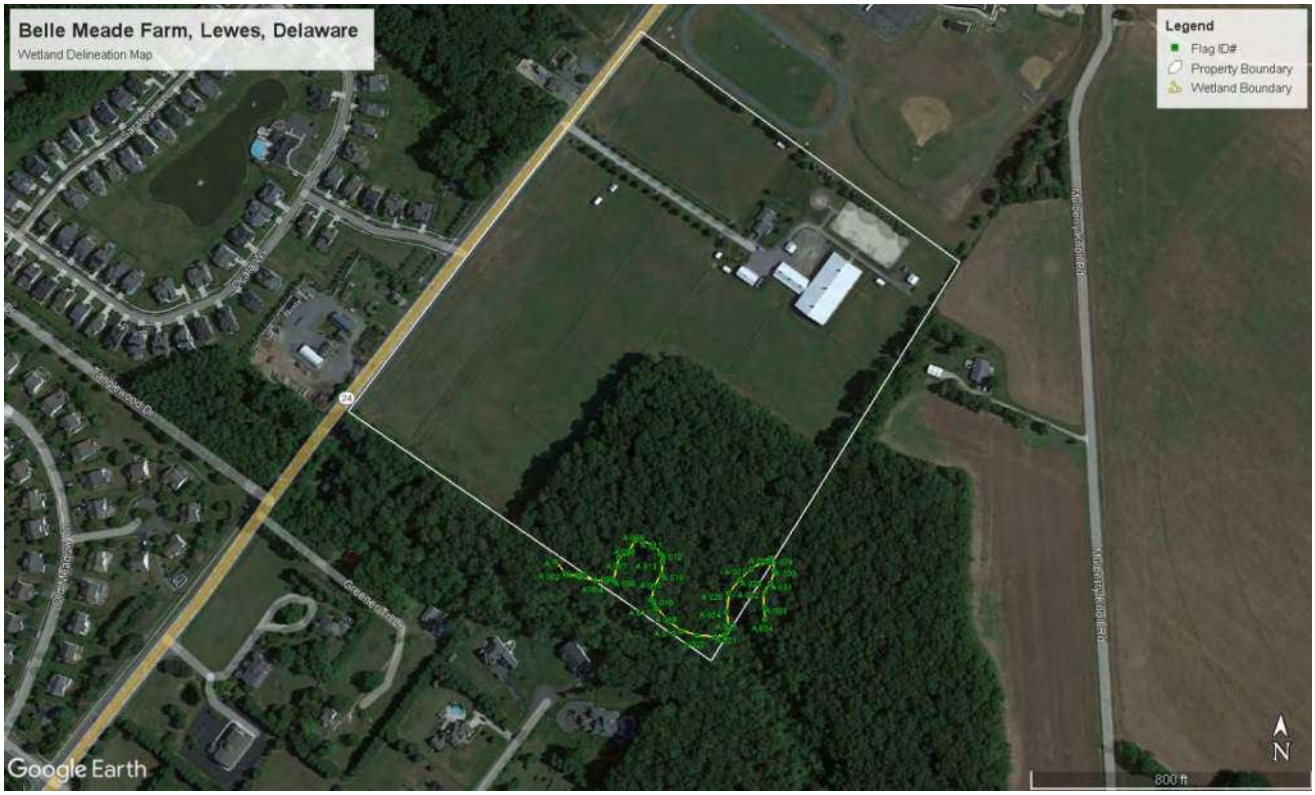



**Figure 13: Wetland Delineation Map**

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always o a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

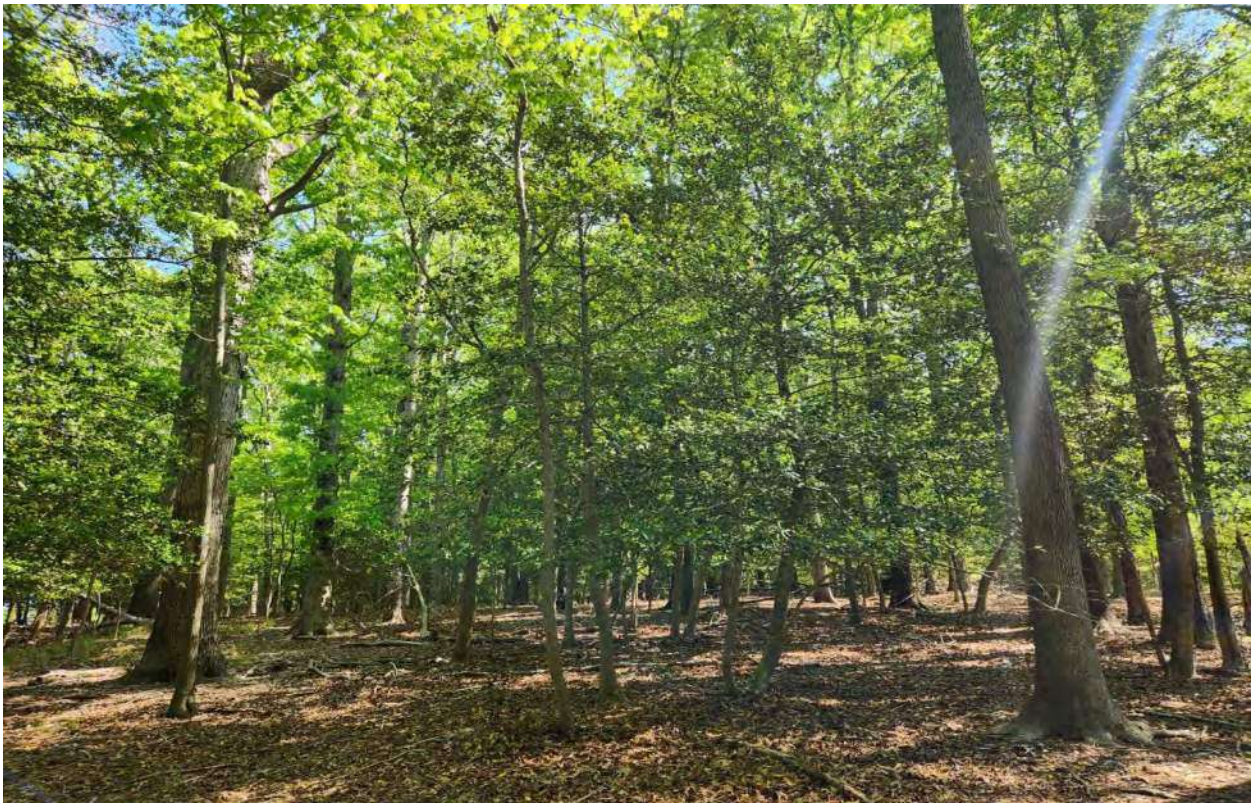
Paved driveway in the northwestern portion of the property, looking east.

Pasture surrounding barn in the northeastern portion of the property, looking northeast.

Pasture area in the north-central portion of the property, looking northeast.

Pasture bordering woodlands in the southwestern portion of the property, looking west.

Pasture area in the southwestern portion of the property, looking northeast.



Typical forested upland in the south-central portion of the property.

Forested wetland abutting Dorman Branch in the southeastern portion of the property.

Forested wetland in the southeastern portion of the property.

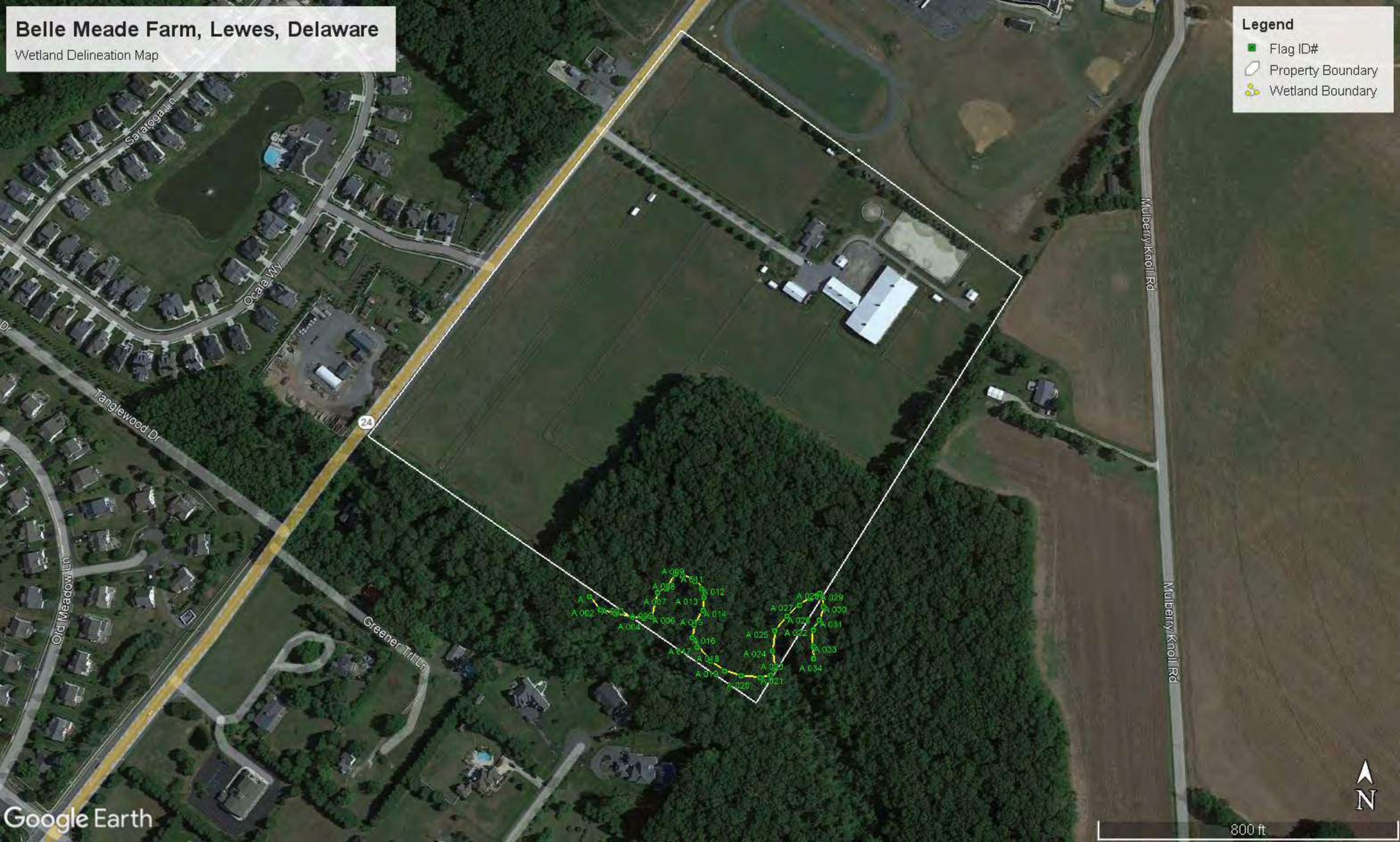
Forested upland in the southeastern portion of the property, looking northwest.

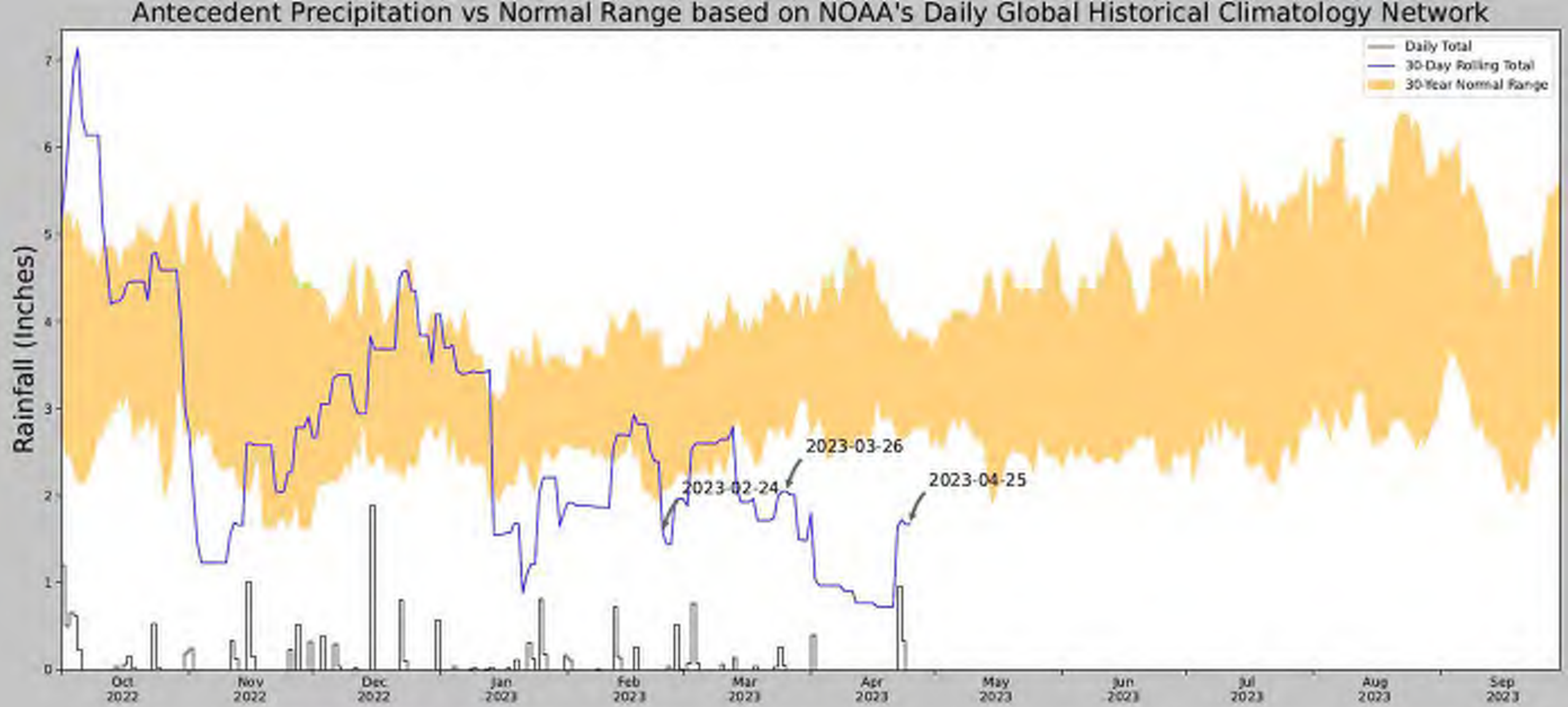
Pasture area bordering woodlands in the central portion of the subject property, looking south.

# Appendices

# Belle Meade Farm, Lewes, Delaware

Wetland Delineation Map






| | |
|---|---|
| Coordinates | 38.711454, -75.152545 |
| Observation Date | 2023-04-25 |
| Elevation (ft) | 14.925 |
| Drought Index (PDSI) | Severe drought (2023-03) |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2023-04-25 | 2.712992 | 3.902362 | 1.669291 | Dry | 1 | 3 | 3 |
| 2023-03-26 | 2.679134 | 4.098032 | 2.047244 | Dry | 1 | 2 | 2 |
| 2023-02-24 | 2.05748 | 3.448032 | 1.57874 | Dry | 1 | 1 | 1 |
| Result | | | | | | | Drier than Normal - 6 |

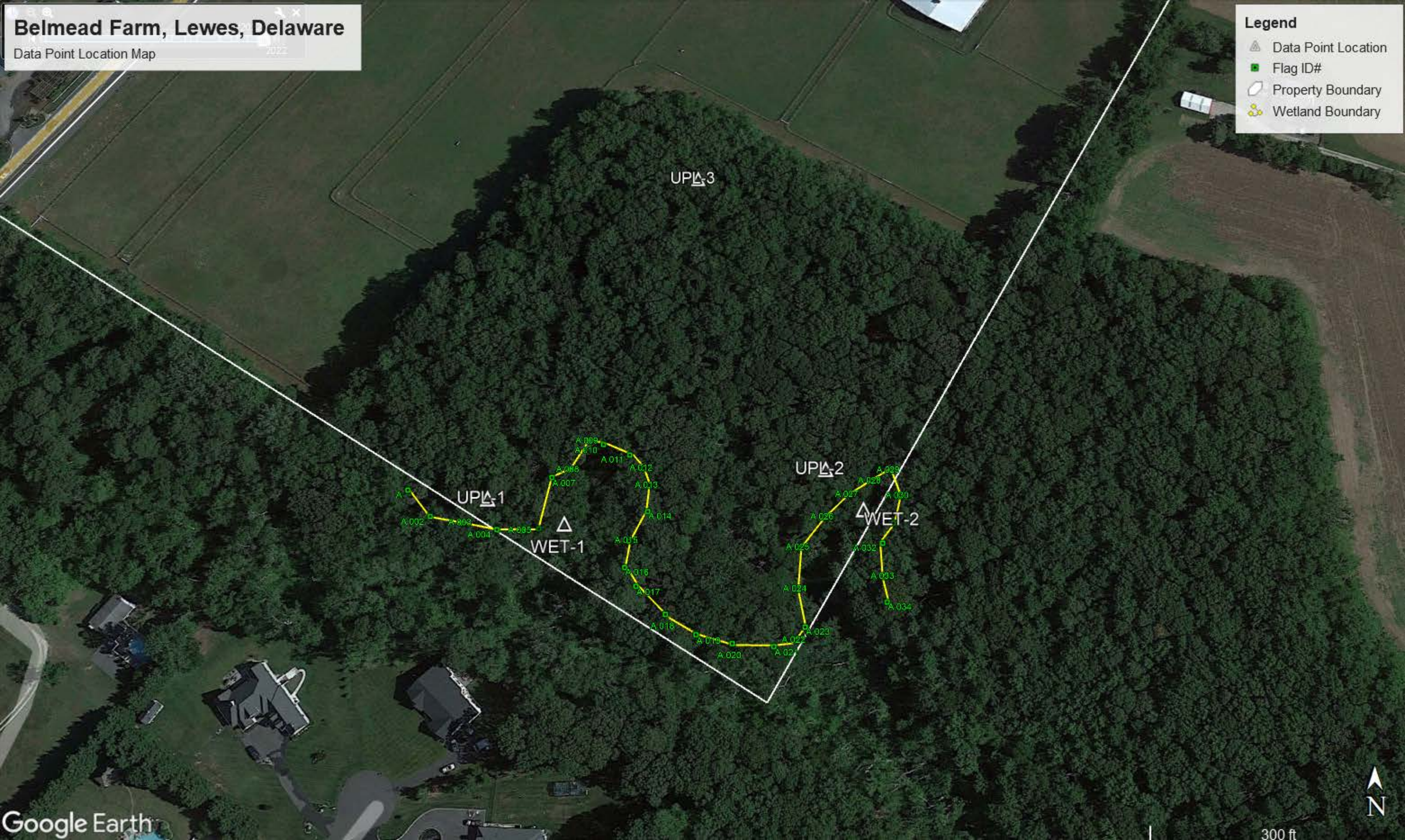
Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| GEORGETOWN-DELAWARE COASTAL AP | 38.6897, -75.3625 | 49.869 | 11.421 | 34.944 | 5.538 | 9080 | 88 |
| MILTON 3.8 SSE | 38.7271, -75.287 | 38.058 | 4.822 | 11.811 | 2.227 | 1 | 1 |
| GEORGETOWN 5 SW | 38.6333, -75.45 | 44.948 | 6.121 | 4.921 | 2.785 | 1940 | 0 |
| GEORGETOWN 5.8 W | 38.6972, -75.4931 | 35.105 | 7.062 | 14.764 | 3.282 | 1 | 0 |
| LEWES | 38.7842, -75.1581 | 9.843 | 12.806 | 40.026 | 6.275 | 331 | 0 |
| Linear Interpolation | N/A | N/A | N/A | N/A | N/A | 0 | 1 |

# Belmead Farm, Lewes, Delaware

Data Point Location Map



## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-5 +

Subregion (LRR or MLRA): LRR T Lat: 38.709160 Long: -75.152600 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DodB) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liriodendron tulipifera* | 20 | yes | FACU |
| 2. *Quercus alba* | 25 | yes | FACU |
| 3. *Quercus rubra* | 20 | yes | FACU |
| 4. *Pinus taeda* | 20 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 85 = Total Cover | | |
| 50% of total cover: 42.5 | 20% of total cover: 17 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Quercus alba* | 10 | yes | FACU |
| 3. *Liquidambar styraciflua* | 5 | yes | FAC |
| 4. *Nyssa sylvatica* | 5 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Cornus florida* | 15 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 35 = Total Cover | | |
| 50% of total cover: 17.5 | 20% of total cover: 7 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | loamy sand | |
| 3-9 | 10YR 4/3 | 100 | | | | | loamy sand | |
| 9-20 | 10YR 4/6 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-1 in the south-central portion of the property.

Soil profile at UPL-1.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.709046 Long: -75.152399 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ____** |
| Hydric Soil Present? | Yes ✓ | No ____ | |
| Wetland Hydrology Present? | Yes ✓ | No ____ | |

Remarks:

Forested wetland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ____ | Depth (inches): 1" |
| Water Table Present? | Yes ✓ | No ____ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ____ | Depth (inches): 0 |

**Wetland Hydrology Present? Yes ✓ No ____**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | no | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Magnolia virginiana* | 5 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus effusus* | 10 | yes | OBL |
| 2. *Carex lurida* | 5 | no | OBL |
| 3. *Juncus tenuis* | 5 | no | FAC |
| 4. *Woodwardia areolata* | 10 | yes | OBL |
| 5. *Phragmites australis* | 10 | yes | FACW |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-8 | 10YR 2/1 | 100 | | | | | muck | saturated |
| 9-20 | 10YR 3/2 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

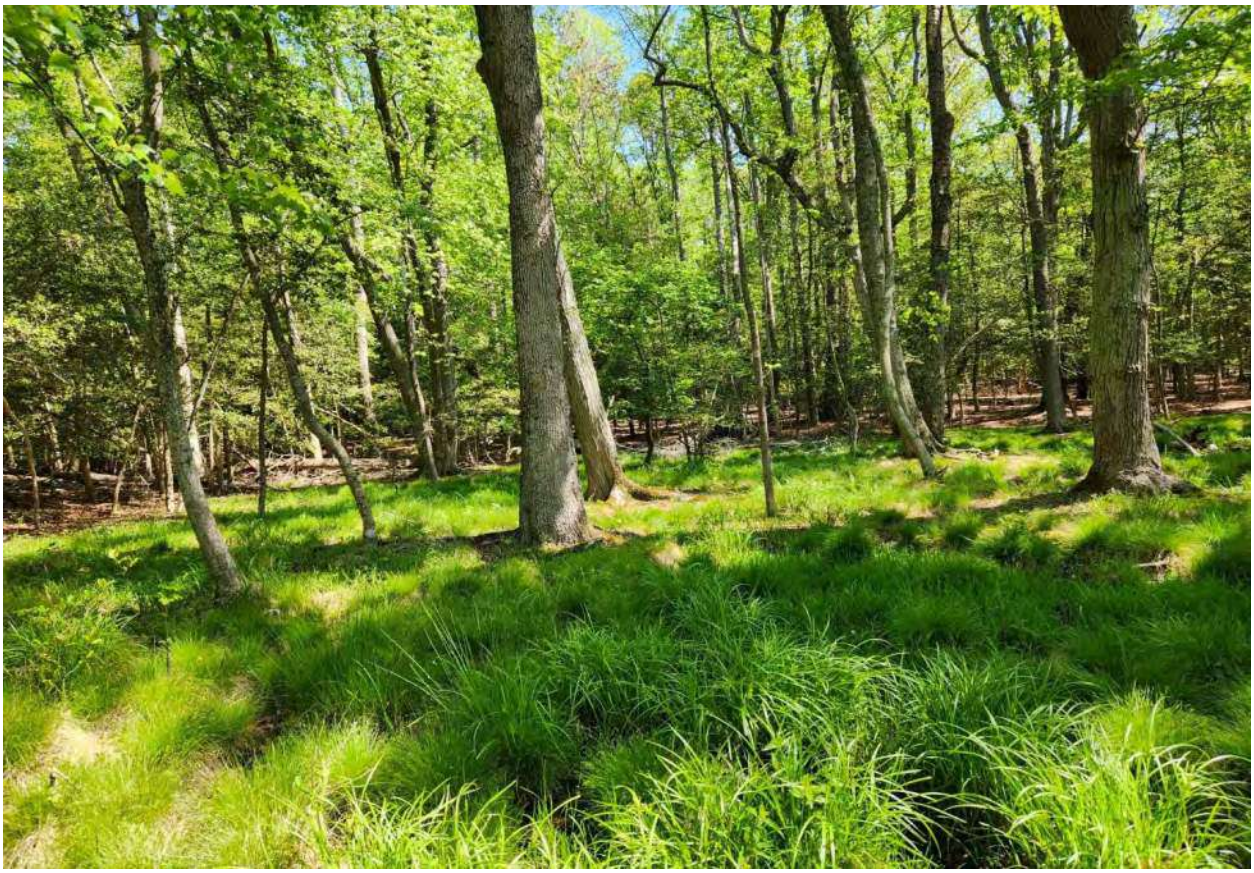
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at Data Point WET-1 in the south-central portion of the property.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.708934 Long: -75.151363 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 15 | yes | FACU |
| 2. *Quercus alba* | 30 | yes | FACU |
| 3. *Quercus rubra* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 15 | yes | FAC |
| 2. *Cornus florida* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 30 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 12 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 3-6 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-2 in the southeastern portion of the property.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.708819 Long: -75.151184 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ____** |
| Hydric Soil Present? | Yes ✓ | No ____ | |
| Wetland Hydrology Present? | Yes ✓ | No ____ | |

Remarks:

Forested wetland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ____ | Depth (inches): 0.5" |
| Water Table Present? | Yes ✓ | No ____ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ____ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ____**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Nyssa sylvatica* | 10 | yes | FAC |
| 2. *Magnolia virginiana* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Vaccinium corymbosum* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus tenuis* | 10 | yes | FAC |
| 2. *Woodwardia areolata* | 5 | yes | OBL |
| 3. *Juncus effusus* | 5 | no | OBL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-20 | 10YR 3/1 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:

Forested wetland at Data Point WET-2 in the southeastern portion of the property.

Saturated soils encountered at WET-2.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-3

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.710365 Long: -75.151586 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DoA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the east-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-3

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 35 | yes | FACU |
| 2. *Liquidambar styraciflua* | 30 | yes | FAC |
| 3. *Ilex opaca* | 10 | no | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 75 = Total Cover | | |
| 50% of total cover: 37.5 | 20% of total cover: 15 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 45 | yes | FAC |
| 2. *Nyssa sylvatica* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 50 = Total Cover | | |
| 50% of total cover: 25 | 20% of total cover: 10 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Smilax rotundofolia* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 4-9 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 9-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-3 in the east-central portion of the property.

Soil profile at UPL-3.

United States Department of Agriculture

NRCS

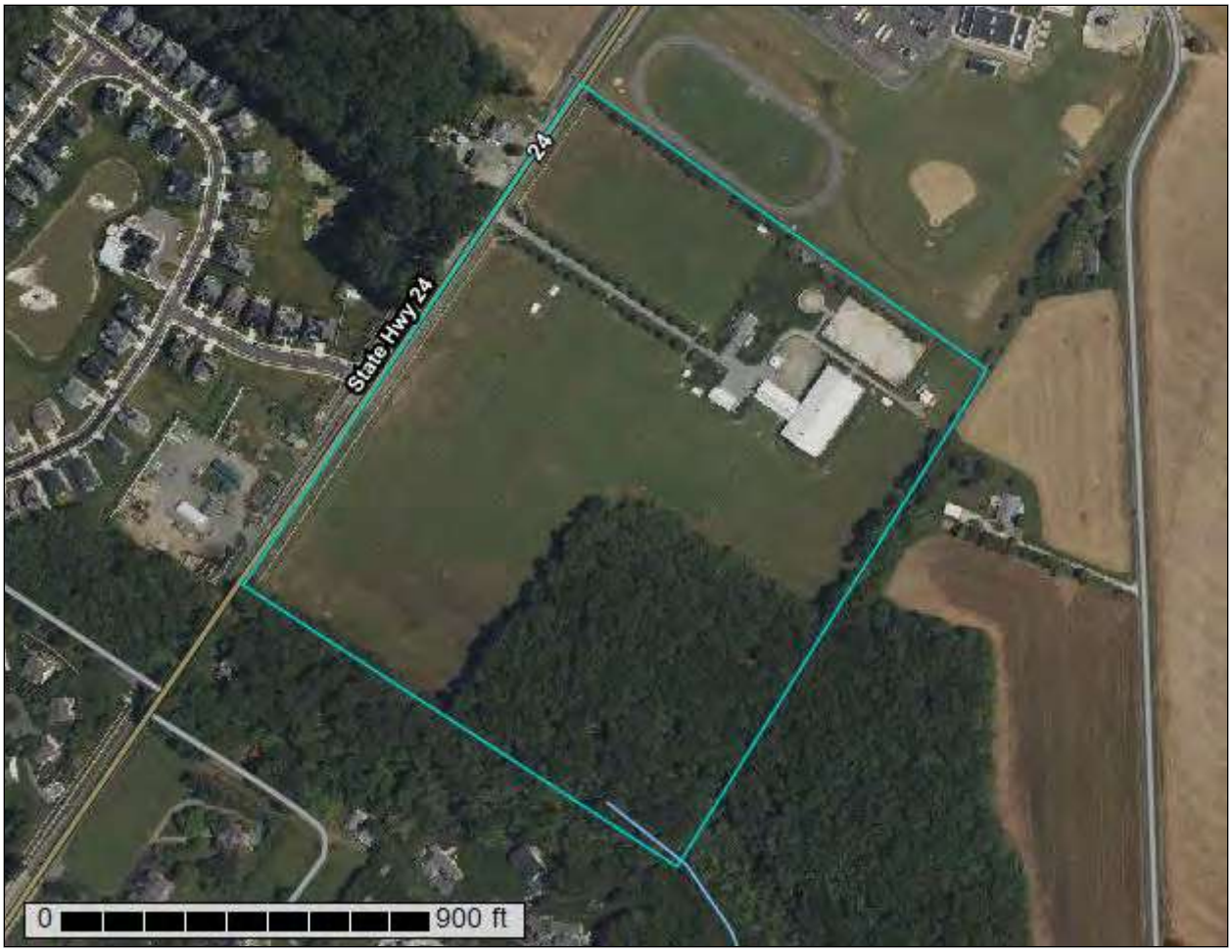
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Belmeade Farm, Lewes, DE




April 29, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

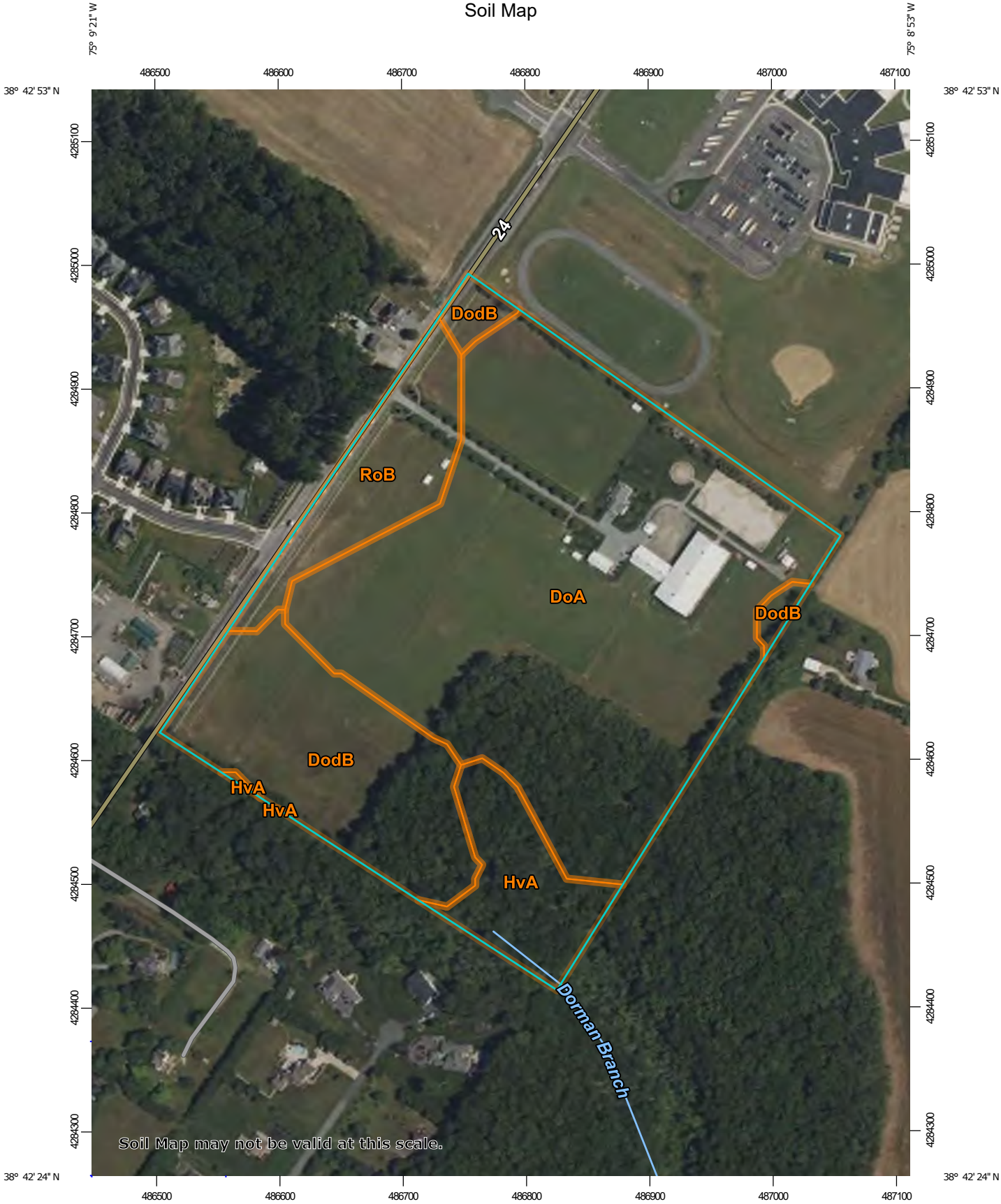
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:4,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 23, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| DoA | Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area | 25.9 | 63.1% |
| DodB | Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area | 8.2 | 20.1% |
| HvA | Hurlock sandy loam, 0 to 2 percent slopes | 3.2 | 7.9% |
| RoB | Rosedale loamy sand, 2 to 5 percent slopes | 3.7 | 8.9% |
| **Totals for Area of Interest** | | **41.1** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## DoA—Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwd
*Elevation:* 0 to 190 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 250 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Knolls, flats, low hills
*Landform position (two-dimensional):* Summit, shoulder
*Landform position (three-dimensional):* Interfluve, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Parent material:* Loamy fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 1
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

### Minor Components

#### Galestown

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Ingleside

*Percent of map unit:* 5 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Footslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## DodB—Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwh
*Elevation:* 0 to 210 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 260 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Flats, knolls, low hills
*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Parent material:* Loamy fluviomarine deposits

**Typical profile**

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

**Properties and qualities**

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Galestown**

*Percent of map unit:* 10 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Hammonton**

*Percent of map unit:* 5 percent
*Landform:* Flats, broad interstream divides
*Landform position (two-dimensional):* Footslope, shoulder
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Ingleside**

*Percent of map unit:* 5 percent
*Landform:* Low hills, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex

*Hydric soil rating:* No

## HvA—Hurlock sandy loam, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qth9
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Hurlock, drained, and similar soils:* 42 percent
*Hurlock, undrained, and similar soils:* 38 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hurlock, Drained

#### Setting

*Landform:* Swales, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*Eg - 10 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Hurlock, Undrained

### Setting

*Landform:* Drainageways, depressions, swales, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A - 2 to 4 inches:* sandy loam
*Eg - 4 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Occasional
*Available water supply, 0 to 60 inches:* Moderate (about 7.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 5w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Minor Components

### Mullica, drained

*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, swales, flats
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Flats, drainageways
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

### Woodstown

*Percent of map unit:* 5 percent
*Landform:* Flats, fluviomarine terraces, broad interstream divides
*Landform position (three-dimensional):* Tread, rise
*Down-slope shape:* Linear

*Across-slope shape:* Linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## RoB—Rosedale loamy sand, 2 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qtjy
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Rosedale

#### Setting

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

#### Typical profile

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, fluviomarine terraces
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

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# Fish and Wildlife Threatened and Endangered Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127


In Reply Refer To: 01/20/2025 15:56:33 UTC
Project Code: 2025-0044405
Project Name: Belmeade Farm

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0044405
Project Name: Belmeade Farm
Project Type: New Constr - Above Ground
Project Description: Above ground development.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.71070505,-75.15219081081176,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1R
- PFO1B

# DelDOT Service Level Evaluation Request Response Letter

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm
cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

# DelDOT Final Traffic Impact Study (TIS)

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

June 4, 2024
Revised: June 24, 2024

Christopher Duke, P.E.
Becker Morgan Group, Inc.
100 Discovery Blvd, Suite 102
Newark, DE 19713

Dear Mr. Duke:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Belle Meade** (Tax Parcel: 334-18.00-40.01) multi-use development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. This letter has been revised to clarify and to fix grammatical and formatting errors. The recommendation items and analysis results they are based on have not changed. On Page 1, a typo was fixed in the retail square footage. On Page 6, Item 3, turn lane lengths and minimum tapers and the name of the intersection in the body of Item 3 were added. DelDOT accepts this letter and concurs with the recommendations.

If you have any questions concerning this letter or the enclosed review letter, please contact me at Annamaria.Furmato@delaware.gov.

Sincerely,

Annamaria Furmato
TIS Group Project Engineer

AF:km
Enclosures
cc with enclosures: William Krapf, Capano Group, L.P.
David L. Edgell, Office of State Planning Coordination
Jamie Whitehouse, Sussex County Planning & Zoning
Andrew J. Parker, McCormick Taylor, Inc.
Tucker Smith, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Deputy Secretary / Director of Transportation Solutions (DOTS)
Mark Luszcz, Deputy Director, DelDOT Traffic, DOTS
Michael Simmons, Assistant Director, Project Development South, DOTS
Peter Haag, Chief Traffic Engineer, DelDOT Traffic, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, DelDOT Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Pamela Steinebach, Director, Planning
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination, Planning
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination, Planning
Sireen Muhtaseb, TIS Group Manager, Development Coordination, Planning
Philip Lindsey, TIS Group Project Engineer, Development Coordination, Planning
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning, Planning
Steve Bayer, Regional Transportation Planner, Statewide & Regional Planning

June 6, 2024

Ms. Annamaria Furmato
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
**Task No. 5A Subtask 08A – Belle Meade**

Dear Ms. Furmato:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Belle Meade development prepared by Becker Morgan Group, Inc. dated February 2024. Becker Morgan Group prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Belle Meade development, along the south side of Delaware Route 24 (Sussex Road 24), approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. The proposed development would consist of 125,000 square feet of retail space and 480 low-rise multi-family houses. One signalized access point is proposed on Delaware Route 24 opposite Lexington Avenue. Construction is anticipated to be completed in 2032.

The subject land is located on an approximately 38.33-acre parcel. The subject land is currently zoned AR-1 (Agricultural Residential) and the developer plans to rezone the land to C-4 (Planned Commercial).

**Relevant and On-Going Projects and Studies**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

**Summary of Analysis Results**

Based on our review, we have the following comments and recommendations:

The following intersections exhibit level of service (LOS) deficiencies without the implementation of physical roadway and/or traffic control improvements:

| ***Intersection*** | ***Existing Traffic Control*** | ***Situations for which deficiencies occur*** |
|---|---|---|
| 1. SR 24 / Lexington Avenue / Site Entrance | Unsignalized | 2032 with development AM, PM, SAT (Case 3) |
| 4. SR 24 / Plantation Road / Warrington Road | Signalized | 2032 with development PM (Case 3) |
| 6. SR 24 / Bryn Mawr Drive | Unsignalized | 2032 without development PM and SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 9. Warrington Road / Old Landing Road | Unsignalized | 2022 Existing SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 10. Mulberry Knoll Road / Cedar Grove Road | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development PM and SAT (Case 3) |
| 12. SR 24 / Spencer Lane / Williams Way | Unsignalized | 2022 Existing PM and SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 13. SR 24 / Camp Arrowhead Road | Signalized | 2032 with development SAT (Case 3) |

| | | |
|---|---|---|
| 14. SR 24 / Harts Road | Unsignalized | 2022 Existing PM (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 16. SR 24 / Jolyns Way | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development SAT (Case 3) |

1. SR 24 / Lexington Avenue / Site Entrance (See Recommendations 2 and 3  Table 2, Page 22)
This unsignalized intersection experiences LOS deficiencies during the AM, PM, and Saturday peaks in Case 3. In Case 3 during the PM and Saturday peaks, the northbound and southbound approaches are expected to operate at LOS F with over 2,500 seconds of delay. The developer proposes to construct a traffic signal at this intersection to mitigate the LOS deficiency. A Traffic Signal Justification Study (TSJS) has been prepared by the Department demonstrating that the warrants for a traffic signal are met with Case 3 volumes. If the intersection were signalized with the lane configuration as proposed in the *SR 24, Love Creek to Mulberry Knoll* project, the intersection will still operate at LOS F in the Saturday peak. The Henlopen TID proposes to widen SR 24 through this intersection to provide two through lanes in each direction. With signalization and the TID improvements the intersection is expected to operate at LOS C or better during all three peak periods.

4. SR 24 / Plantation Road / Warrington Road (See Recommendation 4  Table 5, Page 25)
This signalized intersection experiences LOS deficiencies during the PM peak in Case 3. In Case 3 during the PM peak, the northbound approach is expected to operate at LOS F with 81.7 seconds of delay while the overall intersection will operate at LOS E with 60.8 seconds of delay. Queues on the northbound approach are expected to be over 838 feet long which exceeds the available storage. The Henlopen TID proposes to widen the Plantation Road and Warrington Road approaches to include two left-turn lanes, two through lanes, and one right turn lane. With the TID improvements at this intersection, the intersection is expected to operate at LOS D with 49.5 seconds of delay.

6. SR 24 / Bryn Mawr Drive (Table 7, Page 27)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peaks in Case 2 and the AM, PM, and Saturday Peaks in Case 3. In Case 3 during the PM peak, the southbound approach is expected to operate at LOS F with 62.5 seconds of delay and queues over 65 feet long. A signal could mitigate the LOS deficiencies at his intersection. However, a signal is not recommended because of the proximity to adjacent signals and the low minor street volumes. Bryn Mawr Drive is a private road and the delay is only experienced on the minor street approach without impact to Delaware Route 24.

9. Warrington Road / Old Landing Road (See Recommendation 4  Table 10, Page 30)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 during the PM peak, the intersection has failing LOS on three approaches with the overall intersection operating at LOS F with 69 seconds of delay. The Henlopen TID proposes a roundabout at this intersection which will mitigate the LOS deficiency.

10. Mulberry Knoll Road / Cedar Grove Road (See Recommendation 4  Table 11, Page 31)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 2 and the PM and Saturday peaks in Case 3. In Case 3 during the Saturday peak, the northbound Mulberry Knoll Road approach is expected to operate at LOS F with 837.7 seconds of delay and queues over 753 feet long. The developer recommends the construction of a dedicated eastbound right-turn lane on Cedar Grove Road. However, this improvement fails to fully mitigate the LOS deficiency. The Henlopen TID proposes a roundabout at this intersection.

12. SR 24 / Spencer Lane / Williams Way (See Recommendation 4  Table 13, Page 33)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peak hours in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3, during the PM peak, the southbound approach is expected to operate at LOS F with 505.6 seconds of delay and queues over 63 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection. With that improvement, the intersection continues to experience LOS deficiencies. It should be noted that the delay is only experienced on the minor street approach, which is a private road. A signal is not recommended at this intersection due to the low minor street volumes. Additionally, the northbound volume during all peak hours is less than 10 vehicles.

13. SR 24 / Camp Arrowhead Road (See Recommendation 4  Table 14, Page 34)
This signalized intersection experiences LOS deficiencies during the Saturday peak in Case 3. In Case 3 during the Saturday peak, the eastbound approach is expected to operate at LOS F with 95 seconds of delay and queues over 1,573 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection which mitigates the LOS deficiency.

14. SR 24 / Harts Road (See Recommendation 4  Table 15, Page 35)
This unsignalized intersection experiences LOS deficiencies during the PM peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 in the PM peak hour the southbound Harts Road approach is expected to operate at LOS F with 989.9 seconds of delay. The Henlopen TID proposes the elimination of this intersection.

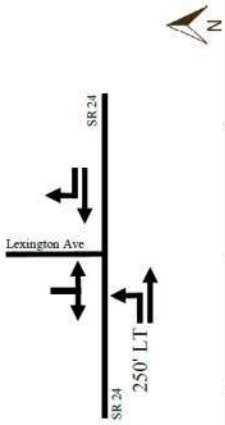
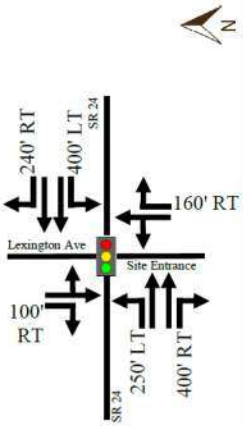
16. SR 24 / Jolyns Way (See Recommendation 4  Table 17, Page 37)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Cases 2 and 3. In Case 3 during the Saturday peak, the northbound Jolyns Way approach is expected to operate at LOS E with 45.3 seconds of delay and queues of less than one vehicle. It should be noted that the forecasted volume on this approach is five (5) vehicles in the Saturday peak hour. The Henlopen TID proposes to signalize this intersection, widen SR 24 to include two through lanes in each direction, and add a northern leg to the intersection that will connect to Robinsonville Road. These improvements will mitigate the LOS deficiencies.

**Development Improvements**

Should Sussex County approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan by note or illustration, unless a Design Deviation is requested and approved by the Department. All applicable agreements (i.e. letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development. The following items should be implemented at the same time as site construction once all agency approvals and permits are secured and completed in accordance with DelDOT's Standards and Specifications.

1. The developer shall improve the State-maintained Roads on which they front (Delaware Route 24), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

2. The developer should construct the full-movement Site Entrance on Delaware Route 24. The proposed configuration is shown in the table below.

| Approach | Current Configuration | | Approach | Proposed Configuration | |
|---|---|---|---|---|---|
| Eastbound SR 24 | One left turn lane and one through lane |  | Eastbound SR 24 | One left turn lane, two through lanes, and one right turn lane |  |
| Westbound SR 24 | One through lane and one right turn lane. | | Westbound SR 24 | One left turn lane, two through lanes, and one right turn lane | |
| Northbound | Approach does not exist. | | Northbound Site Entrance | One shared left / through lane and one right turn lane. | |
| Southbound Lexington Avenue | One shared left / right turn lane. Stop Control. | | Southbound Lexington Avenue | One shared left / through lane and one right turn lane. | |

At the proposed Site Entrance intersection, an eastbound right-turn lane is warranted on SR 24 based on DelDOT's Auxiliary Lane Worksheet, Figure 5.2.9.1-b. Initial recommended minimum turn lane length (excluding taper) is a 400-foot right-turn lane on eastbound SR 24. The westbound left-turn lane should be designed to accommodate the 95$^{th}$ percentile queues. Initial recommended minimum turn lane length (excluding taper) is a 400-foot left-turn lane on westbound SR 24. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

3. The developer should enter into a traffic signal agreement to design and construct a traffic signal with pedestrian crossings at the intersection of Site Entrance / Lexington Avenue and SR 24. SR 24 should be widened to include two 11-foot through lanes and 5-foot bicycle lanes in each direction within the extents of the site frontage. Beginning at the western extent of the site frontage, a minimum 150-foot eastbound lane addition taper should be provided to add the second eastbound through lane. Beginning west of the intersection, a minimum 495-foot westbound lane drop taper should be provided. At the signalized intersection there should be dedicated left-turn lanes and channelized right-turn lanes on each SR 24 approach, and on the northbound and southbound approaches there should be a shared left / through lane and a channelized right-turn lane. Initial recommended minimum turn lane lengths (excluding tapers) are a 250-foot eastbound left-turn lane, a 240-foot westbound right-turn lane, a 160-foot northbound right-turn lane, and a 100-foot southbound right-turn lane. At the signalized intersection the developer should also construct signalized pedestrian crossings on all approaches. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane

lengths and other design details during the site plan review. The developer will be granted credit against their TID fee for this work.

4. The developer shall pay the Henlopen TID fee. The developer should coordinate with DelDOT regarding the TID fee amount and payment terms.

5. The following bicycle and pedestrian improvements should be included:

   a. Per the DelDOT Development Coordination Manual section 5.2.9.2, bicycle lanes are required where right-turn lanes are being installed.

   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.

   c. Utility covers should be made flush with the pavement.

   d. A minimum 15-foot-wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontages along Delaware Route 24. Within the easement, a minimum of a 10-foot wide shared-use path should be constructed. The shared-use path should meet AASHTO and ADA standards and should have a minimum of a five-foot buffer from the roadway. At the property boundaries, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at or before both boundaries of the property.

   e. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.

   f. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five-feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. Internal sidewalks in the development should connect to the proposed shared-use path along the site frontages.

   g. Construct a bus stop pad on SR 24 within the site frontage. Bus stop pad should connect to shared use paths and sidewalks along the site frontage. Location, size, and type of bus pad will be determined through coordination with the Delaware Transit Corporation (DTC).

Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines*. These guidelines are available on DelDOT's website at http://deldot.gov/Publications/manuals/de mutcd/index.shtml.

Please note that this review generally focuses on capacity and level of service issues; additional safety and operational issues will be further addressed through DelDOT's site plan review process.

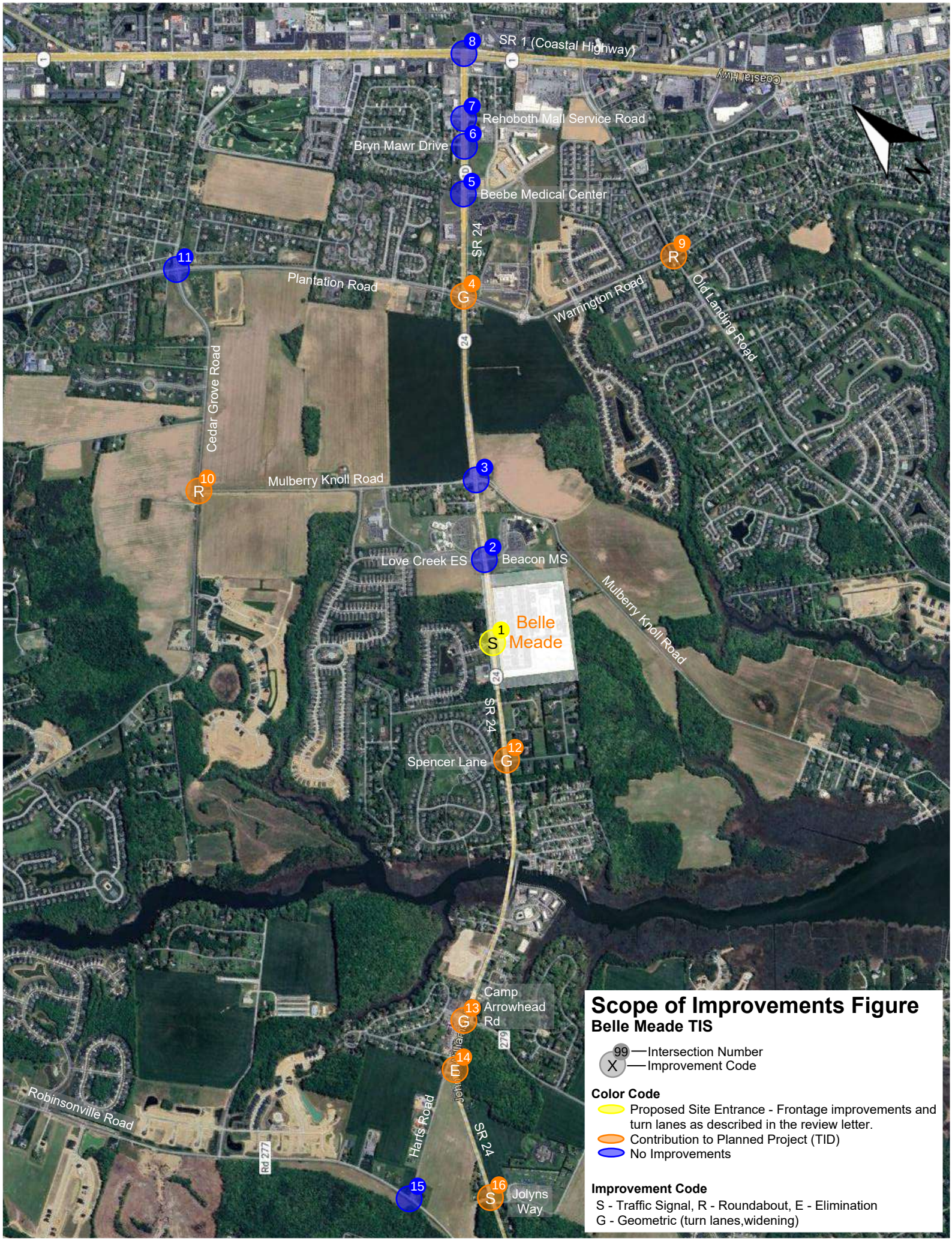
Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

**McCormick Taylor, Inc.**

Andrew J. Parker, PE, PTOE
Project Manager

Enclosure


SR 1 (Coastal Highway)
Coastal Hwy
Rehoboth Mall Service Road
Bryn Mawr Drive
Beebe Medical Center
SR 24
Plantation Road
Warrington Road
Old Landing Road
Cedar Grove Road
Mulberry Knoll Road
Love Creek ES
Beacon MS
Belle Meade
Spencer Lane
Camp Arrowhead Rd
Robinsonville Road
Harts Road
Rd 277
Jolyns Way
Scope of Improvements Figure
Belle Meade TIS
99 — Intersection Number
X — Improvement Code
Color Code
Proposed Site Entrance - Frontage improvements and turn lanes as described in the review letter.
Contribution to Planned Project (TID)
No Improvements
Improvement Code
S - Traffic Signal, R - Roundabout, E - Elimination
G - Geometric (turn lanes,widening)

## General Information

**Report date:** February 2024
**Prepared by:** Becker Morgan Group, Inc
**Prepared for:** Capano Management, Inc.
**Tax parcel:** 334-18.00-40.01
**Generally consistent with DelDOT's Development Coordination Manual:** Yes

## Project Description and Background

**Description:** The proposed Belle Meade development consists of 125,000 square feet of retail space, 480 low-rise multi-family houses.
**Location:** The site is located along the south side of Delaware Route 24, approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. A site location map is included on page 11.
**Amount of land to be developed:** an approximately 38.33-acre parcel.
**Land use approval(s) needed:** The subject land is currently zoned AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial).
**Proposed completion year:** 2032
**Proposed access locations:** One full access point is proposed on Delawar Route 24 opposite Lexington Avenue.
**Average Daily Traffic Volumes (per DelDOT Traffic Summary 2022):**

- Delaware Route 24: 18,591 vehicles/day

Mulberry Knoll Road
SR 24
N
Mulberry Knoll Road
SR 24
Site Location Map
Proposed Entrance

## 2020 Delaware Strategies for State Policies and Spending

**Location with respect to the Strategies for State Policies and Spending Map of Delaware:**
The proposed Belle Meade development is located within Investment Level 2.

*Investment Level 2*
This investment level has many diverse characteristics. These areas can be composed of less developed areas within municipalities, rapidly growing areas in the counties that have or will have public water and wastewater services and utilities, areas that are generally adjacent to or near Investment Level 1 Areas, smaller towns and rural villages that should grow consistently with their historic character, and suburban areas with public water, wastewater, and utility services. These areas have been shown to be the most active portion of Delaware's developed landscape. They serve as transition areas between Level 1 and the more open, less populated areas. They generally contain a limited variety of housing types, predominantly detached single-family dwellings.

In Investment Level 2, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity.

Investments should encourage departure from the typical single-family-dwelling developments and promote a broader mix of housing types and commercial sites encouraging compact, mixed-use development where applicable. Overall, the State's intent is to use spending and management tools to promote well-designed development in these areas. Such development provides for a variety of housing types, user-friendly transportation systems, and provides essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community. Investment Level 2 areas are prime locations for designating "pre-permitted areas."

**Proposed Development's Compatibility with Strategies for State Policies and Spending:**
The proposed Belle Meade development falls within Investment Level 2 and is to be developed as 125,000 square feet of retail space, 480 low-rise multi-family houses. The proposed development is consistent with the character of Investment Level 2. It is therefore concluded that the proposed development appears to generally comply with the policies stated in the 2020 "Strategies for State Policies and Spending."

## Comprehensive Plan

**Sussex County Comprehensive Plan:**
*(Source: Sussex County Comprehensive Plan, March 2019)*

The Sussex County Comprehensive Plan Future Land Use Map indicates that the proposed Belle Meade site is planned for "Commercial" land use. It would appear that the proposed Belle Meade development generally fits within the intended land use for this location.

**Proposed Development's Compatibility with Comprehensive Plan:**
The proposed development appears to comply with the Sussex County Comprehensive Plan. The Belle Meade development is proposed on land that is planned for Commercial use. The land is

zoned as AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial). The proposed development generally aligns with both the Future Land Use Map and the proposed zoning.

**Relevant Projects in the DelDOT Capital Transportation Program**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

## Trip Generation

Trip generation for the proposed development was computed using comparable land uses and equations contained in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers (ITE). The following land use was utilized to estimate the amount of new traffic generated for this development:

- 480 low-rise multi-family dwelling units (ITE Land Use Code 220)
- 125,000 square-foot Retail Space (ITE Land Use Code 821)

**Table 1**
**Peak Hour Trip Generation**

| Land Use | Phase | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Saturday Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| LUC 220<br>LUC 821 | Gross | 173 | 211 | 384 | 249 | 211 | 460 | 336 | 315 | 651 |
| | Pass-by | 0 | 0 | 0 | 114 | 106 | 220 | 127 | 116 | 243 |
| **Total Trips** | | **173** | **211** | **384** | **363** | **317** | **680** | **463** | **431** | **894** |

## Overview of TIS

**Intersections examined:**

1) Site Entrance / Lexington Avenue / Delaware Route 24
2) Delaware Route 24 / Love Creek Elementary School / Beacon Middle School
3) Delaware Route 24 / Mulberry Knoll Road (Sussex Road 284)
4) Delaware Route 24 / Plantations Road / Warrington Road (Sussex Road 275)
5) Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)
6) Delaware Route 24 / Bryn Mawr Drive
7) Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way
8) Delaware Route 1 / Delaware Route 24
9) Warrington Road / Old Landing Road (Sussex Road 274)
10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)
11) Cedar Grove Road / Plantations Road
12) Delaware Route 24 / Spencer Lane / Williams Way
13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)
14) Delaware Route 24 / Harts Road (Sussex Road 277C)
15) Robinsonville Road (Sussex Road 277) / Harts Road
16) Delaware Route 24 / Jolyns Way (Sussex Road 289)

**Conditions examined:**

1) 2022 Existing (Case 1)
2) 2032 without development (Case 2)
3) 2032 with development (Case 3)

**Peak hours evaluated:** Weekday morning, evening, and Saturday mid-day peak hours

**Committed developments considered:**

1) Scenic Manor f.k.a. Estates at Mulberry Knoll (320 single-family detached houses)
2) V□M, LLC (5,000 square-foot super convenience store with gas pumps and a 12,000 square-foot office)
3) Belle Terre (269 single-family detached houses)
4) Arbor-Lyn (142 single-family detached houses)
5) Osprey Point (217 single-family detached houses)
6) Welshes Pond f.k.a. Fieldstone (247 single-family detached houses)
7) Wellesley (132 single-family detached houses)
8) Centre at Love Creek f.k.a. Pelican Landing (84,576 square-foot shopping center)
9) Marsh Island (139 single-family detached houses)
10) Chase Oaks f.k.a. Charter Oak (249 single-family detached houses)
11) Brentwood f.k.a. Coral Lakes (198 single-family detached houses)
12) Tanager Woods f.k.a. Street Property (173 single-family detached houses)
13) Middle Creek Preserve (313 single-family detached houses)
14) Hailey's Glen f.k.a. Kielbasa Property (68 single-family detached houses)
15) Beachtree Preserve (155 single-family detached houses)

**Intersection Descriptions**

1) **Site Entrance/Lexington Avenue & Delaware Route 24**
   **Type of Control:** Currently unsignalized and proposed to be signalized.
   **Eastbound Approach:** (DE 24) existing one left-turn lane and one through lane; proposed one left-turn, two through, and one right-turn lane.
   **Westbound Approach:** (DE 24) existing one through and one right-turn lane; proposed one left-turn, two through, and one right-turn lane.
   **Northbound Approach:** (Site Entrance) proposed one shared left-through and one right-turn lane.
   **Southbound Approach:** (Lexington Avenue) stop-controlled; currently one shared left/right-turn lane; proposed one shared left/through and one right-turn lane.

2) **Delaware Route 24 / Love Creek Elementary School / Beacon Middle School**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Beacon Middle School) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Love Creek Elementary School) one shared left/through lane and one right-turn lane.

3) **Delaware Route 24 & Mulberry Knoll Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Mulberry Knoll Road) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Mulberry Knoll Road) one shared left/through lane and one right-turn lane.

4) **Delaware Route 24 & Plantation Road / Warrington Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Warrington Road) one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane.
   **Southbound Approach:** (Plantation Road) one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane.

5) **Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Beebe Road) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Entrance to Residence Inn) one shared left/through lane and one right turn lane.

6) **Delaware Route 24 / Bryn Mawr Drive**
   **Type of Control:** three-leg stop controlled intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane and two through lanes.
   **Westbound Approach:** (DE 24) one right-turn lane and two through lanes.
   **Southbound Approach:** (Bryn Mawr Drive) stop-controlled; one shared left-right turn lane.

7) **Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Rehoboth Mall Service Road) one shared left-through lane and one right turn lane.
   **Southbound Approach:** (Hudson Way) one shared left-through lane and one right turn lane.

8) **Delaware Route 1 / Delaware Route 24**
   **Type of Control:** signalized three-leg intersection.
   **Eastbound Approach:** (DE 24) three left-turn lanes and two right-turn lanes.
   **Northbound Approach:** (DE 1) two left-turn lanes and three through lanes.
   **Southbound Approach:** (DE 1) one U-turn lane, three through lanes, and one right turn.

9) **Warrington Road / Old Landing Road (Sussex Road 274)**
   **Type of Control:** all-way stop-controlled four-leg intersection.
   **Eastbound Approach:** (Warrington Road) one left-turn lane and one shared through/right-turn lane.
   **Westbound Approach:** (Strawberry Road) one shared left/through/right-turn lane.
   **Northbound Approach:** (Old Landing Road) one shared left/through/right-turn lane.
   **Southbound Approach:** (Old Landing Road) one shared left/through/right-turn lane.

**10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)**

**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) one shared through/right-turn lane.
**Westbound Approach:** (Cedar Grove Road) one shared left-turn/through lane.
**Northbound Approach:** (Mulberry Knoll Road) stop-controlled; one shared left/right-turn lane.

**11) Cedar Grove Road / Plantation Road**

**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (Cedar Grove Road) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Plantation Road) one left-turn lane, one through lane, and one right-turn lane.
**Southbound Approach:** (Plantation Road) one left-turn lane, one through lane, and one right-turn lane.

**12) Delaware Route 24 / Spencer Lane / Williams Way**

**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Williams Way) stop-controlled; one shared left/through/right-turn lane.
**Southbound Approach:** (Spencer Lane) stop-controlled; one shared left/through lane and one right-turn lane.

**13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)**

**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Camp Arrowhead Road) one left-turn lane, one through lane, and one right-turn lane.
**Southbound Approach:** (Fairfield Road) one left-turn lane and one shared through/right-turn lane.

14) **Delaware Route 24 / Harts Road (Sussex Road 277C)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane and one through lane.
**Westbound Approach:** (DE 24) one through lane and one right-turn lane.
**Southbound Approach:** (Harts Road) stop-controlled; one right-turn lane and one left-turn lane.

15) **Robinsonville Road (Sussex Road 277) / Harts Road**
**Type of Control:** stop-controlled three-leg intersection.
**Westbound Approach:** (Harts Road) stop-controlled; one shared left/right-turn lane.
**Northbound Approach:** (Robinsonville Road) existing one shared through/right-turn lane.
**Southbound Approach:** (Robinsonville Road) existing one shared left-turn/through lane.

16) **Delaware Route 24 / Jolyns Way (Sussex Road 289)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one shared through/right-turn lane.
**Westbound Approach:** (DE 24) one shared left-turn/through lane.
**Northbound Approach:** (Jolyns Way) stop-controlled; one shared left/right-turn lane.

## Safety Evaluation

**Crash Data:** Delaware Crash Analysis Reporting System (CARS) data was provided in the TIS for the three-year period from January 1, 2021, through December 31, 2023. A total of 7 reportable crashes occurred within 0.1 miles of the site access. Three were rear-end, two were sideswipe, one was an angle, and one was a single-vehicle crash. None of the crashes caused any injury or involved pedestrians or bicyclists.

**Sight Distance:** The study area generally consists of relatively flat roadways and there are few visual obstructions. As always adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site accesses.

## Transit, Pedestrian, and Bicycle Facilities

**Existing transit service:** Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates one fixed-route transit bus route in the area of the proposed Belle Meade development. Route 215 Millsboro/Rehoboth runs along DE 24 with the nearest stops located west of the site at the Love Creek Marina and east of the site at Beebe Medical Center.

**Planned transit service:** Delaware Transit Corporation (DTC) has requested that the developer construct a bus stop pad on SR 24 within the site frontage. The location, size, and type of bus pad will be determined through coordination with DTC.

**Existing bicycle and pedestrian facilities**: According to DelDOT's Sussex County Bicycle Map, Delaware Route 24 is designated as a High-Traffic Regional Bicycle Route with a Bikeway. Plantation Road is designated as a High-Traffic Statewide Bicycle Route with a Bikeway. Recent

DelDOT projects along SR 24 have or are in the process of adding bicycle lanes along SR 24 between Love Creek and SR 1. The same projects have also added sidewalks or shared use paths along the same segment of SR 24, except for the segment between Mulberry Knoll Road and Plantation Road / Warrington Road.

**Planned bicycle and pedestrian facilities:** The developer should maintain the existing sidewalk or shared use path along the site frontage that was constructed by the "SR 24, Love Creek to Mulberry Knoll" project. In addition, a signalized pedestrian crossing of SR 24 should be included at the proposed signal at the intersection of SR 24 and Lexington Avenue.

**Previous Comments**

The initial scoping memorandum between the developer and DelDOT was dated December 9, 2022.

In a review letter dated October 6, 2023, DelDOT commented on the traffic counts and seasonally adjusted traffic volumes. The developer was asked to include additional committed developments that were originally included in the scoping memorandum. DelDOT also provided additional count data and directed the developer to update the volume figures.

In a second review letter dated October 30, 2023, DelDOT requested additional revisions to the committed development volumes due to construction detours in the area during the traffic counts. The developer was asked to address the noted issues and proceed with the Preliminary TIS.

In a third review letter dated December 28, 2023, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and distribution. The developer was then directed to resubmit the Preliminary TIS.

In a fourth review letter dated January 25, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and then resubmit the Preliminary TIS.

In a fifth review letter dated February 15, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to revise how growth factors were applied to volumes provided by the Henlopen TID and associated volume figures then resubmit the Preliminary TIS.

In a sixth review letter dated February 19, 2024, DelDOT noted that the Preliminary TIS was acceptable as submitted and directed the developer to proceed with the Final TIS.

It appears that all substantive comments from DelDOT's TIS Scoping Memorandum, Traffic Count Review, Preliminary TIS Review, and other correspondence were addressed in the Final TIS submission.

**General HCS Analysis Comments**
*(see table footnotes on the following pages for specific comments)*

1) Both the TIS and McCormick Taylor utilized Highway Capacity Software (HCS) version 2023 to complete the traffic analyses.

2) The TIS and McCormick Taylor generally used heavy vehicle percentages (HV%) from turning movement counts for existing and future conditions (as per DelDOT's Development Coordination Manual section 2.2.8.11.6.H). McCormick Taylor and the TIS assumed 3% HV for future movements and at the proposed site entrance.

3) The TIS and McCormick Taylor determined overall intersection peak hour factors (PHF) for each intersection based on the turning movement counts. Future PHFs were determined as per the DelDOT Development Coordination Manual section 2.2.8.11.6.F where applicable. The application of future PHFs in the TIS was inconsistent between intersections and volume scenarios.

4) For analyses of all intersections, McCormick Taylor and the TIS assumed 0% grade for all movements.

Table 2
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [1] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **1. SR 24 / Lexington Avenue / Site Entrance** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 – Left | A (8.1) | B (10.4) | A (8.7) | A (8.1) | B (10.5) | A (8.8) |
| Southbound Lexington Avenue | D (30.0) | E (42.7) | E (35.7) | D (30.5) | E (43.0) | E (36.3) |
| | | | | | | |
| 2032 No Build (Case 2) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (13.3) | B (10.5) | A (9.0) | B (13.2) | B (10.4) |
| Southbound Lexington Avenue | E (36.8) | F (90.0) | F (53.2) | F (108.0) | F (251.2) | F (150.1) |
| | | | | | | |
| 2032 Build (Case 3) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (12.8) | B (10.1) | A (9.0) | B (12.7) | B (10.1) |
| Westbound SR 24 – Left | B (13.9) | C (17.7) | D (34.9) | B (13.8) | C (16.6) | E (35.8) |
| Northbound Site Entrance | F (333.4) | F (3337.9) | F (10913) | F (1486.8) | F (17804.0) | F (44574.1) |
| Southbound Lexington Avenue | F (354.3) | F (2563.7) | F (6644.9) | F (3163.6) | F (13387.7) | [3] |
| | | | | | | |
| 2032 Build (Case 3) Signal [2] | | | | | | |
| Overall | - | - | - | B (14.1) | C (28.3) | F (92.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [4] | | | | | | |
| Overall | B (10.2) | B (11.6) | B (19.2) | B (12.0) | B (16.0) | C (25.0) |

[1] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[2] TIS modeled Case 2 and 3 with two through lanes in both eastbound and westbound directions on SR 24. MT modeled with one through lane in each direction based on the proposed condition in the SR 24, Love Creek to Mulberry Knoll Road Project.
[3] Capacity cannot be calculated as intersection volume exceeds HCM limitations.
[4] Henlopen TID proposes two through lanes in each direction along SR 24.

Table 3
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [5] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **2. SR 24 / Love Creek Elementary School / Beacon Middle School** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) [6] | | | | | | |
| Overall | A (9.6) | A (7.7) | A (2.0) | B (14.2) | B (10.4) | A (6.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (6.4) | A (4.6) | A (0.6) | B (10.3) | A (5.4) | C (20.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (5.9) | A (4.5) | A (0.8) | C (23.3) | A (7.3) | D (41.3) |

[5] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[6] TIS modeled intersection in Case 1 with one through lane in each direction. Existing conditions, following the completion of the SR 24, Love Creek to Mulberry Knoll Road Project, will have two through lanes in each direction along SR 24.

Table 4
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [7] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **3. SR 24 / Mulberry Knoll Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (8.8) | A (9.3) | B (18.1) | A (8.9) | A (8.3) | B (17.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (30.5) | D (46.0) | E (78.1) | B (19.9) | C (23.3) | C (28.5) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (37.0) | D (52.3) | F (85.0) | C (20.7) | C (24.9) | C (30.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID)[8] | | | | | | |
| Overall | - | - | - | B (17.1) | B (16.4) | C (23.5) |

[7] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[8] Henlopen TID proposes the addition of dedicated right-turn lanes on both minor street approaches. The turn lanes are modeled with 180-foot storage length.

Table 5
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [9] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **4. SR 24 / Plantation Road / Warrington Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | C (23.3) | C (31.8) | C (34.6) | D (36.6) | D (44.1) | D (50.4) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (26.1) | C (35.6) | D (39.0) | C (32.4) | D (53.6) | D (50.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (26.7) | D (37.5) | D (40.7) | C (31.5) | E (60.8) | D (54.8) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [10] | | | | | | |
| Overall | - | - | - | C (28.8) | D (49.5) | D (42.0) |

[9] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[10] The Henlopen TID conceptual design includes two left turn lanes, two through lanes, and one right turn lane on the Warrington Road and Plantation Road approaches.

Table 6
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [11] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **5. SR 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (1.5) | A (5.1) | A (1.3) | A (1.8) | A (9.4) | A (7.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (1.3) | A (3.8) | A (1.3) | A (1.3) | B (10.9) | B (11.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (1.3) | A (3.7) | A (1.3) | A (1.7) | B (11.1) | B (12.2) |

[11] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 7
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [12] Two-Way Stop-Control** | **LOS per TIS [13]** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **6. SR 24 / Bryn Mawr Drive** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | B (10.4) | B (11.4) | B (11.7) | A (8.5) | A (9.5) | A (8.8) |
| Southbound Bryn Mawr Drive | C (15.1) | C (20.1) | C (21.8) | C (18.7) | C (20.1) | C (23.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | B (12.4) | C (17.0) | C (18.1) | A (8.9) | B (11.3) | B (11.1) |
| Southbound Bryn Mawr Drive | C (17.4) | D (29.6) | D (33.7) | D (30.6) | E (49.5) | F (56.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | B (11.5) | B (14.1) | C (15.1) | A (9.1) | B (11.7) | B (11.7) |
| Southbound Bryn Mawr Drive | C (17.1) | D (25.7) | D (29.4) | E (35.8) | F (62.4) | F (75.2) |

[12] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[13] TIS modeled this intersection with three though lanes in each direction on SR 24 which does not match the existing or proposed conditions.

Table 8
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [14] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **7. SR 24 / Rehoboth Mall Service Road / Hudson Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (3.1) | A (8.0) | A (5.4) | A (3.8) | B (10.7) | A (5.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (2.5) | A (6.0) | A (4.3) | A (2.5) | A (7.4) | A (5.0) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (2.4) | A (5.7) | A (4.1) | A (3.2) | A (7.1) | A (4.2) |

[14] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 9
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [15] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **8. SR 24 / SR 1** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (19.7) | C (23.0) | D (39.2) | B (17.8) | C (22.9) | C (24.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | D (43.2) | D (52.2) | E (77.3) | C (23.6) | C (32.1) | C (29.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (46.2) | E (56.5) | F (83.9) | C (29.8) | D (35.1) | C (33.1) |

[15] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 10
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [16] All-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **9. Warrington Road / Old Landing Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound Warrington Road | D (31.6) | C (23.3) | F (116.1) | D (28.4) | C (20.4) | F (102.7) |
| Westbound Strawberry Way | A (9.5) | A (9.6) | B (11.1) | A (9.6) | A (9.7) | B (11.2) |
| Northbound Old Landing Road | C (15.7) | B (12.9) | C (22.5) | C (15.6) | B (12.8) | C (22.3) |
| Southbound Old Landing Road | B (12.3) | C (20.3) | D (31.6) | B (12.3) | C (20.0) | D (31.2) |
| Overall | C (22.9) | C (20.0) | F (66.0) | C (21.2) | C (18.7) | F (60.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound Warrington Road | F (130.4) | F (131.1) | F (336.8) | F (75.9) | F (51.7) | F (216.8) |
| Westbound Strawberry Way | B (10.7) | B (12.1) | B (12.9) | B (10.8) | B (12.1) | B (13.0) |
| Northbound Old Landing Road | C (22.4) | c (20.2) | E (42.8) | C (22.1) | C (20) | E (42.4) |
| Southbound Old Landing Road | C (15.2) | F (88.0) | F (103.2) | C (15.1) | F (89.9) | F (101.8) |
| Overall | F (76.7) | F (91.8) | F (192.0) | E (48.5) | F (60.2) | F (138.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound Warrington Road | F (161.0) | F (155.6) | F (380.1) | F (115.3) | F (62.0) | F (243.9) |
| Westbound Strawberry Way | B (10.8) | B (12.2) | B (13.0) | B (10.9) | B (12.3) | B (13.1) |
| Northbound Old Landing Road | C (23.4) | C (20.9) | E (46.7) | C (23.1) | C (20.8) | E (46.3) |
| Southbound Old Landing Road | C (16.1) | F (105.0) | F (128.6) | C (16.0) | F (103.4) | F (127.6) |
| Overall | F (93.3) | F (108.9) | F (221.0) | F (57.0) | F (69.8) | F (159.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Roundabout | | | | | | |
| Overall | B (10.6) | B (11.7) | C (20.4) | B (10.6) | B (11.7) | C (20.4) |

[16] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 11
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [17] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **10. Mulberry Knoll Road / Cedar Grove Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.2) | A (7.6) | A (9.8) | A (8.1) | A (7.6) | A (9.9) |
| Northbound Mulberry Knoll Road | B (11.5) | B (11.1) | C (20.5) | B (11.8) | B (11.1) | C (20.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.3) | A (8.9) | A (8.3) | B (12.3) |
| Northbound Mulberry Knoll Road | C (20.1) | D (32.5) | F (614.3) | C (20.1) | D (32.5) | F (614.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (22.3) | E (40.4) | F (837.7) | C (22.3) | E (40.4) | F (837.7) |
| | | | | | | |
| 2032 Build (Case 3) w/ improvements [18] | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (19.3) | D (33.9) | F (581.4) | C (19.3) | D (33.9) | F (581.4) |
| | | | | | | |
| 2032 Build (Case 3) Roundabout [19] | | | | | | |
| Overall | - | - | - | A (6.9) | A (6.7) | C (18.0) |

[17] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[18] The TIS proposes to construct a dedicated eastbound right-turn lane on Cedar Grove Road.
[19] Henlopen TID proposes a roundabout at this intersection.

Table 12
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [20] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **11. Cedar Grove Road / Plantation Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (18.3) | B (18.3) | C (31.2) | B (17.6) | B (17.7) | C (34.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | B (19.8) | C (22.5) | D (41.4) | B (18.8) | C (21.0) | C (34.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (20.2) | C (23.3) | D (44.4) | B (19.1) | B (21.9) | D (44.8) |

[20] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 13
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [21] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **12. SR 24 / Spencer Lane / Williams Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.6) | B (10.4) | A (8.6) | A (8.6) | B (10.4) | A (8.6) |
| Westbound SR 24 - Left | A (9.8) | A (8.9) | B (10.0) | A (9.8) | A (8.9) | B (10.0) |
| Northbound Williams Way | C (24.3) | F (56.0) | D (31.2) | C (24.3) | F (56.0) | D (31.2) |
| Southbound Spencer Lane | C (24.3) | E (44.1) | E (40.6) | C (24.3) | E (44.1) | E (40.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (12.9) | B (10.2) | A (9.6) | B (13.5) | B (10.4) |
| Westbound SR 24 - Left | B (11.5) | B (10.6) | B (12.3) | B (11.5) | B (10.9) | B (12.7) |
| Northbound Williams Way | F (52.4) | F (220.3) | F (97.8) | F (52.4) | F (284.6) | F (115.8) |
| Southbound Spencer Lane | F (65.8) | F (233.6) | F (221.1) | F (65.8) | F (330.5) | F (291.9) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | A (10.0) | B (13.5) | B (10.8) | A (10.0) | B (14.2) | B (11.0) |
| Westbound SR 24 - Left | B (11.9) | B (11.1) | B (13.3) | B (11.9) | B (11.4) | B (13.8) |
| Northbound Williams Way | F (65.5) | F (305.4) | F (148.5) | F (65.5) | F (406.1) | F (181.6) |
| Southbound Spencer Lane | F (91.3) | F (535.2) | F (408.7) | F (91.3) | F (505.6) | F (547.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [22] | | | | | | |
| Eastbound SR 24 - Left | - | - | - | B (10.4) | B (14.5) | B (11.1) |
| Westbound SR 24 - Left | - | - | - | B (12.0) | B (11.5) | B (13.9) |
| Northbound Williams Way | - | - | - | E (41.9) | F (130.2) | F (86.1) |
| Southbound Spencer Lane | - | - | - | D (33.3) | F (176.2) | F (117.7) |

[21] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[22] Henlopen TID proposes left-turn lanes, two through lanes, and right turn lanes on both SR 24 approach at this intersection.

Table 14
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [23] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **13. SR 24 / Camp Arrowhead Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (10.5) | B (13.7) | B (14.6) | B (12.4) | B (15.8) | B (16.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (27.4) | E (59.5) | F (88.3) | B (10.6) | B (17.8) | B (18.2) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (45.3) | F (89.5) | F (129.1) | B (12.3) | D (38.9) | E (58.6) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [24] | | | | | | |
| Overall | - | - | - | A (6.5) | B (11.0) | B (12.2) |

[23] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[24] Henlopen TID proposes an additional through lane in both directions of SR 24.

Table 15
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [25] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **14. SR 24 / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.4) | A (9.4) | A (8.5) | A (8.2) | A (9.5) | A (8.5) |
| Southbound Harts Road | C (16.8) | E (37.7) | D (31.7) | C (18.6) | E (38.6) | D (32.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.3) | B (11.5) | A (9.9) | A (9.3) | B (11.5) | A (9.9) |
| Southbound Harts Road | F (109.5) | F (648.1) | F (541.0) | F (109.5) | F (648.1) | F (541.0) |
| | | | | | | |
| 2032 Build (Case 3) [26] | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (11.9) | B (10.4) | A (9.6) | B (11.9) | B (10.4) |
| Southbound Harts Road | F (198.1) | F (989.8) | F (982.7) | F (198.1) | F (989.8) | F (982.7) |

[25] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[26] Henlopen TID proposes the removal of this intersection.

Table 16
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [27] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **15. Robinsonville Road / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Harts Road | B (10.1) | B (13.2) | B (12.7) | B (10.1) | B (13.2) | B (12.7) |
| Southbound Robinsonville Road - Left | A (7.8) | A (7.6) | A (7.9) | A (7.8) | A (7.6) | A (7.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Harts Road | B (11.5) | A (25.1) | C (19.8) | B (11.8) | A (29.5) | C (19.8) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.2) | A (8.7) | A (8.2) | A (8.3) | A (8.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Harts Road | B (11.7) | D (29.7) | C (23.2) | B (12.0) | D (29.7) | C (20.5) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.3) | A (8.8) | A (8.3) | A (8.3) | A (8.7) |

[27] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 17
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [28] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **16. SR 24 / Jolyns Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound SR 24 - Left | A (8.7) | A (8.3) | A (9.1) | A (9.0) | A (8.3) | A (9.1) |
| Northbound Jolyns Way | C (16.0) | C (15.6) | C (20.8) | C (16.6) | C (16.1) | C (20.8) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound SR 24 - Left | A (9.4) | A (9.1) | B (10.2) | A (9.4) | A (9.1) | B (10.2) |
| Northbound Jolyns Way | C (22.2) | C (24.5) | E (37.1) | C (22.2) | C (24.5) | E (37.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound SR 24 - Left | A (9.6) | A (9.3) | B (10.6) | A (9.6) | A (9.3) | B (10.6) |
| Northbound Jolyns Way | C (24.3) | D (27.5) | E (45.3) | C (24.3) | D (27.5) | E (45.3) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [29] | | | | | | |
| Overall | - | - | - | A (1.5) | A (1.6) | A (1.4) |

[28] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

[29] Henlopen TID proposes to signalize this intersection with two through lanes and dedicated turn lanes in each direction along SR 24, extending Jolyns Way north of SR 24 to connect to Robinsonville Road forming a northern leg of the intersection, and adding dedicated right turn lanes on both Jolyns Way approaches. The capacity analysis for the Case 3 with TID results above modeled the intersection without the proposed northern leg because traffic volumes have not been prepared for this condition.

# Off-Site Improvements – Opinion of Cost

The Final TIS recommendations from DelDOT included development improvements as follows: frontage improvements, full movement signalized Site Entrance at the intersection of Lexington Ave. and DE Rt. 24 with auxiliary turn lanes, bicycle and pedestrian improvements and Henlopen TID fees to be paid as determined by DelDOT.

Based on the 2025 rate schedule the project's contribution to the Henlopen TID is estimated at approximately □2,800,000.00.

In addition to the TID, the project's frontage improvements, as recommended by the Traffic Impact Study, are estimated at approximately □1,400,000.00

There are no off-site drainage, sewer, or water costs anticipated with the project scope. Impact fees to the appropriate infrastructure owner's will be calculated at the time of payment, based on the most currently adopted rate schedules.

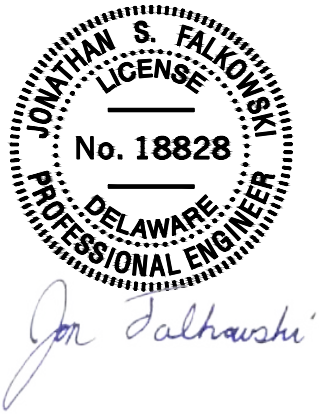
# ENVIRONMENTAL ASSESSMENT & PUBLIC FACILITIES EVALUATION REPORT (EAPFR)

**FOR**

# BELMEAD FARM LLC
# (CZ 2001)

Sussex County, Delaware

February 2025




Prepared by:

Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

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- a. Summary in accordance with §115-194.3 – Coastal Area, Subparagraph B(2).

3.0 **APPENDIX**
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- b. County Zoning Map
- c. Future Land Use Map
- d. Wetlands Delineation Report
- e. US Fish and Wildlife Service – Threatened and Endangered Species List
- f. DelDOT Service Level Evaluation Request Response Letter
- g. DelDOT Final Traffic Impact Study (TIS)

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# 1.0 Rezoning Application

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

November 23, 2022

Sussex County
Planning and Zoning
2 The Circle
Georgetown, DE 19947
Attn: Mr. Jamie Whitehouse

RE: Rezoning Application
**BELLE MEAD FARM**
John J Williams Hwy
Lewes, Delaware
2022079.00

Dear Mr. Whitehouse:

Please find attached Zoning Map Amendment Application and Fee for the property otherwise known as the Belle Mead Farm in Lewes, Delaware. As previously discussed with you, we will be following up the application with the required site plans and other documents at a later date. It was agreed that the submittal of the Zoning Map Application and Fee would be adequate to get this project into the queue for a hearing scheduling.

If you have any questions, please feel free to contact us at any time.

Kind regards,

J. Michael Riemann, PE
Becker Morgan Group
Vice President

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

PORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JACKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

www.beckermorgan.com

File #: _____

# Planning & Zoning Commission Application
# Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
**302-855-7878 ph. 302-854-5079 fax**

**Type of Application: (please check applicable)**
Conditional Use ___
Zoning Map Amendment ✔

**Site Address of Conditional Use/Zoning Map Amendment**

20044(+/-) John J Williams Hwy - Belle Mead Farm - Route 24

**Type of Conditional Use Requested:**

**Tax Map #:** 334-18.00-40.01 & 334-18.00-40.06 **Size of Parcel(s):** 39.22 +/- ac.

**Current Zoning:** AR-1 **Proposed Zoning:** C4 **Size of Building:** TBD

**Land Use Classification:** COMMERCIAL

**Water Provider:** TIDEWATER **Sewer Provider:** SUSSEX COUNTY

**Applicant Information**

Applicant Name: BELMEAD FARM LLC
Applicant Address: 105 FOULK ROAD
City: WILMINGTON State: DE ZipCode: 19803
Phone #: 429-8700 E-mail: _____

**Owner Information**

Owner Name: BELMEAD FARM LLC
Owner Address: 105 FOULK ROAD
City: WILMINGTON State: DE Zip Code: 19803
Phone #: 429-8700 E-mail: _____

**Agent/Attorney/Engineer Information**

Agent/Attorney/Engineer Name: BECKER MORGAN GROUP, INC
Agent/Attorney/Engineer Address: 309 S. GOVERNORS AVE
City: DOVER State: DE Zip Code: 19904
Phone #: 734-7950 E-mail: MRIEMANN@BECKERMORGAN.COM

# Check List for Sussex County Planning & Zoning Applications

**The following shall be submitted with the application**

x **Completed Application**

x **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

x **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

__ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

x **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

x **DelDOT Service Level Evaluation Request Response**

x **PLUS Response Letter** (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

***Signature of Applicant/Agent/Attorney***

Date: 11/22/22

***Signature of Owner***

Date: 11/14/2022

*For office use only:*

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm

cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

Document# 2022000032608 BK: 5734 PG: 290
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Consideration: $5,100,000.00 County/Town: $76,500.00 State: $127,500.00 Total: $204,000.00
Doc Surcharge Paid Town: SUSSEX COUNTY

TAX PARCEL #: 3-34-18.00-40.01

PREPARED BY & RETURN TO:
Parkowski, Guerke & Swayze, P.A.
19354C Miller Road
Rehoboth Beach, DE 19971
File No. 015-22/VGR

NO SURVEY WAS PERFORMED OR REQUESTED

**THIS DEED**, made this 3 day of June, 2022,

- BETWEEN -

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED** and **THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**, of 722 NE 2nd Street, Delray Beach, FL 33483, parties of the first part,

- AND -

**BELMEAD FARM, LLC**, a Delaware limited liability company, of 28855 Lewes Georgetown Hwy, Lewes, DE 19958, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of Ten Dollars and 00/100 ($10.00), lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

**ALL** that certain lot, piece and parcel of land lying and being in Lewes and Rehoboth Hundred, Sussex County and State of Delaware, lying and being along the southeastern right of way of State Route 24 (50 feet wide), more particularly described as follows, to wit:

**BEGINNING** at an iron pipe situate along the aforesaid southwesterly right of way of State Route 24, said point being the common boundary of these lands and lands now or formerly of Mudiwa and Preachess Vellah Munyikwa; thence by and with said right of way North 42 degrees 12 minutes 08 seconds East, 1,451.40 feet to a capped rebar; thence leaving the aforesaid right of way and running by and with lands now or formerly of Cape Henlopen School District South 47 degrees 36 minutes 26 seconds East, 1,205.68 feet to a found rebar; thence running by and with lands now or formerly of Alfred G. Best, Trustee, and lands now or formerly of Linda Elizabeth Best, South 40 degrees 01 minutes 32 seconds West, 365.05 feet to an iron pipe;

thence by and with other lands of Grantor, South 40 degrees 40 minutes 22 seconds West, 1,064.47 feet to a found rebar; thence by and with lands now or formerly of John and Deanna Hoover, North 48 degrees 38 minutes 42 seconds West, 611.81 feet to a found rebar; thence by and with lands now or formerly of Frank and Marlene Bracale, North 48 degrees 40 minutes 10 seconds West, 411.81 feet to an iron pipe; thence by and with lands now or formerly of Mudiwa and Preachess Vellah Munyikwa, North 48 degrees 36 minutes 49 seconds West, 224.47 feet to the point and place of Beginning, said to contain 40.61 acres of land as depicted on the Perimeter Survey prepared by Compass Point Associates dated January 17, 2011, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, Delaware.

**BEING** the same lands and premises which were conveyed unto Mark H. Ronald Trust dated 3/8/2007, as amended, Mark H. Ronald and Mary Ann Ronald, Trustees, either of whom may act independently, and Mary Ann Ronald Trust dated 3/8/2007, as amended, Mary Ann Ronald and Mark H. Ronald, Trustees, either of whom may act independently, by Deed of J.G. Townsend, Jr. & Co. dated January 28, 2011, and recorded February 1, 2011, in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 3862, Page 170.

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ TRUSTEE (SEAL)
**Mark H. Ronald, Trustee**

**THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ Trustee (SEAL)
**Mary Ann Ronald, Trustee**

Document# 2022000032608 BK: 5734 PG: 292
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Doc Surcharge Paid

STATE OF Florida, COUNTY OF Palm Beach: to-wit

**BE IT REMEMBERED**, that on 06/03, 2022, personally came before me, the subscriber, Mark H. Ronald, Trustee of the Mark H. Ronald Trust dated March 8, 2007, as amended, and Mary Ann Ronald, Trustee, of the Mary Ann Ronald Trust dated March 8, 2007, as amended, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

GIVEN under my Hand and Seal of Office the day and year aforesaid.

JUNAE MCPHERSON
Notary Public - State of Florida
Commission # HH 206991
My Comm. Expires Dec 13, 2025

Notary Public

My Commission Expires: 12/13/25

# 2.0 Environmental Assessment and Public Facility Evaluation Report

## Belmead Farm, LLC

| | |
|---|---|
| Tax Maps: | 334-18.00-40.01 □ 40.06 |
| Parcel Acreage: | □39.22 Acres |
| Existing Zoning: | AR-1: Agricultural Residential |
| Proposed Zoning: | C-4: Planned Commercial District |
| 2019 Future Land Use: | Commercial and Coastal Area |
| Site Investment Area: | Level 2, 3 □ 4 |
| Chapter 89 Water Source: | "Fair" Groundwater Recharge Area |
| | "No" Wellhead Protection Area |
| Wetlands: | Freshwater Forested □ Shrub Wetland (PFO1R) |
| Flood Zone: | Zone X – Map 10005C0334K; 03/16/2015 |
| Watershed: | Rehoboth Bay Watershed |
| TID: | Henlopen |
| Access / Road Frontage: | John J. Williams Hwy. (SR00024) |
| Sanitary Sewer Supplier: | Tier 2 – Sussex County Planning Area |
| Water Supplier: | Tidewater Utilities Inc. |

**§115-194.3 – Coastal Area, Subparagraph B (2).**

a) *Proposed drainage design and the effect on stormwater quality and quantity leaving the site, including methods for reducing the amount of phosphorous and nitrogen in the stormwater runoff and the control of any other pollutants such as petroleum hydrocarbons or metals*

The proposed development of the parcels will follow all applicable State and local stormwater management regulations and will meet or exceed quality and quantity management standards. Through the use of Green Technology Best Management Practices (GTBMP's), the proposed stormwater management facilities will reduce the phosphorous and nitrogen loading. The improvements are not anticipated to produce other pollutants such as petroleum hydrocarbons or metals. Should a commercial tenant require the need for petroleum pollutant measures, appropriate filtration will be utilized in accordance with State and local regulations.

b) *Proposed method of providing potable and, where appropriate, irrigation water and the effect on public or private water systems and groundwater, including an estimate of average peak demands.*

The parcels are located in Tidewater Utilities area and will serve the project's water source. The proposed water system design will be in accordance with all codes and regulations set forth by Sussex County, DHSS Office of Drinking Water and Tidewater. Tidewater's franchise area has been evaluated for groundwater impacts to ensure no adverse impacts. The anticipated water demand is 68,625 gallons/day.

c) *Proposed means of wastewater treatment and disposal with an analysis of the effect on the quality of groundwater and surface waters, including alternative locations for on site septic systems*

The parcels are located within Sewer Tier 2 – Sussex County Planning area and a future request to annex to the Tier 1 - Unified Sanitary Sewer District will be made as the parcels are directly adjacent to the Tier 1 District. It is anticipated that a gravity sewer collection system will be designed and installed to collect and convey wastewater. All sewer systems will be designed to follow all the codes and regulations of the Sussex County Ordinance.

d) *Analysis of the increase in traffic and the effect on the surrounding roadway system.*

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The Final TIS recommendations from DelDOT included development improvements as follows: frontage improvements, full movement signalized Site Entrance at the intersection of Lexington Ave. and DE Rt. 24 with auxiliary turn lanes, bicycle and pedestrian improvements and Henlopen TID fees to be paid as determined by DelDOT.

e) *The presence of any endangered or threatened species listed on federal or state registers and proposed habitat protection areas.*

A Rare Species Search per the United States Fish and Wildlife Service (USFWS) database for the likelihood of rare and endangered species was performed. Two potential species were identified based on the search. The tri-colored bat, which the USFWS usually suggests that if tree clearing is required within the breeding season, then a summer survey should be conducted to determine whether the bats are present. Tree clearing is usually restricted to the time period between Oct. 1 and March 31 to avoid impacts to the listed bat species. The Monarch Butterly requires specialized habitat (milkweed) for breeding. Suitable habitat for the species is not likely or anticipated to occur within the development area.

f) *The preservation and protection from loss of tidal or nontidal wetlands on the site.*

Freshwater Forested/Shrub Wetland habitat was identified on the subjected site. No wetlands will be disturbed with the proposed development and the County required buffers will be respected. A wetlands delineation report is included with the project packet.

g) *Provisions for open space as defined in § 115-4*

The project offers recreational facilities such as a clubhouse, swimming pool, play areas and walking paths. Several stormwater management facilities are proposed which have a demonstrated recreational value and provide scenic vistas, while providing wildlife corridors. The project will respect all buffers and maintain significant forested areas and will not disturb existing wetlands found on-site.

h) *A description of provisions of public and private infrastructure*

The project proposes a mix of both public and private infrastructure. Public infrastructure includes construction of water and sewer main that will be turned over to respective utility providers. In addition, significant improvements along DE Rt. 24 will be constructed, including auxiliary turn lanes, traffic signal with pedestrian crossings and a paved shared-use path, providing multi-modal transportation network paths. Private infrastructure includes roadways, sidewalks, parking, other utilities and stormwater management areas, etc. which will be privately owned and maintained.

i) *Economic, recreational or other benefits*

The project holds significant potential not only for job creation but also for addressing critical gaps in workforce development within Sussex County. By providing commercial job growth opportunity, economic development and affordable housing, the project aims to deliver much needed services and housing to the local community.

j) *The presence of any historic or cultural resources that are listed on the National Register of Historic Places*

No existing presence of historic or cultural resources were listed per the National Register of Historic Places.

k) *A description of how the proposed application and proposed mitigation measures are in conformance with the current Sussex County Comprehensive Plan*

The current Sussex County Comprehensive Plan includes a Future Land Use Map to help determine how land should be zoned, to ensure responsible development. The Future Land Use map in the plan indicates that the subject property has land use designation of "Commercial Area" and "Coastal Area." The parcels would otherwise be entirely identified as "Commercial Area" if not for a small portion of "Coastal Area" on parcel 40.01, which is not planned for development as it is located within a wetland area along Dorman Branch, in the southwestern most portion of the parcel.

As outlined in the Comprehensive Plan, Coastal Areas are areas that can accommodate development provided that special environmental concerns are addressed. As this area is

not intended to be developed, the development plan is consistent with the Comprehensive Plan for Coastal Areas. (Sussex County Comprehensive Plan, 4-15).

Commercial Areas include retail and service uses that are mainly located along higher functional classification roadways such as highways and arterials. Route 24 is classified by DelDOT as a "Principal Arterial". As opposed to small, traditional downtown areas that are often historic and pedestrian-friendly, Commercial Areas include commercial corridors, shopping centers, and other medium and large commercial vicinities geared towards vehicular traffic. In addition to primary shopping destinations, this area would also be the appropriate place to locate hotels, motels, car washes, auto dealerships, l and other medium and larger scale commercial uses not primarily targeted to the residents of immediately adjacent residential areas. These more intense uses should be located along main roads or near major intersections. Institutional and commercial uses may be appropriate depending on surrounding uses. Mixed-use buildings may also be appropriate for these areas (Sussex County Comprehensive Plan, 4-17). The development plan includes a mix of retail, service uses, medium scale commercial and mixed use buildings as is consistent with the Comprehensive Plan.

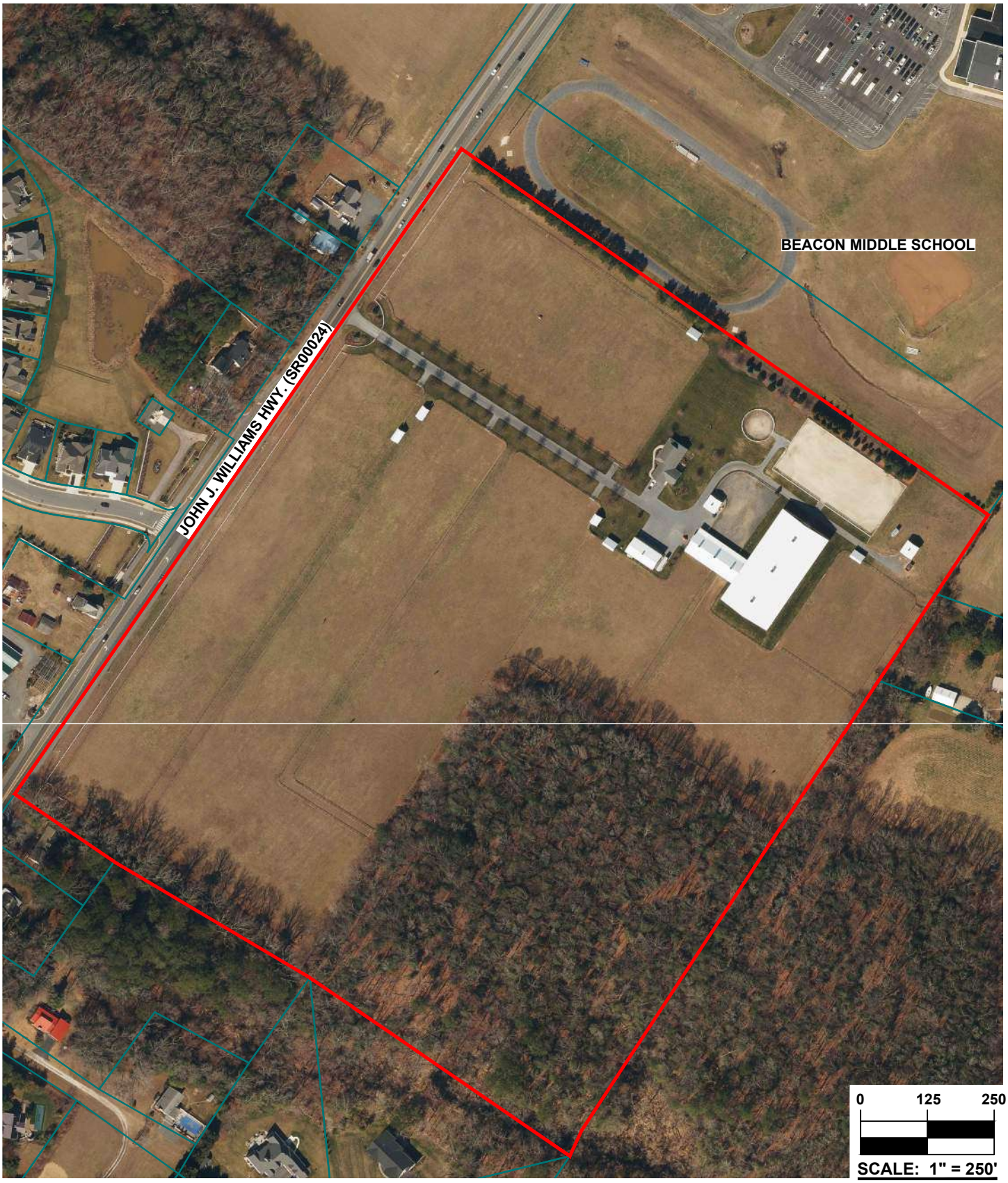
The proposed zoning of C-4: Planned Commercial District is consistent with the intended Future Land Use designation of Commercial Use as an applicable zoning district within the Growth Area. The C-4 zoning allows for a maximum of forty (40) percent of its developable area to consist of duplexes, townhouses or multifamily dwellings which helps promote development designed to support both residential and commercial uses as noted in 4.6.3.

The subject parcels are also located within the planned Henlopen Transportation Improvement District, which DelDOT is working alongside Sussex County to correspond with their Comprehensive Plan.

l) *Actions to be taken by the applicant to mitigate the detrimental impacts identified relevant to Subsection B(2)(a) through (k) of the manner in which they are consistent with the Comprehensive Plan.*

All mitigation measures, identified relevant to sections (a) through (k) are identified above in each respective section.

# 3.0 Appendix




LAYER STATE: LOCATIONS

## SITE LOCATION MAP
# BELLE MEADE FARMS

REHOBOTH BEACH
SUSSEX COUNTY / DELAWARE

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

| | |
|---|---|
| BMG: | 2022079.00 |
| SCALE: | 1" = 250' |
| DATE: | 12/23/24 |
| DRAWN BY: | J.N.K. |

**SITE**

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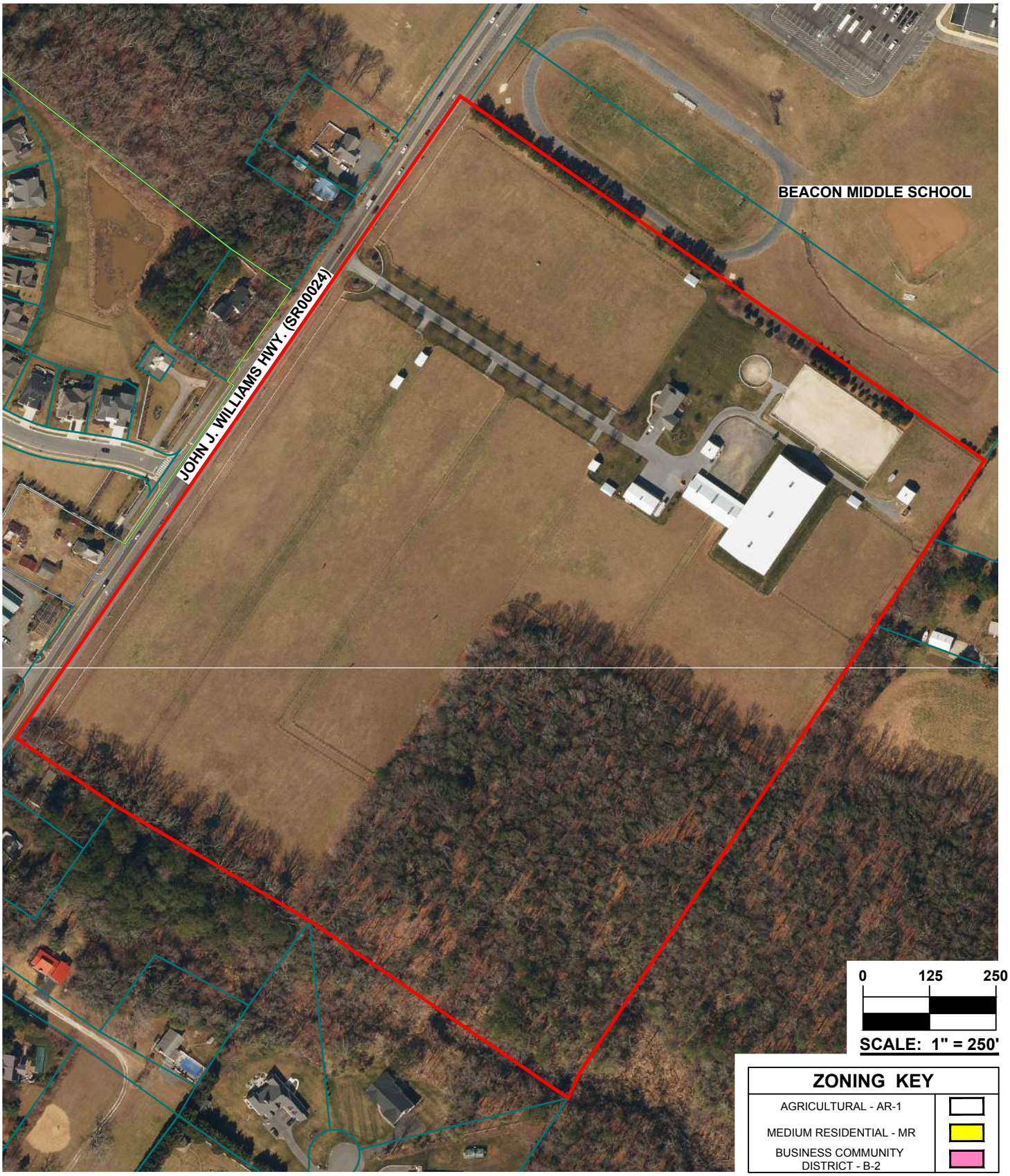


LAYER STATE: ZONING

## ZONING MAP
# BELLE MEADE FARMS

REHOBOTH BEACH
SUSSEX COUNTY / DELAWARE

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2022079.00
SCALE: 1" = 250'
DATE: 12/23/24
DRAWN BY: J.N.K.

**ZONING**

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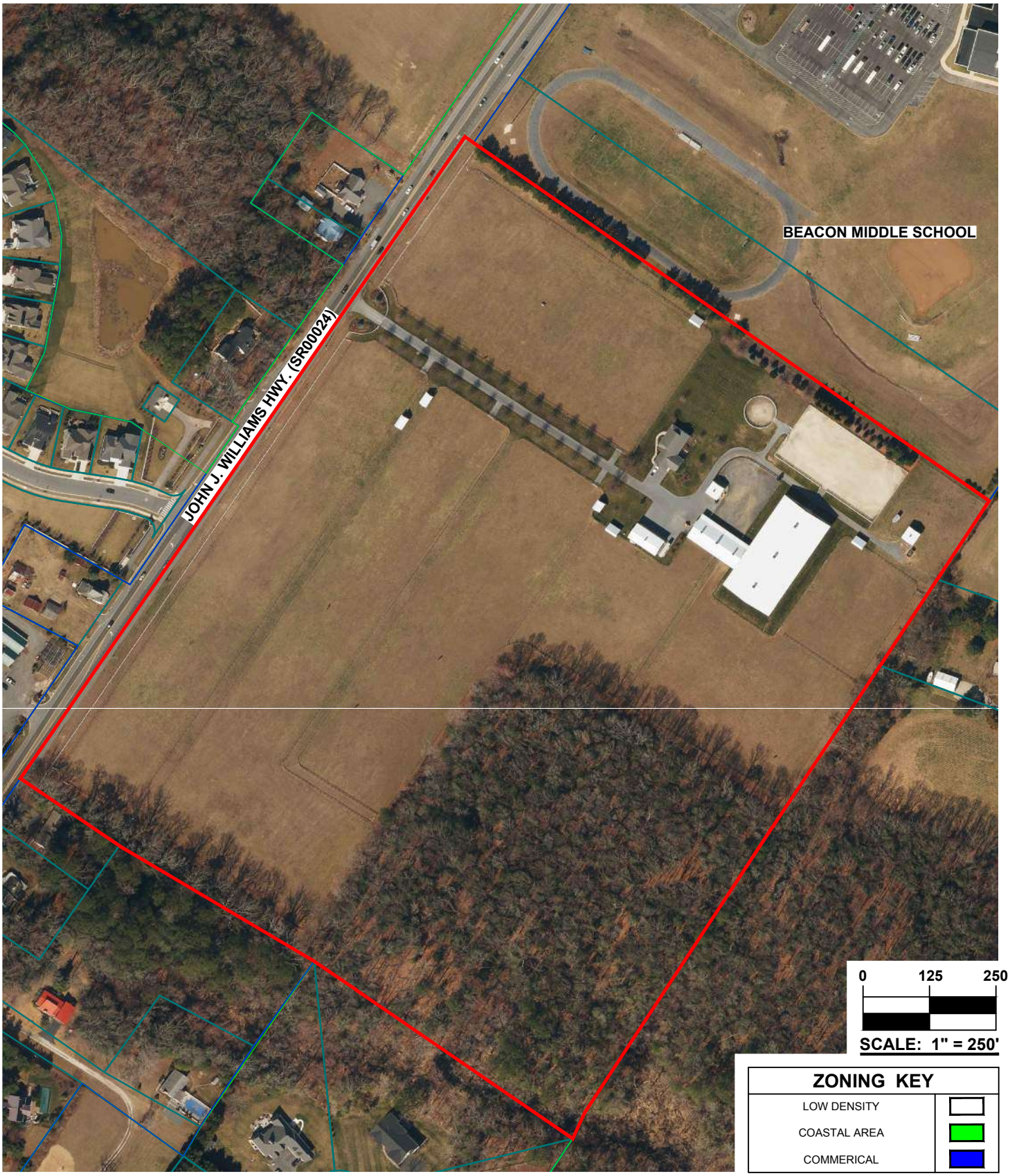


LAYER STATE: FUTURE LAND USE

# FUTURE LAND USE MAP
# BELLE MEADE FARMS

REHOBOTH BEACH
SUSSEX COUNTY / DELAWARE

BECKER MORGAN GROUP
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BMG: 2022079.00
SCALE: 1" = 250'
DATE: 12/23/24
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**FUTURE**

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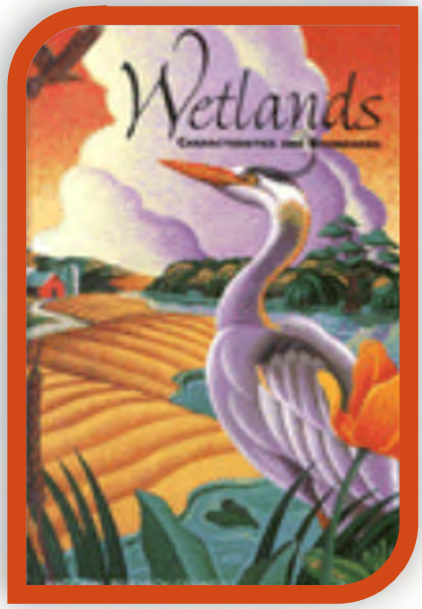
# Wetland Delineation Report

# Wetland Delineation – Belmead Farm, Lewes, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
April 30, 2023
Jim@WatershedEco.com

## Introduction




At the request of Becker Morgan Group, Inc., Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored "Wetlands: Characteristics and Boundaries". He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

## Executive Summary

Watershed Eco, LLC reviewed background information and conducted a wetland delineation at the Belmead Farm, LLC. property and determined that palustrine forested wetlands were present in the southeastern portion of the property abutting a Dorman Branch. These wetlands and waters were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut the perennial stream Dorman Branch, a tributary to Love Creek and Rehoboth Bay, both Traditional Navigable Waterways. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

## Contents

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## Definition of Jurisdictional Waters and Wetlands

The Navigable Waters Protection Rule (NWPR) became effective on June 22, 2020. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussions of Jurisdiction related to Waters and Wetlands in this report are based on the NWPR Section 404 of the Clean Water Act and as described in the definitions in this section as well as all guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction is established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on June 22, 2020 in the NWPR.

The NWPR defines four categories of WOTUS, 1. Territorial Seas and Traditional Navigable Waters, 2. Tributaries to 1., 3. Lakes and Ponds, and impoundments of Jurisdictional Waters and 4. Adjacent Wetlands. All other Waters are determined by the rule to be non-jurisdictional and the rule further clarifies exclusions which are not jurisdictional.

In this case we are interested in the jurisdictional status of mapped Waters in the form of non-tidal wetlands within the Subject Property. The mapped wetlands have been classified as adjacent wetlands. In the NWPR, adjacent wetlands are defined as follows: abutting, meaning to touch, or inundated by flooding from waters 1-3 above, separated only be a berm, bank or dune or an artificial dike or barrier. The NWPR further clarifies that an adjacent wetland must have a direct hydrologic surface connection to a water listed in 1-3 above in a typical year. The NWPR further clarifies that a tributary is a river or stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this definition in a typical year either directly or through one or more waters. A tributary must be intermittent or perennial. It is assumed that the mapped wetlands have a direct surface connection to Dorman Branch and would be regulated by the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers recently vacated the Navigable Water Protection Rule. At the present time the U.S. Army Corps of Engineers is following the 2023 Wetland Rules. The U.S. Army Corps of Engineers Philadelphia District and DNREC Subaqueous Lands Division should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

## Subject Property

The Subject Property is located at 28855 Lewes Georgetown Highway in Lewes, Sussex County, Delaware. The Subject Property is located at Latitude and Longitude 38.711454and -75.152545 and is identified as Sussex County Tax Parcel No. 334-18.00-40.01 consisting of approximately 39.19 Acres.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of mowed pastures associated with equestrian use and woodlands in the southeast.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the southeastern portion of the property. These wetlands abut Dorman Branch and drain southeasterly off-site to Love Creek, a tributary to Rehoboth Bay.

## Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

## Findings

### Background Research

The NWI Map (Figure 2) depicts palustrine forested wetlands in the southeastern portion of the subject property.

The USGS Mapping (Figure 3) depicts a blue-line stream identified as Dorman Branch in the southeastern portion of the property. The subject property is relatively flat with elevations ranging from 20 feet above sea level in the northwest to 10 feet asl in the southeast.

The National Hydrography Dataset map (Figure 4) depicts a blue-line stream feature with abutting palustrine forested wetlands in the southeastern portion of the property.

The 1937 aerial photo (Figure 5) depicts the property in agricultural use with woodlands in the southeast. The surrounding land use is predominantly agricultural and wooded with a few scattered residential properties.

The 1954 aerial photo (Figure 6) and 1968 imagery (Figure 7) depicts similar site conditions as the 1937 imagery. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts no significant changes within the subject property since 1968. Surrounding land use remains largely agricultural and wooded with residential development to the southwest and west.

The 2002 aerial photo (Figure 9) depicts no significant changes within the subject property or surrounding land since the 1992 imagery. Some site grading is apparent to the north.

The 2015 aerial photo (Figure 10) depicts a dwelling and barn have been constructed in the northeastern portion of the subject property. Woodlands remain in the southeast. New commercial development is apparent to the north and additional residential development is apparent to the south.

The 2022 aerial photo (Figure 11) depicts similar conditions as the 2015 imagery within the subject property. An additional residential subdivision has been constructed to the west.

The NRCS Soil Mapping (Figure 12) indicates the property is primarily underlain with well-drained Downer sandy loam (DoA and DodB), and Rosedale loamy sand (RoB). An area of poorly drained Hurlock sandy loam (HvA) is mapped within the woodlands in the southeastern portion of the property.

## Field Investigation

Watershed Eco LLC., conducted a field investigation on April 26, 2023. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** – woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.
>
> ***Saplings*** – woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.
>
> ***Shrubs*** – woody plants 1 to 6 meters in height.
>
> ***Herbs*** – all herbaceous plants regardless of size and woody plants less than 1 meter in height.
>
> ***Woody Vines*** – all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience.

## Results

Palustrine forested wetlands were observed in the southeastern portion of the property. These wetlands abut Dorman Branch which drains southeasterly off-site to Love Creek, a tributary to Rehoboth Bay, a Traditional Navigable Waterway. These wetlands would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The northeastern portion of the property consists of a dwelling with several barn structures. The remainder of the property consists of horse pastures with woodlands in the southeast.

Representative photographs of the site and flagged areas are included in this report.

## Jurisdiction

***Federal Jurisdiction – WOTUS***

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and in most cases the “Section 404” wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

***State Jurisdiction – Subaqueous Lands***

Typically, “blue-line” streams are regulated as State Subaqueous Lands. The perennial stream Dorman Branch is located inside of the delineated wetland boundary and would be regulated by DNREC as Subaqueous Lands

## Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco LLC. that federally jurisdictional palustrine forested wetlands are located within the southeastern portion of the subject property. These wetlands have a direct surface connection to Dorman Branch along the southern boundary of the property which drains off-site to Love Creek and Rehoboth Bay and would be regulated as Section 404 wetlands. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands mapped within the subject property.

Dorman Branch, along the southern property boundary would be regulated by DNREC as Subaqueous Lands. Dorman Branch was not delineated separately from the wetlands.

The mapped Waters can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

## Figures

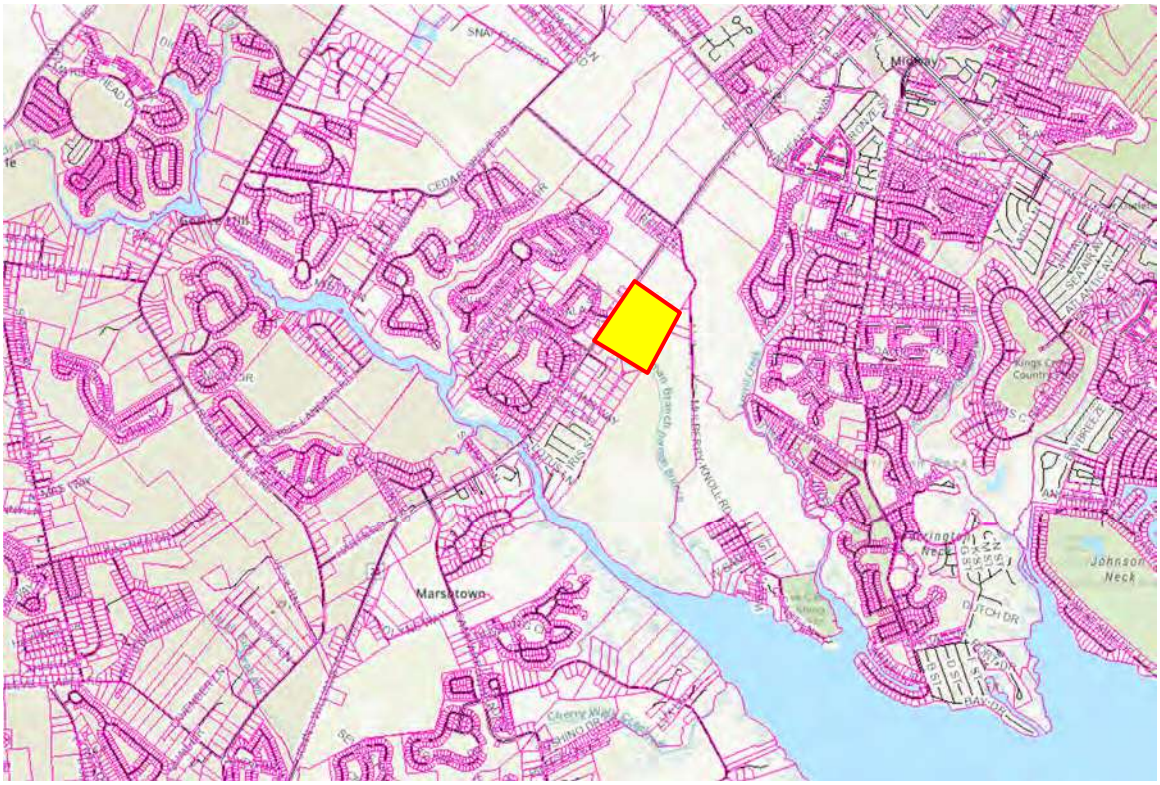



Figure 1: Location Map

Figure 2: National Wetland Inventory Map.

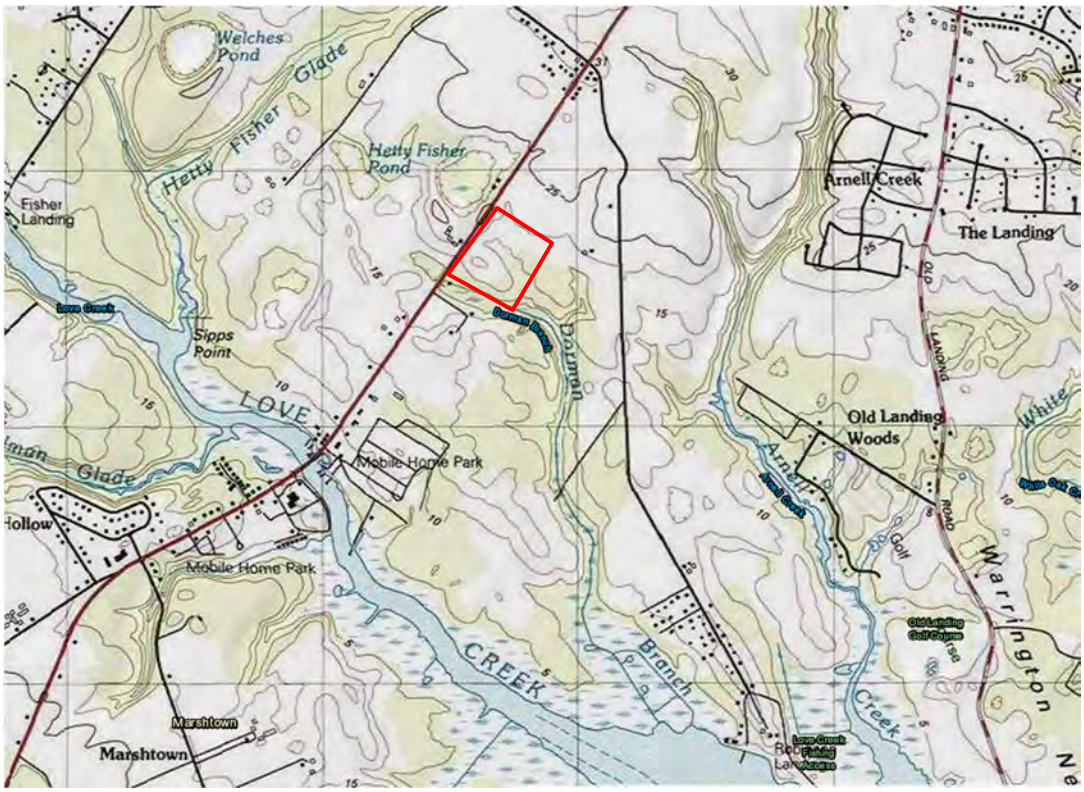



Figure 3: USGS Mapping.

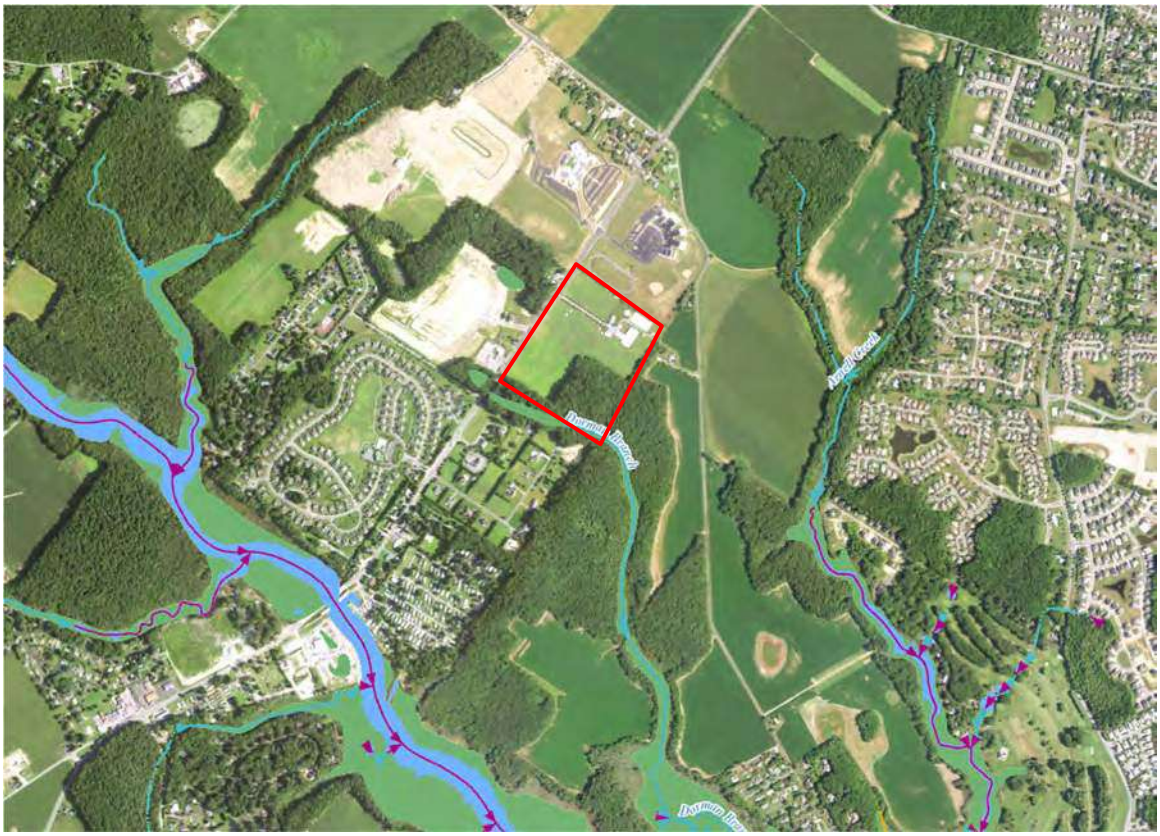


Figure 4: NHD Map.

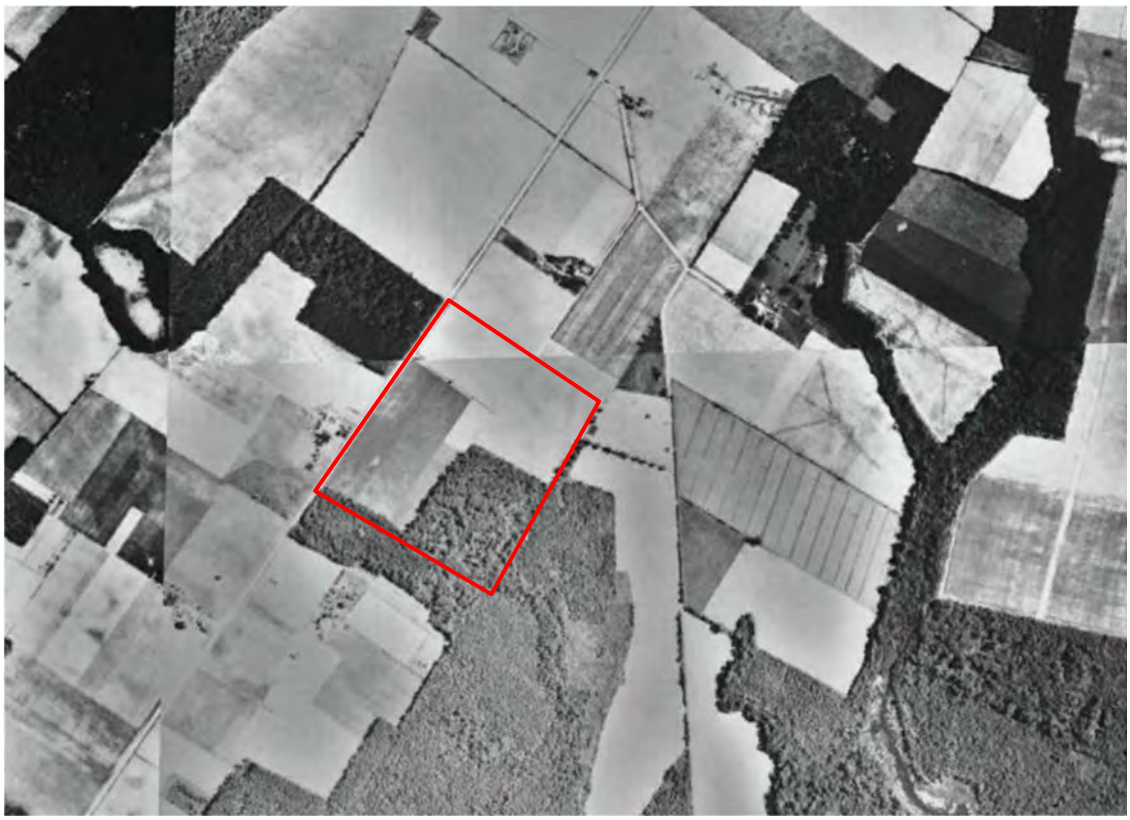


Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

Figure 10: 2015 Aerial Photograph.

Figure 11: 2022 Aerial Photograph

Figure 12: USDA Soil Survey Map.

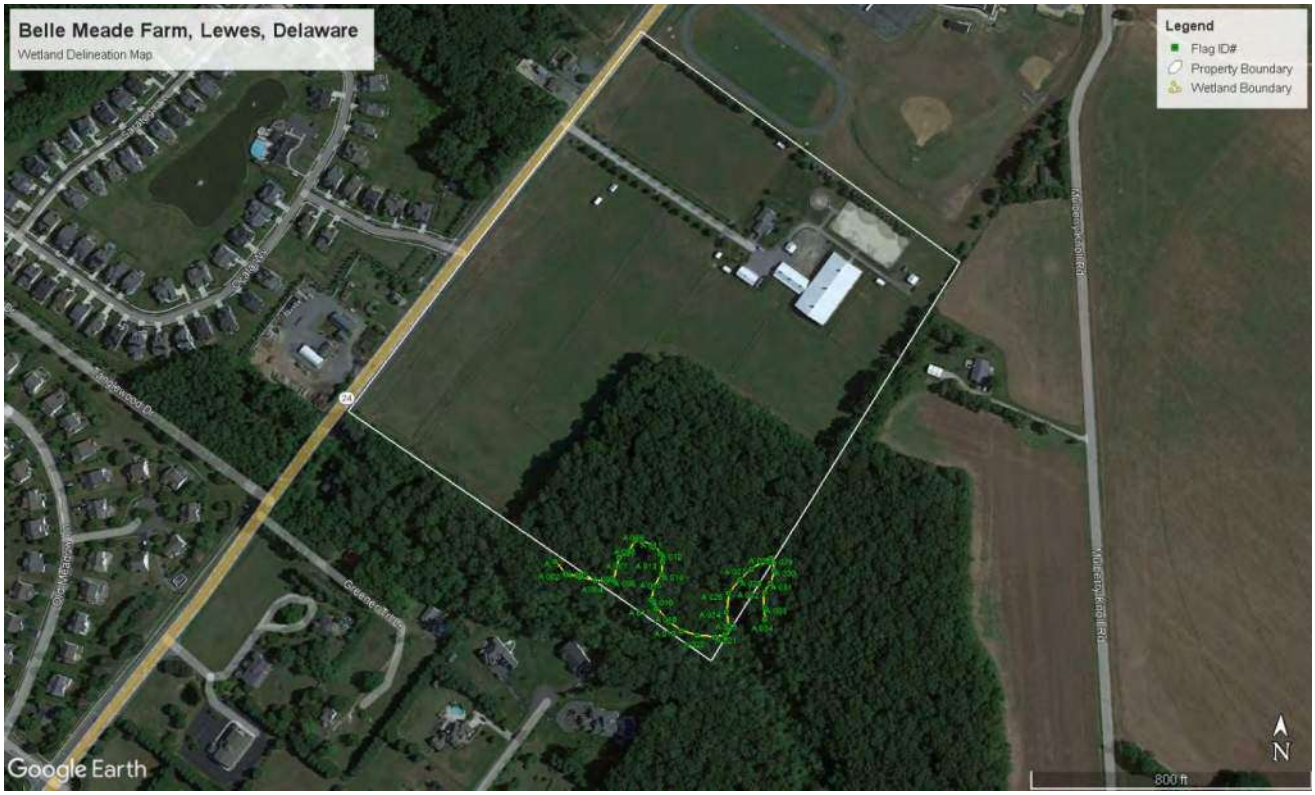



**Figure 13: Wetland Delineation Map**

## Credentials

**James C. McCulley IV**

**Senior Professional Wetland Scientist, P.W.S. (#000471)**

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on “No Net Loss” at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

**Firefly Music Festival** – Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always o a short time frame for this project.

**Breakwater Beach** – Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

**Peninsula** – Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

**The Reserves** – Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

**Warrington Property/Oak Creek** – Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

**Shipyard Shops** – Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

**Delaware Outdoor Advertising** - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

**Townsend Station** – Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

**State Route 1, Phase II, Scott Run to Smyrna** – Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

# Photographs

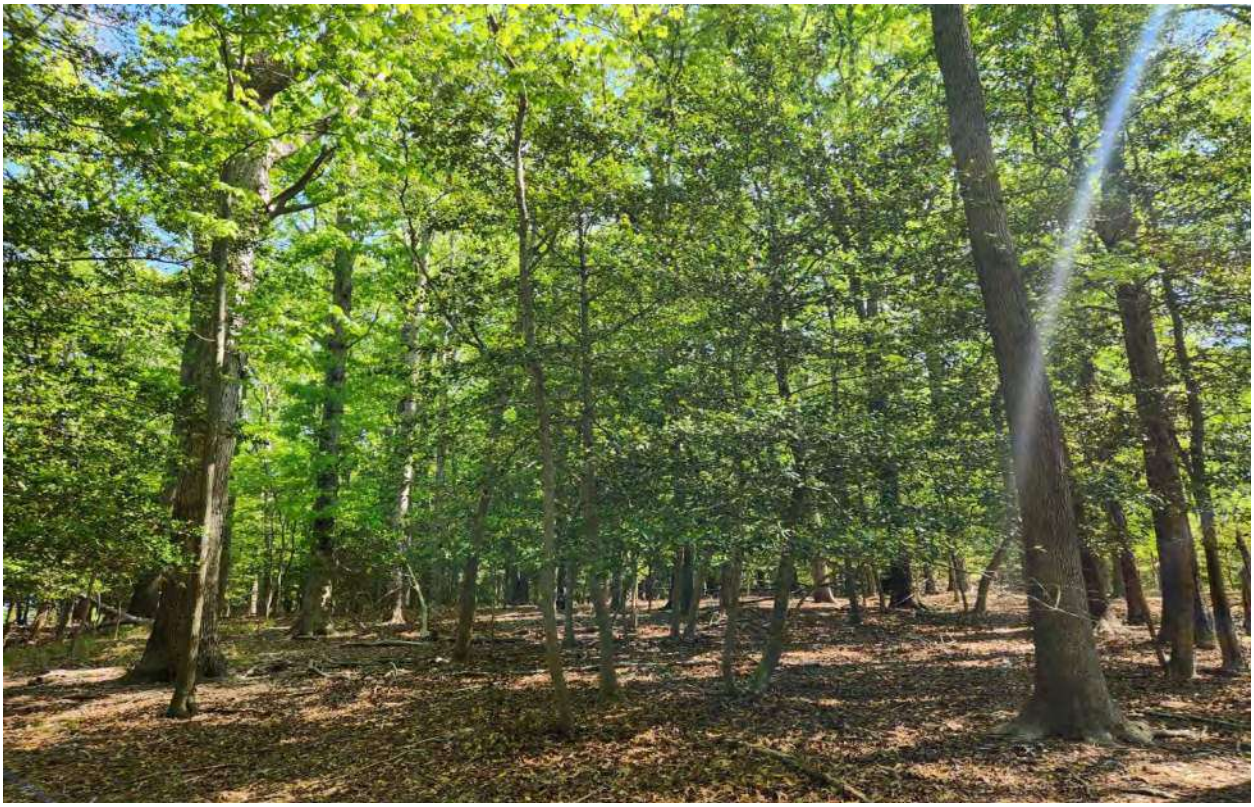
Paved driveway in the northwestern portion of the property, looking east.

Pasture surrounding barn in the northeastern portion of the property, looking northeast.

Pasture area in the north-central portion of the property, looking northeast.

Pasture bordering woodlands in the southwestern portion of the property, looking west.

Pasture area in the southwestern portion of the property, looking northeast.



Typical forested upland in the south-central portion of the property.

Forested wetland abutting Dorman Branch in the southeastern portion of the property.

Forested wetland in the southeastern portion of the property.

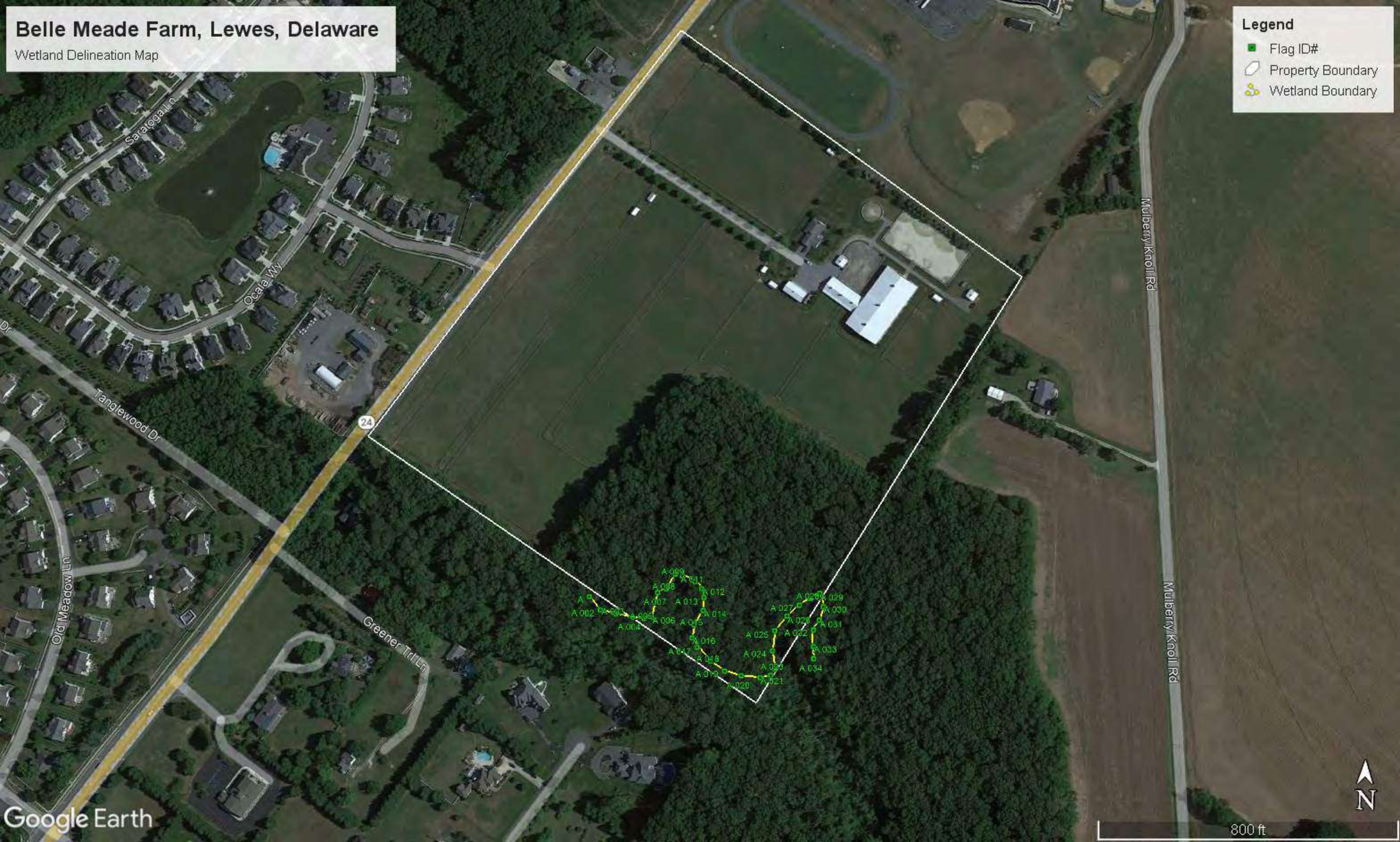
Forested upland in the southeastern portion of the property, looking northwest.

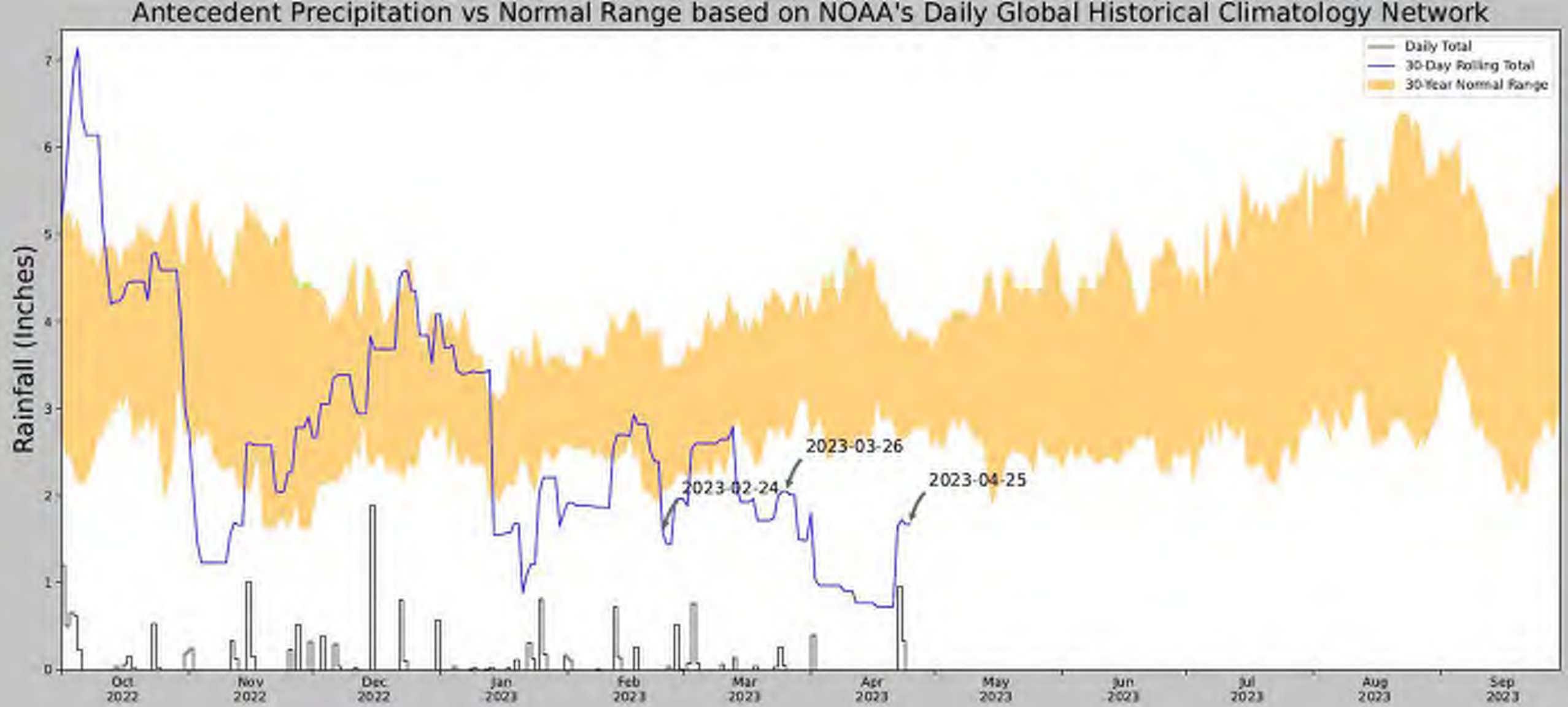
Pasture area bordering woodlands in the central portion of the subject property, looking south.

# Appendices

# Belle Meade Farm, Lewes, Delaware

Wetland Delineation Map






| | |
|---|---|
| Coordinates | 38.711454, -75.152545 |
| Observation Date | 2023-04-25 |
| Elevation (ft) | 14.925 |
| Drought Index (PDSI) | Severe drought (2023-03) |
| WebWIMP $H_2O$ Balance | Wet Season |

| 30 Days Ending | 30th %ile (in) | 70th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|---|---|---|---|---|---|---|---|
| 2023-04-25 | 2.712992 | 3.902362 | 1.669291 | Dry | 1 | 3 | 3 |
| 2023-03-26 | 2.679134 | 4.098032 | 2.047244 | Dry | 1 | 2 | 2 |
| 2023-02-24 | 2.05748 | 3.448032 | 1.57874 | Dry | 1 | 1 | 1 |
| Result | | | | | | | Drier than Normal - 6 |

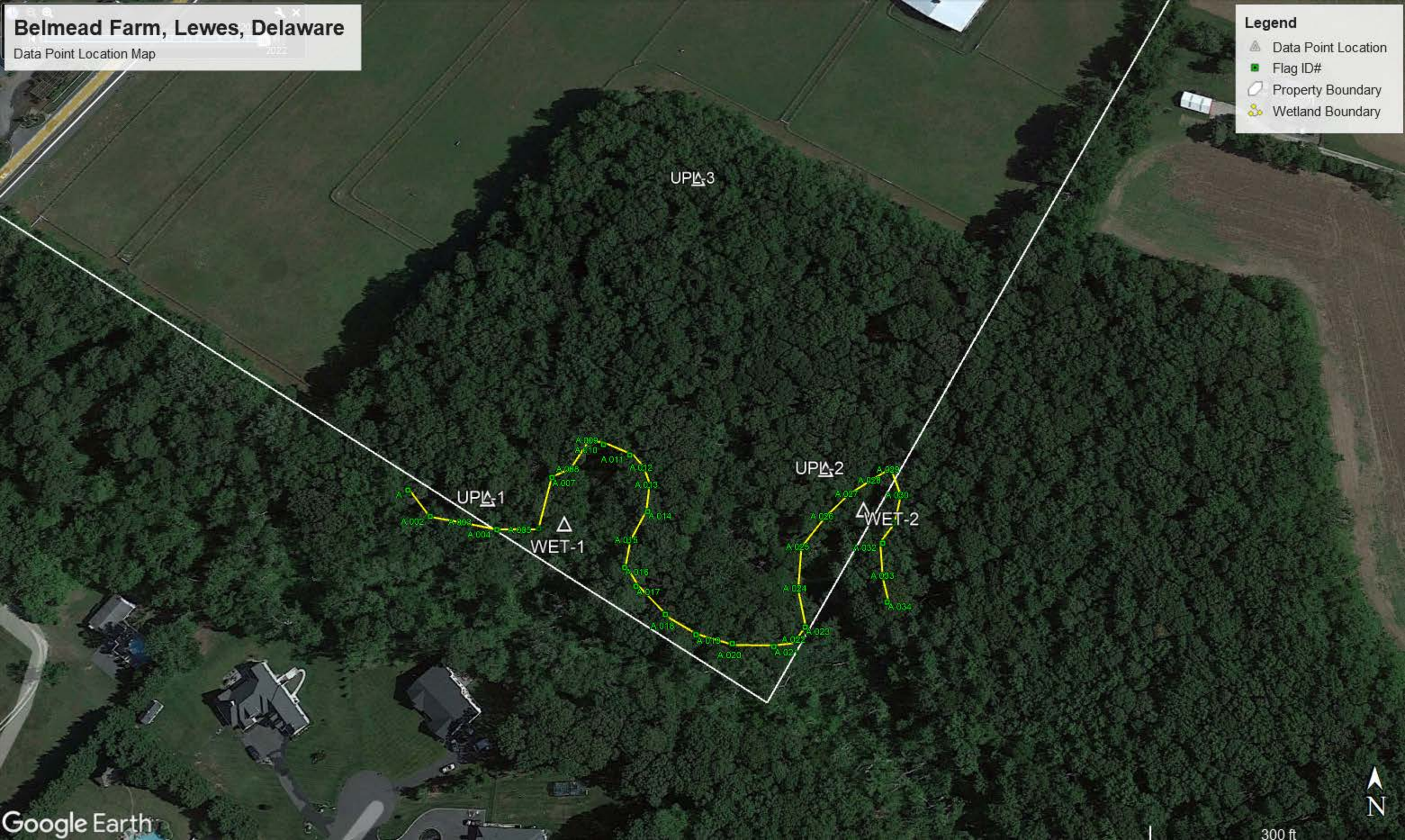
Figure and tables made by the
**Antecedent Precipitation Tool**
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|---|---|---|---|---|---|---|---|
| GEORGETOWN-DELAWARE COASTAL AP | 38.6897, -75.3625 | 49.869 | 11.421 | 34.944 | 5.538 | 9080 | 88 |
| MILTON 3.8 SSE | 38.7271, -75.287 | 38.058 | 4.822 | 11.811 | 2.227 | 1 | 1 |
| GEORGETOWN 5 SW | 38.6333, -75.45 | 44.948 | 6.121 | 4.921 | 2.785 | 1940 | 0 |
| GEORGETOWN 5.8 W | 38.6972, -75.4931 | 35.105 | 7.062 | 14.764 | 3.282 | 1 | 0 |
| LEWES | 38.7842, -75.1581 | 9.843 | 12.806 | 40.026 | 6.275 | 331 | 0 |
| Linear Interpolation | N/A | N/A | N/A | N/A | N/A | 0 | 1 |

# Belmead Farm, Lewes, Delaware

Data Point Location Map



## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-5 +

Subregion (LRR or MLRA): LRR T Lat: 38.709160 Long: -75.152600 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DodB) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ | **Wetland Hydrology Present?** **Yes** _____ **No** ✓ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Liriodendron tulipifera* | 20 | yes | FACU |
| 2. *Quercus alba* | 25 | yes | FACU |
| 3. *Quercus rubra* | 20 | yes | FACU |
| 4. *Pinus taeda* | 20 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 85 = Total Cover | | |
| 50% of total cover: 42.5 | 20% of total cover: 17 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Quercus alba* | 10 | yes | FACU |
| 3. *Liquidambar styraciflua* | 5 | yes | FAC |
| 4. *Nyssa sylvatica* | 5 | yes | FAC |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Cornus florida* | 15 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 35 = Total Cover | | |
| 50% of total cover: 17.5 | 20% of total cover: 7 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | loamy sand | |
| 3-9 | 10YR 4/3 | 100 | | | | | loamy sand | |
| 9-20 | 10YR 4/6 | 100 | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-1 in the south-central portion of the property.

Soil profile at UPL-1.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.709046 Long: -75.152399 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ____** |
| Hydric Soil Present? | Yes ✓ | No ____ | |
| Wetland Hydrology Present? | Yes ✓ | No ____ | |

Remarks:

Forested wetland in the south-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ____ | Depth (inches): 1" |
| Water Table Present? | Yes ✓ | No ____ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ____ | Depth (inches): 0 |

**Wetland Hydrology Present? Yes ✓ No ____**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-1

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. *Nyssa sylvatica* | 10 | no | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 70 = Total Cover | | |
| 50% of total cover: 35 | 20% of total cover: 14 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Acer rubrum* | 15 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Magnolia virginiana* | 5 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 10 = Total Cover | | |
| 50% of total cover: 5 | 20% of total cover: 2 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus effusus* | 10 | yes | OBL |
| 2. *Carex lurida* | 5 | no | OBL |
| 3. *Juncus tenuis* | 5 | no | FAC |
| 4. *Woodwardia areolata* | 10 | yes | OBL |
| 5. *Phragmites australis* | 10 | yes | FACW |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 40 = Total Cover | | |
| 50% of total cover: 20 | 20% of total cover: 8 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-8 | 10YR 2/1 | 100 | | | | | muck | saturated |
| 9-20 | 10YR 3/2 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

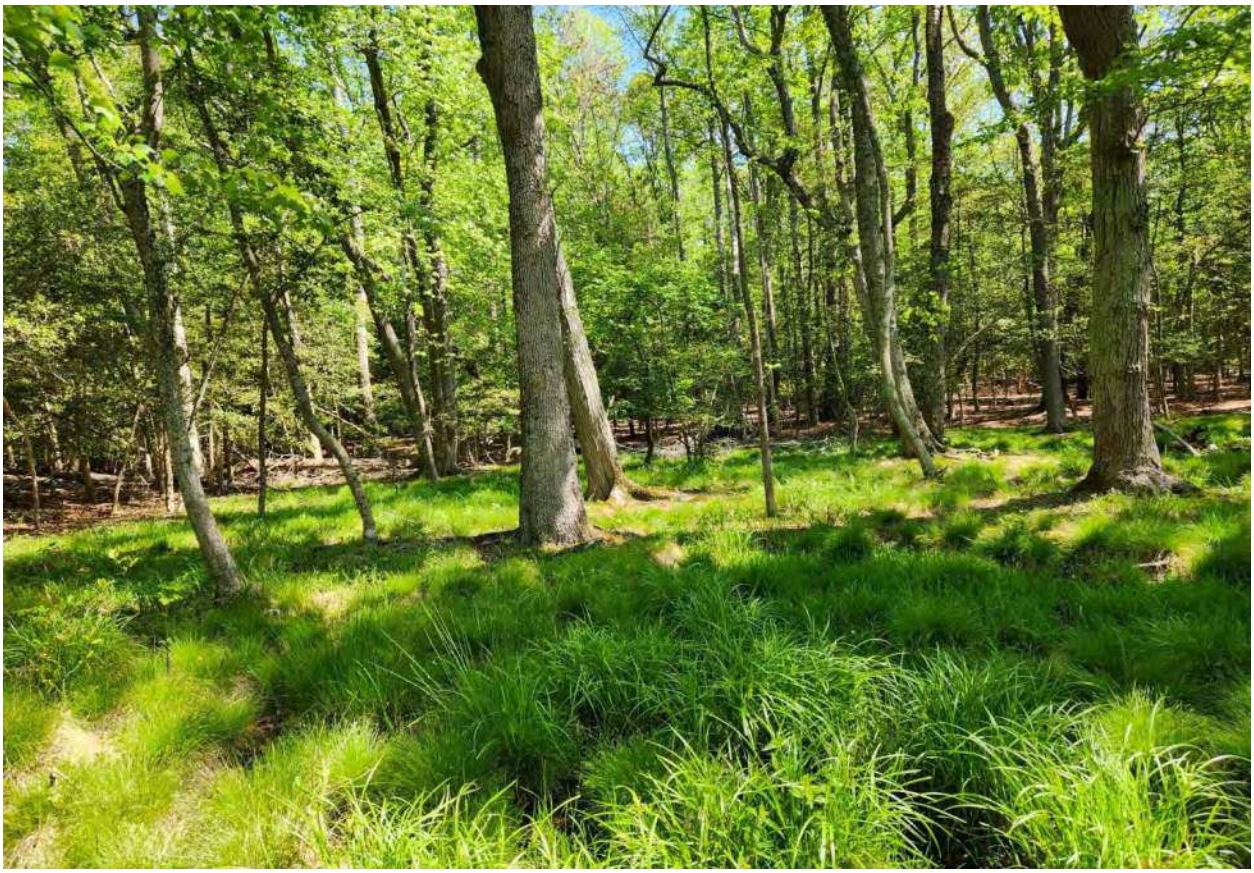
**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:



Forested wetland at Data Point WET-1 in the south-central portion of the property.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.708934 Long: -75.151363 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ | No ✓ | **Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓ |
| Hydric Soil Present? | Yes _____ | No ✓ | |
| Wetland Hydrology Present? | Yes _____ | No ✓ | |

Remarks:

Forested upland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 15 | yes | FACU |
| 2. *Quercus alba* | 30 | yes | FACU |
| 3. *Quercus rubra* | 15 | yes | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 15 | yes | FAC |
| 2. *Cornus florida* | 10 | yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 30 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 30 = Total Cover | | |
| 50% of total cover: 12 | 20% of total cover: 6 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 3-6 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 6-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-2 in the southeastern portion of the property.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: WET-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.708819 Long: -75.151184 Datum: NAD 83

Soil Map Unit Name: Hurlock sandy loam (HvA) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes ✓ No ____** |
| Hydric Soil Present? | Yes ✓ | No ____ | |
| Wetland Hydrology Present? | Yes ✓ | No ____ | |

Remarks:

Forested wetland in the southeastern portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ✓ | No ____ | Depth (inches): 0.5" |
| Water Table Present? | Yes ✓ | No ____ | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes ✓ | No ____ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes ✓ No ____**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland appears to intercept groundwater table and receives sheet flow runoff from adjacent forested uplands.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: WET-2

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 60 | yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 60 = Total Cover | | |
| 50% of total cover: 30 | 20% of total cover: 12 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Nyssa sylvatica* | 10 | yes | FAC |
| 2. *Magnolia virginiana* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 5 | yes | FAC |
| 2. *Vaccinium corymbosum* | 10 | yes | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 15 = Total Cover | | |
| 50% of total cover: 7.5 | 20% of total cover: 3 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Juncus tenuis* | 10 | yes | FAC |
| 2. *Woodwardia areolata* | 5 | yes | OBL |
| 3. *Juncus effusus* | 5 | no | OBL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 20 = Total Cover | | |
| 50% of total cover: 10 | 20% of total cover: 4 | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

Buttressed tree roots and sphagnum moss observed within wetland.

## SOIL

Sampling Point: WET-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-20 | 10YR 3/1 | 100 | | | | | muck | saturated |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ✓ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ✓ **No** ___

Remarks:

Forested wetland at Data Point WET-2 in the southeastern portion of the property.

Saturated soils encountered at WET-2.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Belmead Farm City/County: Lewes, Sussex Sampling Date: 4/26/2023

Applicant/Owner: Becker Morgan, Inc. State: DE Sampling Point: UPL-3

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2 +

Subregion (LRR or MLRA): LRR T Lat: 38.710365 Long: -75.151586 Datum: NAD 83

Soil Map Unit Name: Downer sandy loam (DoA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ✓ | No ____ | **Is the Sampled Area within a Wetland?** **Yes** ____ **No** ✓ |
| Hydric Soil Present? | Yes ____ | No ✓ | |
| Wetland Hydrology Present? | Yes ____ | No ✓ | |

Remarks:

Forested upland in the east-central portion of the subject property. Based on the Antecedent Precipitation Tool hydrologic conditions were drier than normal at the time of the site investigation.

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Water Table Present? | Yes ____ | No ✓ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes ____ | No ✓ | Depth (inches): _____ |

**Wetland Hydrology Present?** **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

**VEGETATION (Five Strata) –** Use scientific names of plants.

Sampling Point: UPL-3

| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus falcata* | 35 | yes | FACU |
| 2. *Liquidambar styraciflua* | 30 | yes | FAC |
| 3. *Ilex opaca* | 10 | no | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 75 = Total Cover | | |
| 50% of total cover: 37.5 | 20% of total cover: 15 | | |

| Sapling Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 45 | yes | FAC |
| 2. *Nyssa sylvatica* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 50 = Total Cover | | |
| 50% of total cover: 25 | 20% of total cover: 10 | | |

| Shrub Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. *Ilex opaca* | 20 | yes | FAC |
| 2. *Smilax rotundofolia* | 5 | yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| | 25 = Total Cover | | |
| 50% of total cover: 12.5 | 20% of total cover: 5 | | |

| Herb Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

| Woody Vine Stratum (Plot size: 30 ft) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 0 = Total Cover | | |
| 50% of total cover: | 20% of total cover: | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | | x 1 = |
| FACW species | | x 2 = |
| FAC species | | x 3 = |
| FACU species | | x 4 = |
| UPL species | | x 5 = |
| Column Totals: | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: UPL-3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/2 | 100 | | | | | sandy loam | |
| 4-9 | 10YR 4/3 | 100 | | | | | sandy loam | |
| 9-20 | 10YR 5/4 | 100 | | | | | sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** _____ **No** ✓

Remarks:

Forested upland at Data Point UPL-3 in the east-central portion of the property.

Soil profile at UPL-3.

United States Department of Agriculture

NRCS

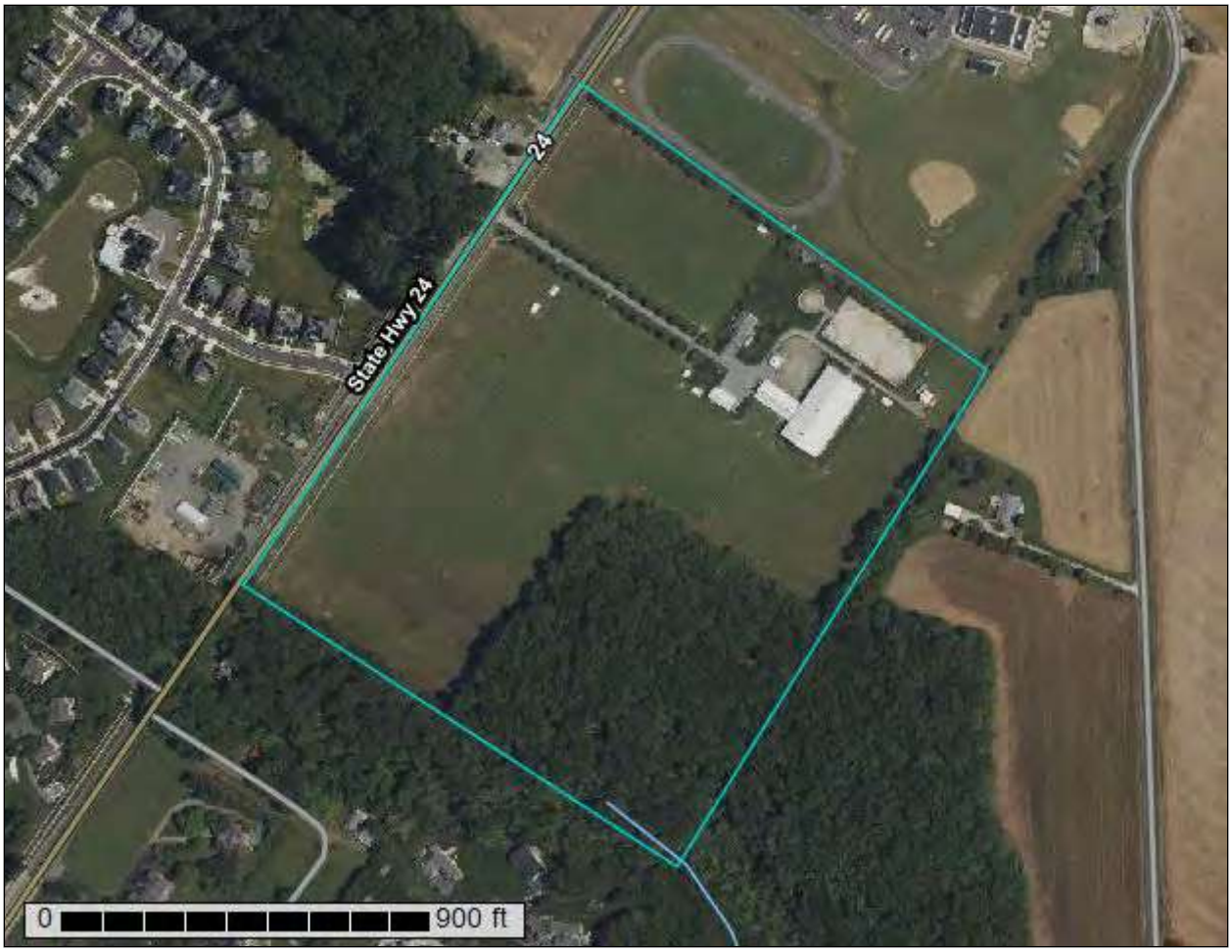
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sussex County, Delaware

## Belmeade Farm, Lewes, DE




April 29, 2023

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

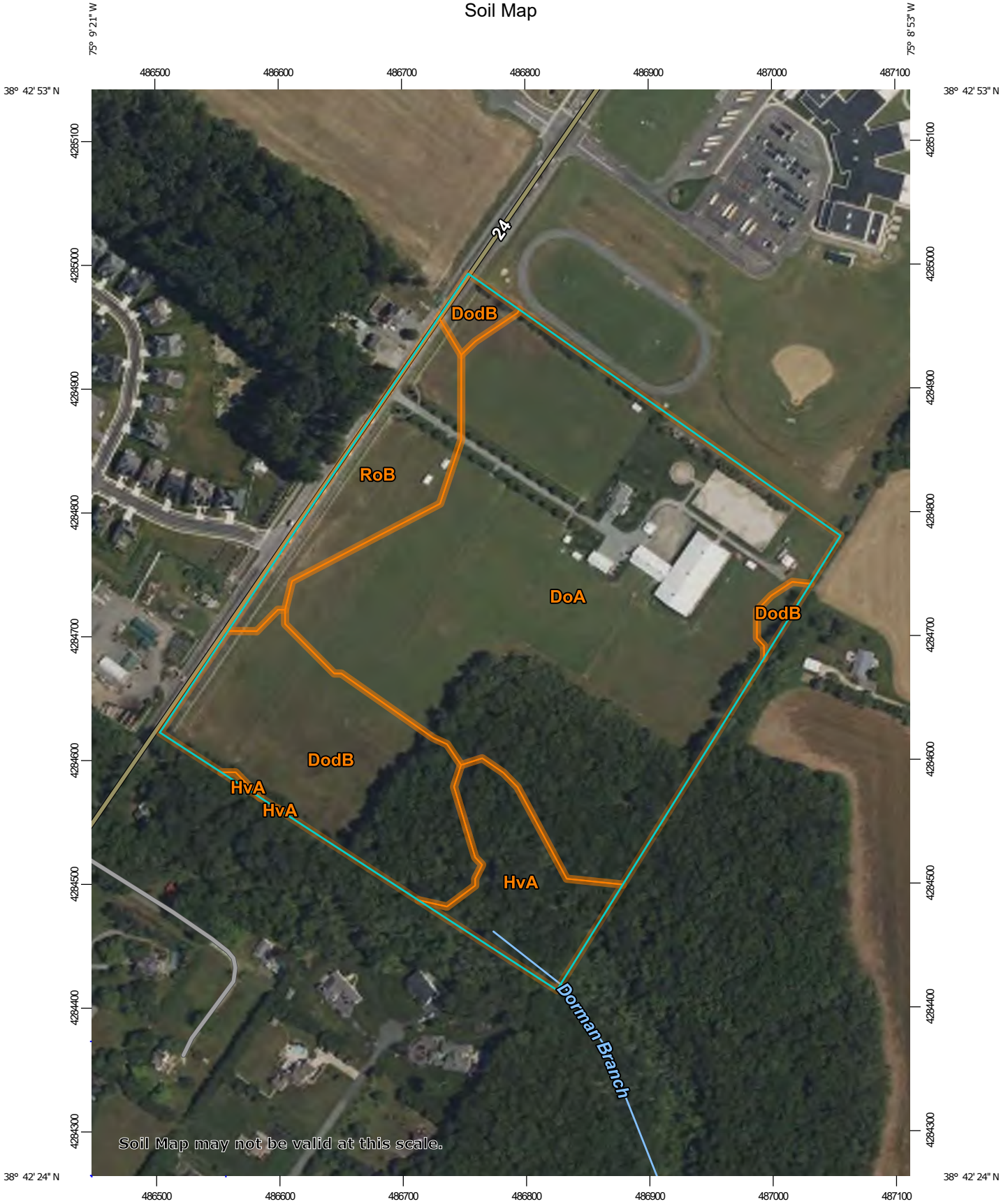
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:4,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 23, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| DoA | Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area | 25.9 | 63.1% |
| DodB | Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area | 8.2 | 20.1% |
| HvA | Hurlock sandy loam, 0 to 2 percent slopes | 3.2 | 7.9% |
| RoB | Rosedale loamy sand, 2 to 5 percent slopes | 3.7 | 8.9% |
| **Totals for Area of Interest** | | **41.1** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sussex County, Delaware

## DoA—Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwd
*Elevation:* 0 to 190 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 250 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Knolls, flats, low hills
*Landform position (two-dimensional):* Summit, shoulder
*Landform position (three-dimensional):* Interfluve, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Parent material:* Loamy fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 1
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

### Minor Components

#### Galestown

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Ingleside

*Percent of map unit:* 5 percent
*Landform:* Flats
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

#### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Footslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## DodB—Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area

### Map Unit Setting

*National map unit symbol:* 2thwh
*Elevation:* 0 to 210 feet
*Mean annual precipitation:* 41 to 50 inches
*Mean annual air temperature:* 46 to 64 degrees F
*Frost-free period:* 190 to 260 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Flats, knolls, low hills
*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Convex, linear
*Across-slope shape:* Convex, linear
*Parent material:* Loamy fluviomarine deposits

**Typical profile**

*Ap - 0 to 10 inches:* sandy loam
*BE - 10 to 16 inches:* loamy sand
*Bt - 16 to 28 inches:* sandy loam
*C1 - 28 to 48 inches:* loamy sand
*C2 - 48 to 80 inches:* sand

**Properties and qualities**

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Galestown**

*Percent of map unit:* 10 percent
*Landform:* Broad interstream divides, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Hammonton**

*Percent of map unit:* 5 percent
*Landform:* Flats, broad interstream divides
*Landform position (two-dimensional):* Footslope, shoulder
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Ingleside**

*Percent of map unit:* 5 percent
*Landform:* Low hills, flats
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Nose slope, rise
*Down-slope shape:* Linear
*Across-slope shape:* Convex

*Hydric soil rating:* No

## HvA—Hurlock sandy loam, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qth9
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Hurlock, drained, and similar soils:* 42 percent
*Hurlock, undrained, and similar soils:* 38 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hurlock, Drained

#### Setting

*Landform:* Swales, depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam
*Eg - 10 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 10 to 20 inches
*Frequency of flooding:* None
*Frequency of ponding:* Rare
*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Description of Hurlock, Undrained

### Setting

*Landform:* Drainageways, depressions, swales, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Loamy fluviomarine sediments fluviomarine deposits

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material
*A - 2 to 4 inches:* sandy loam
*Eg - 4 to 13 inches:* sandy loam
*Btg - 13 to 25 inches:* sandy loam
*Cg - 25 to 63 inches:* loamy sand
*2Cg - 63 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 5.95 in/hr)
*Depth to water table:* About 0 to 10 inches
*Frequency of flooding:* None
*Frequency of ponding:* Occasional
*Available water supply, 0 to 60 inches:* Moderate (about 7.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 5w
*Hydrologic Soil Group:* A/D
*Hydric soil rating:* Yes

## Minor Components

### Mullica, drained

*Percent of map unit:* 5 percent
*Landform:* Drainageways, depressions, swales, flats
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* Yes

### Hammonton

*Percent of map unit:* 5 percent
*Landform:* Flats, drainageways
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

### Woodstown

*Percent of map unit:* 5 percent
*Landform:* Flats, fluviomarine terraces, broad interstream divides
*Landform position (three-dimensional):* Tread, rise
*Down-slope shape:* Linear

*Across-slope shape:* Linear
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## RoB—Rosedale loamy sand, 2 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 1qtjy
*Elevation:* 0 to 120 feet
*Mean annual precipitation:* 42 to 48 inches
*Mean annual air temperature:* 52 to 58 degrees F
*Frost-free period:* 180 to 220 days
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Rosedale and similar soils:* 75 percent
*Minor components:* 25 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Rosedale

#### Setting

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy eolian deposits over fluviomarine deposits

#### Typical profile

*A - 0 to 9 inches:* loamy sand
*E - 9 to 25 inches:* loamy sand
*Bt - 25 to 38 inches:* sandy loam
*C - 38 to 68 inches:* loamy sand
*2Cg - 68 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 5.95 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* A
*Hydric soil rating:* No

## Minor Components

**Evesboro**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Galloway**

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Hydric soil rating:* No

**Klej**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

**Hambrook**

*Percent of map unit:* 5 percent
*Landform:* Depressions, flats, fluviomarine terraces
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Hydric soil rating:* No

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# Fish and Wildlife Threatened and Endangered Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127


In Reply Refer To: 01/20/2025 15:56:33 UTC
Project Code: 2025-0044405
Project Name: Belmeade Farm

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Chesapeake Bay Ecological Services Field Office**
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

# PROJECT SUMMARY

Project Code: 2025-0044405
Project Name: Belmeade Farm
Project Type: New Constr - Above Ground
Project Description: Above ground development.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.71070505,-75.15219081081176,14z

Counties: Sussex County, Delaware

# ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1R
- PFO1B

# DelDOT Service Level Evaluation Request Response Letter

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

October 27, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Becker Morgan Group, Inc** proposed land use application, which we received on October 21, 2022. This application is for an approximate 40.00- acre parcel (Tax Parcel: 334-18.00-40.01). The subject land is located on the southeast side of John J Williams Highway (Delaware Route 24) approximately 1,700 feet south of the intersection with Mulberry Knoll Road (Sussex Road 284). The subject land is currently zoned C-1 (General Commercial), with a proposed zoning of C-4 (Planned Commercial) to build 125,000 square feet of commercial/ retail space and up to 480 multifamily housing units.

Per the 2021 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volume along John J Williams Highway from Plantation Road (Sussex Road 275) to Camp Arrowhead Road (Sussex Road 279), is 17,338 and 22,294 vehicles per day, respectively.

Based on our review, we estimate that the proposed land use would generate more than 50 vehicle trips in any hour or 500 vehicle trips per day, and would be considered to have a **Major** impact to the local area roadways. In this instance, the Department considers a Major impact to be when a proposed land use would generate more than 200 vehicle trips in any hour of the week and / or 2,000 vehicle trips per day. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, (trip generation). These numbers of trips meet DelDOT's warrants for requiring a Traffic Impact Study (TIS).

However, the subject development is located in the Henlopen Transportation Improvement District (TID), adopted by DelDOT and Sussex County in accordance with Section 2.4 of the Development Coordination Manual. The intent of the TID is to plan comprehensively and thereby to enable both land development and the transportation improvements needed to support it. For residential and non-residential developments that are consistent with the Land Use and

Transportation Plan (LUTP) developed for the TID, the applicant is required to pay a fee per dwelling unit and a fee per square foot of non-residential space in lieu of doing a TIS and making off-site improvements in accordance therewith. The proposed development is not consistent with the LUTP, therefore, the developer will be required to perform a TIS to determine if the Level of Service (LOS) analyzed by the TID is consistent with the inclusion of the proposed development. If the LOS determined by the TIS is compliant with the TID, the proposed development is to pay the TID fee as stated above. Any improvements required by DelDOT beyond the site entrance construction will be creditable toward the fee.

The applicant should contact Ms. Sarah Coakley, Principal Planner in DelDOT's Regional Systems Planning Section, for information regarding the TID and the associated fees. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SM:afm
cc: Becker Morgan Group, Inc, Applicant
Lauren DeVore, Sussex County Planning & Zoning
Elliott Young, Sussex County Planning & Zoning
Sussex Reviewer, Sussex County Planning & Zoning
David Edgell, State Planning Coordinator, Cabinet Committee on State Planning Issues
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination
Kevin Hickman, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Reviewer, Development Coordination
Brian Yates, Subdivision Reviewer, Development Coordination
Thomas Gagnon, Subdivision Reviewer, Development Coordination
Joshua Johnson, Subdivision Reviewer, Development Coordination
Claudy Joinville, TIS Group Project Engineer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination

# DelDOT Final Traffic Impact Study (TIS)

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

June 4, 2024
Revised: June 24, 2024

Christopher Duke, P.E.
Becker Morgan Group, Inc.
100 Discovery Blvd, Suite 102
Newark, DE 19713

Dear Mr. Duke:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Belle Meade** (Tax Parcel: 334-18.00-40.01) multi-use development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. This letter has been revised to clarify and to fix grammatical and formatting errors. The recommendation items and analysis results they are based on have not changed. On Page 1, a typo was fixed in the retail square footage. On Page 6, Item 3, turn lane lengths and minimum tapers and the name of the intersection in the body of Item 3 were added. DelDOT accepts this letter and concurs with the recommendations.

If you have any questions concerning this letter or the enclosed review letter, please contact me at Annamaria.Furmato@delaware.gov.

Sincerely,

Annamaria Furmato
TIS Group Project Engineer

AF:km
Enclosures
cc with enclosures: William Krapf, Capano Group, L.P.
David L. Edgell, Office of State Planning Coordination
Jamie Whitehouse, Sussex County Planning & Zoning
Andrew J. Parker, McCormick Taylor, Inc.
Tucker Smith, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Deputy Secretary / Director of Transportation Solutions (DOTS)
Mark Luszcz, Deputy Director, DelDOT Traffic, DOTS
Michael Simmons, Assistant Director, Project Development South, DOTS
Peter Haag, Chief Traffic Engineer, DelDOT Traffic, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, DelDOT Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Pamela Steinebach, Director, Planning
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination, Planning
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination, Planning
Sireen Muhtaseb, TIS Group Manager, Development Coordination, Planning
Philip Lindsey, TIS Group Project Engineer, Development Coordination, Planning
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning, Planning
Steve Bayer, Regional Transportation Planner, Statewide & Regional Planning

June 6, 2024

Ms. Annamaria Furmato
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
**Task No. 5A Subtask 08A – Belle Meade**

Dear Ms. Furmato:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Belle Meade development prepared by Becker Morgan Group, Inc. dated February 2024. Becker Morgan Group prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Belle Meade development, along the south side of Delaware Route 24 (Sussex Road 24), approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. The proposed development would consist of 125,000 square feet of retail space and 480 low-rise multi-family houses. One signalized access point is proposed on Delaware Route 24 opposite Lexington Avenue. Construction is anticipated to be completed in 2032.

The subject land is located on an approximately 38.33-acre parcel. The subject land is currently zoned AR-1 (Agricultural Residential) and the developer plans to rezone the land to C-4 (Planned Commercial).

**Relevant and On-Going Projects and Studies**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

**Summary of Analysis Results**

Based on our review, we have the following comments and recommendations:

The following intersections exhibit level of service (LOS) deficiencies without the implementation of physical roadway and/or traffic control improvements:

| ***Intersection*** | ***Existing Traffic Control*** | ***Situations for which deficiencies occur*** |
|---|---|---|
| 1. SR 24 / Lexington Avenue / Site Entrance | Unsignalized | 2032 with development AM, PM, SAT (Case 3) |
| 4. SR 24 / Plantation Road / Warrington Road | Signalized | 2032 with development PM (Case 3) |
| 6. SR 24 / Bryn Mawr Drive | Unsignalized | 2032 without development PM and SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 9. Warrington Road / Old Landing Road | Unsignalized | 2022 Existing SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 10. Mulberry Knoll Road / Cedar Grove Road | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development PM and SAT (Case 3) |
| 12. SR 24 / Spencer Lane / Williams Way | Unsignalized | 2022 Existing PM and SAT (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 13. SR 24 / Camp Arrowhead Road | Signalized | 2032 with development SAT (Case 3) |

| | | |
|---|---|---|
| 14. SR 24 / Harts Road | Unsignalized | 2022 Existing PM (Case 1)<br>2032 without development AM, PM, SAT (Case 2)<br>2032 with development AM, PM, SAT (Case 3) |
| 16. SR 24 / Jolyns Way | Unsignalized | 2032 without development SAT (Case 2)<br>2032 with development SAT (Case 3) |

1. SR 24 / Lexington Avenue / Site Entrance (See Recommendations 2 and 3  Table 2, Page 22)
This unsignalized intersection experiences LOS deficiencies during the AM, PM, and Saturday peaks in Case 3. In Case 3 during the PM and Saturday peaks, the northbound and southbound approaches are expected to operate at LOS F with over 2,500 seconds of delay. The developer proposes to construct a traffic signal at this intersection to mitigate the LOS deficiency. A Traffic Signal Justification Study (TSJS) has been prepared by the Department demonstrating that the warrants for a traffic signal are met with Case 3 volumes. If the intersection were signalized with the lane configuration as proposed in the *SR 24, Love Creek to Mulberry Knoll* project, the intersection will still operate at LOS F in the Saturday peak. The Henlopen TID proposes to widen SR 24 through this intersection to provide two through lanes in each direction. With signalization and the TID improvements the intersection is expected to operate at LOS C or better during all three peak periods.

4. SR 24 / Plantation Road / Warrington Road (See Recommendation 4  Table 5, Page 25)
This signalized intersection experiences LOS deficiencies during the PM peak in Case 3. In Case 3 during the PM peak, the northbound approach is expected to operate at LOS F with 81.7 seconds of delay while the overall intersection will operate at LOS E with 60.8 seconds of delay. Queues on the northbound approach are expected to be over 838 feet long which exceeds the available storage. The Henlopen TID proposes to widen the Plantation Road and Warrington Road approaches to include two left-turn lanes, two through lanes, and one right turn lane. With the TID improvements at this intersection, the intersection is expected to operate at LOS D with 49.5 seconds of delay.

6. SR 24 / Bryn Mawr Drive (Table 7, Page 27)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peaks in Case 2 and the AM, PM, and Saturday Peaks in Case 3. In Case 3 during the PM peak, the southbound approach is expected to operate at LOS F with 62.5 seconds of delay and queues over 65 feet long. A signal could mitigate the LOS deficiencies at his intersection. However, a signal is not recommended because of the proximity to adjacent signals and the low minor street volumes. Bryn Mawr Drive is a private road and the delay is only experienced on the minor street approach without impact to Delaware Route 24.

9. Warrington Road / Old Landing Road (See Recommendation 4  Table 10, Page 30)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 during the PM peak, the intersection has failing LOS on three approaches with the overall intersection operating at LOS F with 69 seconds of delay. The Henlopen TID proposes a roundabout at this intersection which will mitigate the LOS deficiency.

10. Mulberry Knoll Road / Cedar Grove Road (See Recommendation 4  Table 11, Page 31)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Case 2 and the PM and Saturday peaks in Case 3. In Case 3 during the Saturday peak, the northbound Mulberry Knoll Road approach is expected to operate at LOS F with 837.7 seconds of delay and queues over 753 feet long. The developer recommends the construction of a dedicated eastbound right-turn lane on Cedar Grove Road. However, this improvement fails to fully mitigate the LOS deficiency. The Henlopen TID proposes a roundabout at this intersection.

12. SR 24 / Spencer Lane / Williams Way (See Recommendation 4  Table 13, Page 33)
This unsignalized intersection experiences LOS deficiencies during the PM and Saturday peak hours in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3, during the PM peak, the southbound approach is expected to operate at LOS F with 505.6 seconds of delay and queues over 63 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection. With that improvement, the intersection continues to experience LOS deficiencies. It should be noted that the delay is only experienced on the minor street approach, which is a private road. A signal is not recommended at this intersection due to the low minor street volumes. Additionally, the northbound volume during all peak hours is less than 10 vehicles.

13. SR 24 / Camp Arrowhead Road (See Recommendation 4  Table 14, Page 34)
This signalized intersection experiences LOS deficiencies during the Saturday peak in Case 3. In Case 3 during the Saturday peak, the eastbound approach is expected to operate at LOS F with 95 seconds of delay and queues over 1,573 feet long. The Henlopen TID proposes to widen SR 24 to include two through lanes in each direction at this intersection which mitigates the LOS deficiency.

14. SR 24 / Harts Road (See Recommendation 4  Table 15, Page 35)
This unsignalized intersection experiences LOS deficiencies during the PM peak in Case 1, and the AM, PM, and Saturday peaks in Cases 2 and 3. In Case 3 in the PM peak hour the southbound Harts Road approach is expected to operate at LOS F with 989.9 seconds of delay. The Henlopen TID proposes the elimination of this intersection.

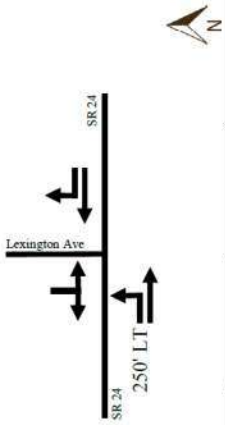
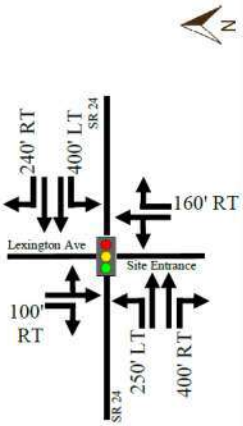
16. SR 24 / Jolyns Way (See Recommendation 4  Table 17, Page 37)
This unsignalized intersection experiences LOS deficiencies during the Saturday peak in Cases 2 and 3. In Case 3 during the Saturday peak, the northbound Jolyns Way approach is expected to operate at LOS E with 45.3 seconds of delay and queues of less than one vehicle. It should be noted that the forecasted volume on this approach is five (5) vehicles in the Saturday peak hour. The Henlopen TID proposes to signalize this intersection, widen SR 24 to include two through lanes in each direction, and add a northern leg to the intersection that will connect to Robinsonville Road. These improvements will mitigate the LOS deficiencies.

**Development Improvements**

Should Sussex County approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan by note or illustration, unless a Design Deviation is requested and approved by the Department. All applicable agreements (i.e. letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development. The following items should be implemented at the same time as site construction once all agency approvals and permits are secured and completed in accordance with DelDOT's Standards and Specifications.

1. The developer shall improve the State-maintained Roads on which they front (Delaware Route 24), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

2. The developer should construct the full-movement Site Entrance on Delaware Route 24. The proposed configuration is shown in the table below.

| Approach | Current Configuration | | Approach | Proposed Configuration | |
|---|---|---|---|---|---|
| Eastbound SR 24 | One left turn lane and one through lane |  | Eastbound SR 24 | One left turn lane, two through lanes, and one right turn lane |  |
| Westbound SR 24 | One through lane and one right turn lane. | | Westbound SR 24 | One left turn lane, two through lanes, and one right turn lane | |
| Northbound | Approach does not exist. | | Northbound Site Entrance | One shared left / through lane and one right turn lane. | |
| Southbound Lexington Avenue | One shared left / right turn lane. Stop Control. | | Southbound Lexington Avenue | One shared left / through lane and one right turn lane. | |

At the proposed Site Entrance intersection, an eastbound right-turn lane is warranted on SR 24 based on DelDOT's Auxiliary Lane Worksheet, Figure 5.2.9.1-b. Initial recommended minimum turn lane length (excluding taper) is a 400-foot right-turn lane on eastbound SR 24. The westbound left-turn lane should be designed to accommodate the 95$^{th}$ percentile queues. Initial recommended minimum turn lane length (excluding taper) is a 400-foot left-turn lane on westbound SR 24. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

3. The developer should enter into a traffic signal agreement to design and construct a traffic signal with pedestrian crossings at the intersection of Site Entrance / Lexington Avenue and SR 24. SR 24 should be widened to include two 11-foot through lanes and 5-foot bicycle lanes in each direction within the extents of the site frontage. Beginning at the western extent of the site frontage, a minimum 150-foot eastbound lane addition taper should be provided to add the second eastbound through lane. Beginning west of the intersection, a minimum 495-foot westbound lane drop taper should be provided. At the signalized intersection there should be dedicated left-turn lanes and channelized right-turn lanes on each SR 24 approach, and on the northbound and southbound approaches there should be a shared left / through lane and a channelized right-turn lane. Initial recommended minimum turn lane lengths (excluding tapers) are a 250-foot eastbound left-turn lane, a 240-foot westbound right-turn lane, a 160-foot northbound right-turn lane, and a 100-foot southbound right-turn lane. At the signalized intersection the developer should also construct signalized pedestrian crossings on all approaches. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane

lengths and other design details during the site plan review. The developer will be granted credit against their TID fee for this work.

4. The developer shall pay the Henlopen TID fee. The developer should coordinate with DelDOT regarding the TID fee amount and payment terms.

5. The following bicycle and pedestrian improvements should be included:

   a. Per the DelDOT Development Coordination Manual section 5.2.9.2, bicycle lanes are required where right-turn lanes are being installed.

   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.

   c. Utility covers should be made flush with the pavement.

   d. A minimum 15-foot-wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontages along Delaware Route 24. Within the easement, a minimum of a 10-foot wide shared-use path should be constructed. The shared-use path should meet AASHTO and ADA standards and should have a minimum of a five-foot buffer from the roadway. At the property boundaries, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at or before both boundaries of the property.

   e. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.

   f. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five-feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. Internal sidewalks in the development should connect to the proposed shared-use path along the site frontages.

   g. Construct a bus stop pad on SR 24 within the site frontage. Bus stop pad should connect to shared use paths and sidewalks along the site frontage. Location, size, and type of bus pad will be determined through coordination with the Delaware Transit Corporation (DTC).

Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines*. These guidelines are available on DelDOT's website at http://deldot.gov/Publications/manuals/de mutcd/index.shtml.

Please note that this review generally focuses on capacity and level of service issues; additional safety and operational issues will be further addressed through DelDOT's site plan review process.

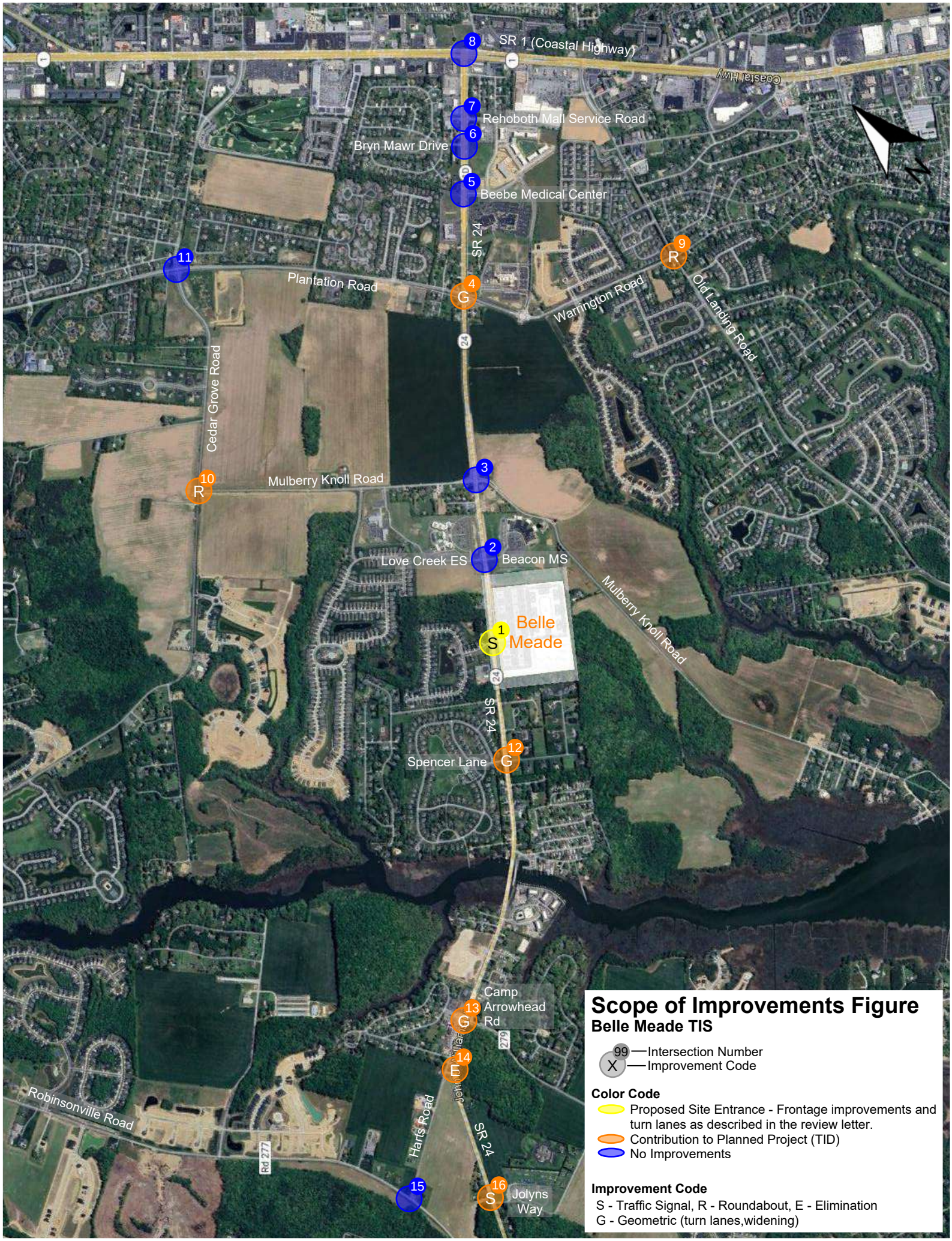
Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

**McCormick Taylor, Inc.**

Andrew J. Parker, PE, PTOE
Project Manager

Enclosure


SR 1 (Coastal Highway)
Coastal Hwy
Rehoboth Mall Service Road
Bryn Mawr Drive
Beebe Medical Center
SR 24
Plantation Road
Warrington Road
Old Landing Road
Cedar Grove Road
Mulberry Knoll Road
Love Creek ES
Beacon MS
Belle Meade
Spencer Lane
Camp Arrowhead Rd
Robinsonville Road
Harts Road
Rd 277
Jolyns Way
Scope of Improvements Figure
Belle Meade TIS
99 — Intersection Number
X — Improvement Code
Color Code
Proposed Site Entrance - Frontage improvements and turn lanes as described in the review letter.
Contribution to Planned Project (TID)
No Improvements
Improvement Code
S - Traffic Signal, R - Roundabout, E - Elimination
G - Geometric (turn lanes,widening)

## General Information

**Report date:** February 2024
**Prepared by:** Becker Morgan Group, Inc
**Prepared for:** Capano Management, Inc.
**Tax parcel:** 334-18.00-40.01
**Generally consistent with DelDOT's Development Coordination Manual:** Yes

## Project Description and Background

**Description:** The proposed Belle Meade development consists of 125,000 square feet of retail space, 480 low-rise multi-family houses.
**Location:** The site is located along the south side of Delaware Route 24, approximately 1,800 feet southwest of the intersection with Mulberry Knoll Road (Sussex Road 284), in Sussex County, Delaware. A site location map is included on page 11.
**Amount of land to be developed:** an approximately 38.33-acre parcel.
**Land use approval(s) needed:** The subject land is currently zoned AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial).
**Proposed completion year:** 2032
**Proposed access locations:** One full access point is proposed on Delawar Route 24 opposite Lexington Avenue.
**Average Daily Traffic Volumes (per DelDOT Traffic Summary 2022):**

- Delaware Route 24: 18,591 vehicles/day

Mulberry Knoll Road
SR 24
N
Mulberry Knoll Road
SR 24
Site Location Map
Proposed Entrance

## 2020 Delaware Strategies for State Policies and Spending

**Location with respect to the Strategies for State Policies and Spending Map of Delaware:**
The proposed Belle Meade development is located within Investment Level 2.

*Investment Level 2*
This investment level has many diverse characteristics. These areas can be composed of less developed areas within municipalities, rapidly growing areas in the counties that have or will have public water and wastewater services and utilities, areas that are generally adjacent to or near Investment Level 1 Areas, smaller towns and rural villages that should grow consistently with their historic character, and suburban areas with public water, wastewater, and utility services. These areas have been shown to be the most active portion of Delaware's developed landscape. They serve as transition areas between Level 1 and the more open, less populated areas. They generally contain a limited variety of housing types, predominantly detached single-family dwellings.

In Investment Level 2, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity.

Investments should encourage departure from the typical single-family-dwelling developments and promote a broader mix of housing types and commercial sites encouraging compact, mixed-use development where applicable. Overall, the State's intent is to use spending and management tools to promote well-designed development in these areas. Such development provides for a variety of housing types, user-friendly transportation systems, and provides essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community. Investment Level 2 areas are prime locations for designating "pre-permitted areas."

**Proposed Development's Compatibility with Strategies for State Policies and Spending:**
The proposed Belle Meade development falls within Investment Level 2 and is to be developed as 125,000 square feet of retail space, 480 low-rise multi-family houses. The proposed development is consistent with the character of Investment Level 2. It is therefore concluded that the proposed development appears to generally comply with the policies stated in the 2020 "Strategies for State Policies and Spending."

## Comprehensive Plan

**Sussex County Comprehensive Plan:**
*(Source: Sussex County Comprehensive Plan, March 2019)*

The Sussex County Comprehensive Plan Future Land Use Map indicates that the proposed Belle Meade site is planned for "Commercial" land use. It would appear that the proposed Belle Meade development generally fits within the intended land use for this location.

**Proposed Development's Compatibility with Comprehensive Plan:**
The proposed development appears to comply with the Sussex County Comprehensive Plan. The Belle Meade development is proposed on land that is planned for Commercial use. The land is

zoned as AR-1 (Agricultural Residential), and the developer plans to rezone the land to C-4 (Planned Commercial). The proposed development generally aligns with both the Future Land Use Map and the proposed zoning.

**Relevant Projects in the DelDOT Capital Transportation Program**

Currently, DelDOT has two relevant and ongoing projects within the area of study.

The *SR 24, Love Creek to Mulberry Knoll* (State Contract No. T201212201) project will improve safety and increase capacity on Delaware Route 24 from Love Creek to Mulberry Knoll Road. Dual lanes along Delaware Route 24 will extend from SR 1 to west of the school entrances located west of Mulberry Knoll Road. The dualized portion of the project will include a 12-foot center-left-turn lane along with two 11-foot travel lanes in each direction, an 8-foot shoulder eastbound and a 5-foot shoulder/bike lane westbound. Improvements at the intersection of Delaware Route 24 and Mulberry Knoll Road will include signalization, changing the Delaware Route 24 approaches so they each have one left-turn lane, two through lanes, and one right-turn lane, along with widening the Mulberry Knoll Road approaches so they each have one left-turn lane and one shared through/right turn lane. Construction is expected to be completed in 2024.

The proposed development is located within the boundary of the operational Henlopen Transportation Improvement District (TID). The TID is a planning concept that seeks to proactively align transportation infrastructure spending and improvements with land use projections and future development within the designated district. The intersections in the study area of the proposed development are within the TID boundary.

Although the proposed development is within the Henlopen TID, the proposed plan for the development is inconsistent with the Land Use and Transportation Plan (LUTP) that was developed for the TID. For developments that are consistent with the LUTP, the developer is required to pay a fee in lieu of performing a TIS. However, as the proposed development is inconsistent with the LUTP, a TIS was required to determine if the TID improvements are still adequate given the additional trips associated with this development. The TID buildout year is 2045 and the minimum acceptable is LOS D.

## Trip Generation

Trip generation for the proposed development was computed using comparable land uses and equations contained in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers (ITE). The following land use was utilized to estimate the amount of new traffic generated for this development:

- 480 low-rise multi-family dwelling units (ITE Land Use Code 220)
- 125,000 square-foot Retail Space (ITE Land Use Code 821)

**Table 1**
**Peak Hour Trip Generation**

| Land Use | Phase | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Saturday Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| LUC 220<br>LUC 821 | Gross | 173 | 211 | 384 | 249 | 211 | 460 | 336 | 315 | 651 |
| | Pass-by | 0 | 0 | 0 | 114 | 106 | 220 | 127 | 116 | 243 |
| **Total Trips** | | **173** | **211** | **384** | **363** | **317** | **680** | **463** | **431** | **894** |

## Overview of TIS

**Intersections examined:**

1) Site Entrance / Lexington Avenue / Delaware Route 24
2) Delaware Route 24 / Love Creek Elementary School / Beacon Middle School
3) Delaware Route 24 / Mulberry Knoll Road (Sussex Road 284)
4) Delaware Route 24 / Plantations Road / Warrington Road (Sussex Road 275)
5) Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)
6) Delaware Route 24 / Bryn Mawr Drive
7) Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way
8) Delaware Route 1 / Delaware Route 24
9) Warrington Road / Old Landing Road (Sussex Road 274)
10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)
11) Cedar Grove Road / Plantations Road
12) Delaware Route 24 / Spencer Lane / Williams Way
13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)
14) Delaware Route 24 / Harts Road (Sussex Road 277C)
15) Robinsonville Road (Sussex Road 277) / Harts Road
16) Delaware Route 24 / Jolyns Way (Sussex Road 289)

**Conditions examined:**

1) 2022 Existing (Case 1)
2) 2032 without development (Case 2)
3) 2032 with development (Case 3)

**Peak hours evaluated:** Weekday morning, evening, and Saturday mid-day peak hours

**Committed developments considered:**

1) Scenic Manor f.k.a. Estates at Mulberry Knoll (320 single-family detached houses)
2) V□M, LLC (5,000 square-foot super convenience store with gas pumps and a 12,000 square-foot office)
3) Belle Terre (269 single-family detached houses)
4) Arbor-Lyn (142 single-family detached houses)
5) Osprey Point (217 single-family detached houses)
6) Welshes Pond f.k.a. Fieldstone (247 single-family detached houses)
7) Wellesley (132 single-family detached houses)
8) Centre at Love Creek f.k.a. Pelican Landing (84,576 square-foot shopping center)
9) Marsh Island (139 single-family detached houses)
10) Chase Oaks f.k.a. Charter Oak (249 single-family detached houses)
11) Brentwood f.k.a. Coral Lakes (198 single-family detached houses)
12) Tanager Woods f.k.a. Street Property (173 single-family detached houses)
13) Middle Creek Preserve (313 single-family detached houses)
14) Hailey's Glen f.k.a. Kielbasa Property (68 single-family detached houses)
15) Beachtree Preserve (155 single-family detached houses)

**Intersection Descriptions**

1) **Site Entrance/Lexington Avenue & Delaware Route 24**
   **Type of Control:** Currently unsignalized and proposed to be signalized.
   **Eastbound Approach:** (DE 24) existing one left-turn lane and one through lane; proposed one left-turn, two through, and one right-turn lane.
   **Westbound Approach:** (DE 24) existing one through and one right-turn lane; proposed one left-turn, two through, and one right-turn lane.
   **Northbound Approach:** (Site Entrance) proposed one shared left-through and one right-turn lane.
   **Southbound Approach:** (Lexington Avenue) stop-controlled; currently one shared left/right-turn lane; proposed one shared left/through and one right-turn lane.

2) **Delaware Route 24 / Love Creek Elementary School / Beacon Middle School**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Beacon Middle School) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Love Creek Elementary School) one shared left/through lane and one right-turn lane.

3) **Delaware Route 24 & Mulberry Knoll Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Mulberry Knoll Road) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Mulberry Knoll Road) one shared left/through lane and one right-turn lane.

4) **Delaware Route 24 & Plantation Road / Warrington Road**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Warrington Road) one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane.
   **Southbound Approach:** (Plantation Road) one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane.

5) **Delaware Route 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Beebe Road) one shared left/through lane and one right-turn lane.
   **Southbound Approach:** (Entrance to Residence Inn) one shared left/through lane and one right turn lane.

6) **Delaware Route 24 / Bryn Mawr Drive**
   **Type of Control:** three-leg stop controlled intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane and two through lanes.
   **Westbound Approach:** (DE 24) one right-turn lane and two through lanes.
   **Southbound Approach:** (Bryn Mawr Drive) stop-controlled; one shared left-right turn lane.

7) **Delaware Route 24 / Rehoboth Mall Service Road / Hudson Way**
   **Type of Control:** signalized four-leg intersection.
   **Eastbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Westbound Approach:** (DE 24) one left-turn lane, two through lanes, and one right-turn lane.
   **Northbound Approach:** (Rehoboth Mall Service Road) one shared left-through lane and one right turn lane.
   **Southbound Approach:** (Hudson Way) one shared left-through lane and one right turn lane.

8) **Delaware Route 1 / Delaware Route 24**
   **Type of Control:** signalized three-leg intersection.
   **Eastbound Approach:** (DE 24) three left-turn lanes and two right-turn lanes.
   **Northbound Approach:** (DE 1) two left-turn lanes and three through lanes.
   **Southbound Approach:** (DE 1) one U-turn lane, three through lanes, and one right turn.

9) **Warrington Road / Old Landing Road (Sussex Road 274)**
   **Type of Control:** all-way stop-controlled four-leg intersection.
   **Eastbound Approach:** (Warrington Road) one left-turn lane and one shared through/right-turn lane.
   **Westbound Approach:** (Strawberry Road) one shared left/through/right-turn lane.
   **Northbound Approach:** (Old Landing Road) one shared left/through/right-turn lane.
   **Southbound Approach:** (Old Landing Road) one shared left/through/right-turn lane.

**10) Mulberry Knoll Road / Cedar Grove Road (Sussex Road 283)**

**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) one shared through/right-turn lane.
**Westbound Approach:** (Cedar Grove Road) one shared left-turn/through lane.
**Northbound Approach:** (Mulberry Knoll Road) stop-controlled; one shared left/right-turn lane.

**11) Cedar Grove Road / Plantation Road**

**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (Cedar Grove Road) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (Cedar Grove Road) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Plantation Road) one left-turn lane, one through lane, and one right-turn lane.
**Southbound Approach:** (Plantation Road) one left-turn lane, one through lane, and one right-turn lane.

**12) Delaware Route 24 / Spencer Lane / Williams Way**

**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Williams Way) stop-controlled; one shared left/through/right-turn lane.
**Southbound Approach:** (Spencer Lane) stop-controlled; one shared left/through lane and one right-turn lane.

**13) Delaware Route 24 / Camp Arrowhead Road (Sussex Road 279)**

**Type of Control:** signalized four-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Westbound Approach:** (DE 24) one left-turn lane, one through lane, and one right-turn lane.
**Northbound Approach:** (Camp Arrowhead Road) one left-turn lane, one through lane, and one right-turn lane.
**Southbound Approach:** (Fairfield Road) one left-turn lane and one shared through/right-turn lane.

14) **Delaware Route 24 / Harts Road (Sussex Road 277C)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one left-turn lane and one through lane.
**Westbound Approach:** (DE 24) one through lane and one right-turn lane.
**Southbound Approach:** (Harts Road) stop-controlled; one right-turn lane and one left-turn lane.

15) **Robinsonville Road (Sussex Road 277) / Harts Road**
**Type of Control:** stop-controlled three-leg intersection.
**Westbound Approach:** (Harts Road) stop-controlled; one shared left/right-turn lane.
**Northbound Approach:** (Robinsonville Road) existing one shared through/right-turn lane.
**Southbound Approach:** (Robinsonville Road) existing one shared left-turn/through lane.

16) **Delaware Route 24 / Jolyns Way (Sussex Road 289)**
**Type of Control:** stop-controlled three-leg intersection.
**Eastbound Approach:** (DE 24) one shared through/right-turn lane.
**Westbound Approach:** (DE 24) one shared left-turn/through lane.
**Northbound Approach:** (Jolyns Way) stop-controlled; one shared left/right-turn lane.

## Safety Evaluation

**Crash Data:** Delaware Crash Analysis Reporting System (CARS) data was provided in the TIS for the three-year period from January 1, 2021, through December 31, 2023. A total of 7 reportable crashes occurred within 0.1 miles of the site access. Three were rear-end, two were sideswipe, one was an angle, and one was a single-vehicle crash. None of the crashes caused any injury or involved pedestrians or bicyclists.

**Sight Distance:** The study area generally consists of relatively flat roadways and there are few visual obstructions. As always adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site accesses.

## Transit, Pedestrian, and Bicycle Facilities

**Existing transit service:** Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates one fixed-route transit bus route in the area of the proposed Belle Meade development. Route 215 Millsboro/Rehoboth runs along DE 24 with the nearest stops located west of the site at the Love Creek Marina and east of the site at Beebe Medical Center.

**Planned transit service:** Delaware Transit Corporation (DTC) has requested that the developer construct a bus stop pad on SR 24 within the site frontage. The location, size, and type of bus pad will be determined through coordination with DTC.

**Existing bicycle and pedestrian facilities**: According to DelDOT's Sussex County Bicycle Map, Delaware Route 24 is designated as a High-Traffic Regional Bicycle Route with a Bikeway. Plantation Road is designated as a High-Traffic Statewide Bicycle Route with a Bikeway. Recent

DelDOT projects along SR 24 have or are in the process of adding bicycle lanes along SR 24 between Love Creek and SR 1. The same projects have also added sidewalks or shared use paths along the same segment of SR 24, except for the segment between Mulberry Knoll Road and Plantation Road / Warrington Road.

**Planned bicycle and pedestrian facilities:** The developer should maintain the existing sidewalk or shared use path along the site frontage that was constructed by the "SR 24, Love Creek to Mulberry Knoll" project. In addition, a signalized pedestrian crossing of SR 24 should be included at the proposed signal at the intersection of SR 24 and Lexington Avenue.

**Previous Comments**

The initial scoping memorandum between the developer and DelDOT was dated December 9, 2022.

In a review letter dated October 6, 2023, DelDOT commented on the traffic counts and seasonally adjusted traffic volumes. The developer was asked to include additional committed developments that were originally included in the scoping memorandum. DelDOT also provided additional count data and directed the developer to update the volume figures.

In a second review letter dated October 30, 2023, DelDOT requested additional revisions to the committed development volumes due to construction detours in the area during the traffic counts. The developer was asked to address the noted issues and proceed with the Preliminary TIS.

In a third review letter dated December 28, 2023, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and distribution. The developer was then directed to resubmit the Preliminary TIS.

In a fourth review letter dated January 25, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to make additional revisions to the committed development volumes and then resubmit the Preliminary TIS.

In a fifth review letter dated February 15, 2024, DelDOT commented on the Preliminary TIS. The developer was asked to revise how growth factors were applied to volumes provided by the Henlopen TID and associated volume figures then resubmit the Preliminary TIS.

In a sixth review letter dated February 19, 2024, DelDOT noted that the Preliminary TIS was acceptable as submitted and directed the developer to proceed with the Final TIS.

It appears that all substantive comments from DelDOT's TIS Scoping Memorandum, Traffic Count Review, Preliminary TIS Review, and other correspondence were addressed in the Final TIS submission.

**General HCS Analysis Comments**
*(see table footnotes on the following pages for specific comments)*

1) Both the TIS and McCormick Taylor utilized Highway Capacity Software (HCS) version 2023 to complete the traffic analyses.

2) The TIS and McCormick Taylor generally used heavy vehicle percentages (HV%) from turning movement counts for existing and future conditions (as per DelDOT's Development Coordination Manual section 2.2.8.11.6.H). McCormick Taylor and the TIS assumed 3% HV for future movements and at the proposed site entrance.

3) The TIS and McCormick Taylor determined overall intersection peak hour factors (PHF) for each intersection based on the turning movement counts. Future PHFs were determined as per the DelDOT Development Coordination Manual section 2.2.8.11.6.F where applicable. The application of future PHFs in the TIS was inconsistent between intersections and volume scenarios.

4) For analyses of all intersections, McCormick Taylor and the TIS assumed 0% grade for all movements.

Table 2
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [1] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **1. SR 24 / Lexington Avenue / Site Entrance** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 – Left | A (8.1) | B (10.4) | A (8.7) | A (8.1) | B (10.5) | A (8.8) |
| Southbound Lexington Avenue | D (30.0) | E (42.7) | E (35.7) | D (30.5) | E (43.0) | E (36.3) |
| | | | | | | |
| 2032 No Build (Case 2) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (13.3) | B (10.5) | A (9.0) | B (13.2) | B (10.4) |
| Southbound Lexington Avenue | E (36.8) | F (90.0) | F (53.2) | F (108.0) | F (251.2) | F (150.1) |
| | | | | | | |
| 2032 Build (Case 3) [2] | | | | | | |
| Eastbound SR 24 – Left | A (9.0) | B (12.8) | B (10.1) | A (9.0) | B (12.7) | B (10.1) |
| Westbound SR 24 – Left | B (13.9) | C (17.7) | D (34.9) | B (13.8) | C (16.6) | E (35.8) |
| Northbound Site Entrance | F (333.4) | F (3337.9) | F (10913) | F (1486.8) | F (17804.0) | F (44574.1) |
| Southbound Lexington Avenue | F (354.3) | F (2563.7) | F (6644.9) | F (3163.6) | F (13387.7) | [3] |
| | | | | | | |
| 2032 Build (Case 3) Signal [2] | | | | | | |
| Overall | - | - | - | B (14.1) | C (28.3) | F (92.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [4] | | | | | | |
| Overall | B (10.2) | B (11.6) | B (19.2) | B (12.0) | B (16.0) | C (25.0) |

[1] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[2] TIS modeled Case 2 and 3 with two through lanes in both eastbound and westbound directions on SR 24. MT modeled with one through lane in each direction based on the proposed condition in the SR 24, Love Creek to Mulberry Knoll Road Project.
[3] Capacity cannot be calculated as intersection volume exceeds HCM limitations.
[4] Henlopen TID proposes two through lanes in each direction along SR 24.

Table 3
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [5] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **2. SR 24 / Love Creek Elementary School / Beacon Middle School** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) [6] | | | | | | |
| Overall | A (9.6) | A (7.7) | A (2.0) | B (14.2) | B (10.4) | A (6.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (6.4) | A (4.6) | A (0.6) | B (10.3) | A (5.4) | C (20.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (5.9) | A (4.5) | A (0.8) | C (23.3) | A (7.3) | D (41.3) |

[5] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[6] TIS modeled intersection in Case 1 with one through lane in each direction. Existing conditions, following the completion of the SR 24, Love Creek to Mulberry Knoll Road Project, will have two through lanes in each direction along SR 24.

Table 4
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [7] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **3. SR 24 / Mulberry Knoll Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (8.8) | A (9.3) | B (18.1) | A (8.9) | A (8.3) | B (17.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (30.5) | D (46.0) | E (78.1) | B (19.9) | C (23.3) | C (28.5) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (37.0) | D (52.3) | F (85.0) | C (20.7) | C (24.9) | C (30.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID)[8] | | | | | | |
| Overall | - | - | - | B (17.1) | B (16.4) | C (23.5) |

[7] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[8] Henlopen TID proposes the addition of dedicated right-turn lanes on both minor street approaches. The turn lanes are modeled with 180-foot storage length.

Table 5
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [9] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **4. SR 24 / Plantation Road / Warrington Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | C (23.3) | C (31.8) | C (34.6) | D (36.6) | D (44.1) | D (50.4) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (26.1) | C (35.6) | D (39.0) | C (32.4) | D (53.6) | D (50.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (26.7) | D (37.5) | D (40.7) | C (31.5) | E (60.8) | D (54.8) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [10] | | | | | | |
| Overall | - | - | - | C (28.8) | D (49.5) | D (42.0) |

[9] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[10] The Henlopen TID conceptual design includes two left turn lanes, two through lanes, and one right turn lane on the Warrington Road and Plantation Road approaches.

Table 6
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [11] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **5. SR 24 / Lexus Way (Beebe Medical Center campus) / Colonial Oaks (Residence Inn)** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (1.5) | A (5.1) | A (1.3) | A (1.8) | A (9.4) | A (7.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (1.3) | A (3.8) | A (1.3) | A (1.3) | B (10.9) | B (11.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (1.3) | A (3.7) | A (1.3) | A (1.7) | B (11.1) | B (12.2) |

[11] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 7
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [12] Two-Way Stop-Control** | **LOS per TIS [13]** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **6. SR 24 / Bryn Mawr Drive** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | B (10.4) | B (11.4) | B (11.7) | A (8.5) | A (9.5) | A (8.8) |
| Southbound Bryn Mawr Drive | C (15.1) | C (20.1) | C (21.8) | C (18.7) | C (20.1) | C (23.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | B (12.4) | C (17.0) | C (18.1) | A (8.9) | B (11.3) | B (11.1) |
| Southbound Bryn Mawr Drive | C (17.4) | D (29.6) | D (33.7) | D (30.6) | E (49.5) | F (56.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | B (11.5) | B (14.1) | C (15.1) | A (9.1) | B (11.7) | B (11.7) |
| Southbound Bryn Mawr Drive | C (17.1) | D (25.7) | D (29.4) | E (35.8) | F (62.4) | F (75.2) |

[12] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[13] TIS modeled this intersection with three though lanes in each direction on SR 24 which does not match the existing or proposed conditions.

Table 8
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [14] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **7. SR 24 / Rehoboth Mall Service Road / Hudson Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | A (3.1) | A (8.0) | A (5.4) | A (3.8) | B (10.7) | A (5.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | A (2.5) | A (6.0) | A (4.3) | A (2.5) | A (7.4) | A (5.0) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | A (2.4) | A (5.7) | A (4.1) | A (3.2) | A (7.1) | A (4.2) |

[14] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 9
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [15] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **8. SR 24 / SR 1** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (19.7) | C (23.0) | D (39.2) | B (17.8) | C (22.9) | C (24.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | D (43.2) | D (52.2) | E (77.3) | C (23.6) | C (32.1) | C (29.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (46.2) | E (56.5) | F (83.9) | C (29.8) | D (35.1) | C (33.1) |

[15] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 10
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [16] All-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **9. Warrington Road / Old Landing Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound Warrington Road | D (31.6) | C (23.3) | F (116.1) | D (28.4) | C (20.4) | F (102.7) |
| Westbound Strawberry Way | A (9.5) | A (9.6) | B (11.1) | A (9.6) | A (9.7) | B (11.2) |
| Northbound Old Landing Road | C (15.7) | B (12.9) | C (22.5) | C (15.6) | B (12.8) | C (22.3) |
| Southbound Old Landing Road | B (12.3) | C (20.3) | D (31.6) | B (12.3) | C (20.0) | D (31.2) |
| Overall | C (22.9) | C (20.0) | F (66.0) | C (21.2) | C (18.7) | F (60.0) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound Warrington Road | F (130.4) | F (131.1) | F (336.8) | F (75.9) | F (51.7) | F (216.8) |
| Westbound Strawberry Way | B (10.7) | B (12.1) | B (12.9) | B (10.8) | B (12.1) | B (13.0) |
| Northbound Old Landing Road | C (22.4) | c (20.2) | E (42.8) | C (22.1) | C (20) | E (42.4) |
| Southbound Old Landing Road | C (15.2) | F (88.0) | F (103.2) | C (15.1) | F (89.9) | F (101.8) |
| Overall | F (76.7) | F (91.8) | F (192.0) | E (48.5) | F (60.2) | F (138.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound Warrington Road | F (161.0) | F (155.6) | F (380.1) | F (115.3) | F (62.0) | F (243.9) |
| Westbound Strawberry Way | B (10.8) | B (12.2) | B (13.0) | B (10.9) | B (12.3) | B (13.1) |
| Northbound Old Landing Road | C (23.4) | C (20.9) | E (46.7) | C (23.1) | C (20.8) | E (46.3) |
| Southbound Old Landing Road | C (16.1) | F (105.0) | F (128.6) | C (16.0) | F (103.4) | F (127.6) |
| Overall | F (93.3) | F (108.9) | F (221.0) | F (57.0) | F (69.8) | F (159.9) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Roundabout | | | | | | |
| Overall | B (10.6) | B (11.7) | C (20.4) | B (10.6) | B (11.7) | C (20.4) |

[16] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 11
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [17] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **10. Mulberry Knoll Road / Cedar Grove Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.2) | A (7.6) | A (9.8) | A (8.1) | A (7.6) | A (9.9) |
| Northbound Mulberry Knoll Road | B (11.5) | B (11.1) | C (20.5) | B (11.8) | B (11.1) | C (20.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.3) | A (8.9) | A (8.3) | B (12.3) |
| Northbound Mulberry Knoll Road | C (20.1) | D (32.5) | F (614.3) | C (20.1) | D (32.5) | F (614.3) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (22.3) | E (40.4) | F (837.7) | C (22.3) | E (40.4) | F (837.7) |
| | | | | | | |
| 2032 Build (Case 3) w/ improvements [18] | | | | | | |
| Westbound Cedar Grove Road - Left | A (8.9) | A (8.3) | B (12.8) | A (8.9) | A (8.3) | B (12.8) |
| Northbound Mulberry Knoll Road | C (19.3) | D (33.9) | F (581.4) | C (19.3) | D (33.9) | F (581.4) |
| | | | | | | |
| 2032 Build (Case 3) Roundabout [19] | | | | | | |
| Overall | - | - | - | A (6.9) | A (6.7) | C (18.0) |

[17] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[18] The TIS proposes to construct a dedicated eastbound right-turn lane on Cedar Grove Road.
[19] Henlopen TID proposes a roundabout at this intersection.

Table 12
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [20] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **11. Cedar Grove Road / Plantation Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (18.3) | B (18.3) | C (31.2) | B (17.6) | B (17.7) | C (34.7) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | B (19.8) | C (22.5) | D (41.4) | B (18.8) | C (21.0) | C (34.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | C (20.2) | C (23.3) | D (44.4) | B (19.1) | B (21.9) | D (44.8) |

[20] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 13
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [21] Two-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **12. SR 24 / Spencer Lane / Williams Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.6) | B (10.4) | A (8.6) | A (8.6) | B (10.4) | A (8.6) |
| Westbound SR 24 - Left | A (9.8) | A (8.9) | B (10.0) | A (9.8) | A (8.9) | B (10.0) |
| Northbound Williams Way | C (24.3) | F (56.0) | D (31.2) | C (24.3) | F (56.0) | D (31.2) |
| Southbound Spencer Lane | C (24.3) | E (44.1) | E (40.6) | C (24.3) | E (44.1) | E (40.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (12.9) | B (10.2) | A (9.6) | B (13.5) | B (10.4) |
| Westbound SR 24 - Left | B (11.5) | B (10.6) | B (12.3) | B (11.5) | B (10.9) | B (12.7) |
| Northbound Williams Way | F (52.4) | F (220.3) | F (97.8) | F (52.4) | F (284.6) | F (115.8) |
| Southbound Spencer Lane | F (65.8) | F (233.6) | F (221.1) | F (65.8) | F (330.5) | F (291.9) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Eastbound SR 24 - Left | A (10.0) | B (13.5) | B (10.8) | A (10.0) | B (14.2) | B (11.0) |
| Westbound SR 24 - Left | B (11.9) | B (11.1) | B (13.3) | B (11.9) | B (11.4) | B (13.8) |
| Northbound Williams Way | F (65.5) | F (305.4) | F (148.5) | F (65.5) | F (406.1) | F (181.6) |
| Southbound Spencer Lane | F (91.3) | F (535.2) | F (408.7) | F (91.3) | F (505.6) | F (547.1) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [22] | | | | | | |
| Eastbound SR 24 - Left | - | - | - | B (10.4) | B (14.5) | B (11.1) |
| Westbound SR 24 - Left | - | - | - | B (12.0) | B (11.5) | B (13.9) |
| Northbound Williams Way | - | - | - | E (41.9) | F (130.2) | F (86.1) |
| Southbound Spencer Lane | - | - | - | D (33.3) | F (176.2) | F (117.7) |

[21] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[22] Henlopen TID proposes left-turn lanes, two through lanes, and right turn lanes on both SR 24 approach at this intersection.

Table 14
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Signalized Intersection** [23] | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **13. SR 24 / Camp Arrowhead Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Overall | B (10.5) | B (13.7) | B (14.6) | B (12.4) | B (15.8) | B (16.6) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Overall | C (27.4) | E (59.5) | F (88.3) | B (10.6) | B (17.8) | B (18.2) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Overall | D (45.3) | F (89.5) | F (129.1) | B (12.3) | D (38.9) | E (58.6) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) [24] | | | | | | |
| Overall | - | - | - | A (6.5) | B (11.0) | B (12.2) |

[23] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[24] Henlopen TID proposes an additional through lane in both directions of SR 24.

Table 15
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [25] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **14. SR 24 / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Eastbound SR 24 - Left | A (8.4) | A (9.4) | A (8.5) | A (8.2) | A (9.5) | A (8.5) |
| Southbound Harts Road | C (16.8) | E (37.7) | D (31.7) | C (18.6) | E (38.6) | D (32.3) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Eastbound SR 24 - Left | A (9.3) | B (11.5) | A (9.9) | A (9.3) | B (11.5) | A (9.9) |
| Southbound Harts Road | F (109.5) | F (648.1) | F (541.0) | F (109.5) | F (648.1) | F (541.0) |
| | | | | | | |
| 2032 Build (Case 3) [26] | | | | | | |
| Eastbound SR 24 - Left | A (9.6) | B (11.9) | B (10.4) | A (9.6) | B (11.9) | B (10.4) |
| Southbound Harts Road | F (198.1) | F (989.8) | F (982.7) | F (198.1) | F (989.8) | F (982.7) |

[25] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[26] Henlopen TID proposes the removal of this intersection.

Table 16
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [27] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **15. Robinsonville Road / Harts Road** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound Harts Road | B (10.1) | B (13.2) | B (12.7) | B (10.1) | B (13.2) | B (12.7) |
| Southbound Robinsonville Road - Left | A (7.8) | A (7.6) | A (7.9) | A (7.8) | A (7.6) | A (7.9) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound Harts Road | B (11.5) | A (25.1) | C (19.8) | B (11.8) | A (29.5) | C (19.8) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.2) | A (8.7) | A (8.2) | A (8.3) | A (8.7) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound Harts Road | B (11.7) | D (29.7) | C (23.2) | B (12.0) | D (29.7) | C (20.5) |
| Southbound Robinsonville Road - Left | A (8.2) | A (8.3) | A (8.8) | A (8.3) | A (8.3) | A (8.7) |

[27] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 17
Peak Hour Levels of Service (LOS)
*Based on Belle Meade Traffic Impact Study – April 2024*
*Prepared by Becker Morgan Group, Inc.*

| **Unsignalized Intersection [28] One-Way Stop-Control** | **LOS per TIS** | | | **LOS per McCormick Taylor** | | |
|---|---|---|---|---|---|---|
| **16. SR 24 / Jolyns Way** | Weekday AM | Weekday PM | Summer Saturday | Weekday AM | Weekday PM | Summer Saturday |
| 2022 Existing (Case 1) | | | | | | |
| Westbound SR 24 - Left | A (8.7) | A (8.3) | A (9.1) | A (9.0) | A (8.3) | A (9.1) |
| Northbound Jolyns Way | C (16.0) | C (15.6) | C (20.8) | C (16.6) | C (16.1) | C (20.8) |
| | | | | | | |
| 2032 No Build (Case 2) | | | | | | |
| Westbound SR 24 - Left | A (9.4) | A (9.1) | B (10.2) | A (9.4) | A (9.1) | B (10.2) |
| Northbound Jolyns Way | C (22.2) | C (24.5) | E (37.1) | C (22.2) | C (24.5) | E (37.1) |
| | | | | | | |
| 2032 Build (Case 3) | | | | | | |
| Westbound SR 24 - Left | A (9.6) | A (9.3) | B (10.6) | A (9.6) | A (9.3) | B (10.6) |
| Northbound Jolyns Way | C (24.3) | D (27.5) | E (45.3) | C (24.3) | D (27.5) | E (45.3) |
| | | | | | | |
| 2032 Build (Case 3 w/ TID) Signal [29] | | | | | | |
| Overall | - | - | - | A (1.5) | A (1.6) | A (1.4) |

[28] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

[29] Henlopen TID proposes to signalize this intersection with two through lanes and dedicated turn lanes in each direction along SR 24, extending Jolyns Way north of SR 24 to connect to Robinsonville Road forming a northern leg of the intersection, and adding dedicated right turn lanes on both Jolyns Way approaches. The capacity analysis for the Case 3 with TID results above modeled the intersection without the proposed northern leg because traffic volumes have not been prepared for this condition.

# Off-Site Improvements – Opinion of Cost

The Final TIS recommendations from DelDOT included development improvements as follows: frontage improvements, full movement signalized Site Entrance at the intersection of Lexington Ave. and DE Rt. 24 with auxiliary turn lanes, bicycle and pedestrian improvements and Henlopen TID fees to be paid as determined by DelDOT.

Based on the 2025 rate schedule the project's contribution to the Henlopen TID is estimated at approximately □2,800,000.00.

In addition to the TID, the project's frontage improvements, as recommended by the Traffic Impact Study, are estimated at approximately □1,400,000.00

There are no off-site drainage, sewer, or water costs anticipated with the project scope. Impact fees to the appropriate infrastructure owner's will be calculated at the time of payment, based on the most currently adopted rate schedules.

**PLANNING & ZONING COMMISSION**
ROBERT C. WHEATLEY, CHAIRMAN
HOLLY J. WINGATE, VICE-CHAIRMAN
BRIAN BUTLER
J. BRUCE MEARS
G. SCOTT COLLINS

**Sussex County**
DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

March 7, 2025

Mr. J. Michael Riemann, P.E.
Principal
Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

By email to: mriemann@beckermorgan.com

RE: Staff Review of the Preliminary Site Plan for Belmead Farm, LLC (C/Z 2001) for the establishment of 166 apartments to be housed in 45,940 square feet of mixed commercial structures and seven (7), three-story, 24-unit apartment buildings containing 168 apartment units total (for a combined total of 334 multifamily units), a clubhouse amenity, private garages and storage units, five (5) commercial structures containing a total of 26,065 square feet of commercial uses (to potentially include two (2) drive-thru facilities), related parking and associated site improvements to be located on a 39.22 acre parcel of land the east side of John J. Williams Highway (Route 24), approximately 0.31-mile southwest of Mulberry Knoll Road (S.C.R. 284) in Lewes, Delaware
Tax Parcels: 334-18.00-40.01 & 40.06

Dear Mr. Riemann,

Further to your submission of February 25th, 2025, Staff have reviewed the Preliminary Site Plan for Belmead Farm, LLC (C/Z 2001) for the establishment of 166 apartments to be housed within 45,940 square feet of structures of mixed commercial and residential use and seven (7) three-story, 24-unit apartment buildings containing 168 apartment units total (for a combined total of 334 multifamily units), a clubhouse amenity, private garages and storage units, five (5) commercial structures containing a total of 26,065 square feet of commercial uses (to potentially include two (2) drive-thru facilities), related parking and associated site improvements to be located on a 39.22 acre parcel of land. The parcel is zoned Agricultural Residential (AR-1) District, and the related Change of Zone Application is to facilitate a Change of Zone to a Planned Commercial (C-4) District.

The property is lying on the east side of John J. Williams Highway (Route 24), approximately 0.-31 mile southwest of Mulberry Knoll Road (S.C.R. 284) in Lewes, Delaware. The majority of the parcels have a Growth Area Future Land Use Designation of "Commercial Area" with a small portion on the southeastern corner of Parcel 40.01 being located in the "Coastal Area" per Sussex County's 2018 Comprehensive Plan Update. The subject property is located within the Henlopen Transportation Improvement District (TID). However, the Applicant has completed a Traffic Impact Study (TIS) at the request of the Delaware Department of Transportation (DelDOT) as it was noted that the proposed development is not consistent with the Land Use and Transportation Plan (LUTP).

Staff engaged in a series of Pre-Application Meetings with the Applicant. The first meeting took place on Wednesday, June 29th, 2022, where Staff met with the Applicant provided high-level commentary regarding the proposal. The second meeting took place on Thursday, February 13th, 2025, in which Staff reviewed the design of the project and provided more detailed feedback regarding the Site design and the status of required document submittals.

Staff have reviewed the submitted Preliminary Site Plan for compliance with Chapter 115 (the Zoning Ordinance) and the Planned Commercial (C-4) District Site Plan specific criteria outlined in §115-83.25(F)(2)(a-h) and §115-83.25(F)(4)(a-d) and the provisions and goals outlined within Sussex County's 2018 Comprehensive Plan. Staff have the following comments for your consideration with regard to the Revised Preliminary Site Plan:

<u>Overall Site Plan Comments</u>

1. **Staff recommend that the Applicant consider an applying a Master Planning approach when incorporating the various design elements of the Plan to ensure an appropriate juxtaposition and harmony of the various uses proposed. Doing so will ensure that the intent of the C-4 District to *"provide an integrated Master Plan setting for uses in the Planned Commercial Development District"* is fully achieved (§115-83.25(f)(4)).**
2. **Staff note that the purpose of the Planned Commercial District is to encourage carefully planned large-scale commercial, retail, and mixed-use developments as a means of creating a superior shopping, working and living environment through unified developments, and to provide for the application of design ingenuity while protecting existing and future developments. Please ensure that these elements are fully demonstrated and addressed in the Plans and any supporting statements (§115-83.24).**
3. Please show the location and design details of all refuse areas on the Plans (ie: dumpster facilities) and include the nature of any proposed screening to be provided.
4. Staff note that for a proposal of 308 individual parking spaces (301 to 400 parking spaces total) for the multifamily units that 8 ADA Accessible Spaces are required. It appears that 7 spaces have been provided. Please include one (1) further ADA Accessible Space in order to comply with the 2012 International Building Code Requirements (2012 International Building Code, 11-14 - Table 1106.1 "Accessible Parking Spaces").
5. Staff do note that a small portion of the subject property on the southwest side contains a Future Land Use Map designation of "Coastal Area." Therefore, Staff ask that the Applicant please ensure that design consideration is given by the Applicant toward the establishment of a greenways which utilizes schools, parks, wildlife habitat areas, river and stream corridors, wetlands, floodplains, historic sites, business parks, urban sidewalks, abandoned rail lines, roads, beach areas and vacant land. Greenways should provide benefits like safe pedestrian, bicycling and equestrian routes for recreationists and commuters; and natural wildlife corridors and biological reserves (§115-194.3(E)).

6. Staff request that the nature, character and location of all transit facilities be shown on the Plans. Please note that the location of any transit facilities will have to be coordinated with the Delaware Transit Corporation (DTC), a Division of the Delaware Department of Transportation (DelDOT) in accordance with their siting requirements.

Staff Review Comments Regarding Application of Sussex County Comprehensive Plan Elements

1. **Please ensure that any open space or public spaces provided serve a valuable public purpose and is inter-connected. Wherever feasible, open space should be provided in locations that can connect to existing public or semi-public open spaces or preserve land along a waterway (Sussex County Comprehensive Plan, 12-10).**
2. **Please ensure that the new development complements the character of the existing surrounding communities by providing an appropriate distribution and intensity of uses to include buffers and downlighting where appropriate (Sussex County Comprehensive Plan, 4-9).**
3. Staff request that the character of all proposed lighting be shown on the Plans. The Comprehensive Plan states, "screening of outdoor lights on residential and commercial properties should be provided whenever feasible to prevent intrusions into adjoining residential areas" (Sussex County Comprehensive Plan, 12-4).
4. Please consider placement of parking to the rear or side of buildings, where practicable, so that the front yard can be landscaped. Doing so provides for a less intense and more aesthetically pleasing corridor sightline (Sussex County Comprehensive Plan 12-4).
5. Street trees and shade trees within existing parking lots are encouraged to lessen the intensity of large parking areas (Sussex County Comprehensive Plan, 12-12). Staff recommend a robust street tree design along the primary lateral corridors of internal vehicle and pedestrian circulation in order to enhance the pedestrian design on the site.
6. Staff recommend sidewalks wider than 5 feet along the major pedestrian corridors throughout the site to more fully meet the intent of (Sussex County Comprehensive Plan, 12-7).

Planned Commercial District (C-4) - Site Plan Review Requirements

1. **Staff request that a tabular summary of the percentage of the Site devoted to buildings, open space, streets and parking areas and total floor area of all residential and non-residential structures (§115-83.25(F)(2)(c)).**
2. **Please provide Architectural Sketches or typical proposed structures and typical landscaping and screening areas (§115-83.25(F)(2)(e)).**
3. Staff request that the required setback lines (BRLs) be clearly delineated on the Plans to ensure compliance with minimum District requirements and that measurements be provided of the various development structures to the property lines (§115-83.25(F)(2)(a)).
4. Staff request that further details be provided on the Landscape Plan and that the Landscape Plan show the proposed height and type of trees to be provided within the development project. For example, please clarify that the "interior parking lot canopy trees" to be included are deciduous trees (§115-83.25(F)(2)(b)).

5. Staff note that a Plan showing proposed generalized parking arrangements has been included in the Applicant's submittal (§115-83.25(F)(2)(d)). Staff request the Plan include a breakdown of the number of bedrooms in the proposed multifamily units in both the apartment and mixed-use buildings to ensure a design compliant with the parking provisioning requirements in (§115-162(B)(1)). Please note any parking reductions based on (§115-162(B)(2)) will require the Plan to show that "the land area saved shall be used only for open space, landscaping or pedestrian walkways."
6. **Staff reviewed the Plan in terms of the requirements of (§115-83.25(F)(2)) which requires the Plan display the requirements of (§115-220 – *Preliminary Site Plan Requirements*) and have the following comments:**
   a) Please include Zoning District boundaries (§115-220(B)(2)).
   b) Please include the location and nature of all proposed construction, excavation or grading, including but not limited to buildings, streets and utilities (§115-220(B)(5)).
   c) Please include the Net Development Area (§115-220(B)(6)).
   d) Please include approximate location and size of nonresidential areas, if any (parking areas, loading areas or other) (§115-220(B)(9)).
   e) Please include approximate location and size of recreational areas, if any (§115-220(B)(10)).
   f) Please include the number of construction phases proposed, if any, with the plot showing the approximate boundaries of each phase and the proposed completion date of each phase (§115-220(B)(12)).
   g) Please show location of all wetlands (both state and federal) shall be indicated, in order to facilitate compliance with state and federal wetlands requirements (§115-220(B)(13)).
   h) Please include the designation of all areas proposed as open space on the Plan (§115-220(B)(15)).
   i) Please provide interconnectivity (Stub/Easement) to all parcels adjacent to Parcels 40.01 & 40.06 on the Plan (§115-220(B)(16)).
   j) Please provide all items listed in (§115-220(B)(17)(a-h)) related to wetland resources on the site on the Plan:
      - Boundary and wetland type
      - All existing forest by type as indicated in (§115-220(B)(17)(b)).
      - Proposed access easement layout (§115-220B(17)(f)).
      - A reference by title, author and date, to the DAR (§115-220(B)(17)(g)).
      - Any walking trails, including the method of construction and the materials used to establish the trails (§115-220B(17)(h)).
7. Please include all proposed setbacks for both Parcels on the Plan (§115-83.25F(2)(a)).
8. Please include the required Tabular Summary (§115-83.25F(2)(c)).
9. Please include architectural sketches of typical proposed structures and typical landscaping and screening areas (§115-83.25(F)(2)(e)). Staff request that the architectural plans clearly show the active frontages and orientation of the buildings and how these buildings relate to public realm.
10. Please include plan or report indicating the extent, timing and estimate costs of all off-site improvements such as roads, sewer and drainage facilities necessary to the construction of the

planned development. Such plan or report shall relate to the sequence of development (§115-83.25F(2)(f)).

11. Please provide a Report or Plan showing the adequacy of public facilities and services such as water, sewer drainage, streets and roads to serve the proposed development (§115-83.25F(2)(g)).
12. Please include a general plan for sedimentation and erosion control and stormwater management (§115-83.25F(2)(h)).
13. Staff request the Applicant consider more landscape buffering between the exclusively residential use (Apartments) and the mixed-use structures as well as around the proposed Clubhouse (§115-83.25F(4)(c)).

Prior to approval of the Final Site Plan, approval letters or letters of no objection from the following agencies shall be submitted to the Sussex County Planning and Zoning Office (All items in which a check mark appears have been received by the Department. Any items in bold have not been received and still require submittal to the Department):

- **Delaware Department of Transportation (DelDOT)**
- **Sussex Conservation District**
- **Office of the State Fire Marshal**

Once all of the above matters have been addressed, please provide **one (1) full-size copy and one (1) electronic copy of a Revised Preliminary Site Plan**. This Application has been scheduled for a Public Hearing on **Wednesday, March 19th, 2025**. Therefore, please submit all required materials no later than the close of business on **Tuesday, March 11th, 2025.**

Please feel free to contact the Department with any questions during business hours, 8:30 A.M. – 4:30 P.M., Monday through Friday at 302-855-7878.

Sincerely,

Mr. Jamie Whitehouse, AICP MRTPI
Director, Department of Planning and Zoning

CC: Mr. Jonathan S. Falkowski, P.E., Associate Principal – Becker Morgan Group, Inc.
Mr. Chad D. Carter, P.E., Senior Associate – Becker Morgan Group, Inc.
Change of Zone No. 2001 Belmead Farm, LLC file

Document# 2022000032608 BK: 5734 PG: 290
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Consideration: $5,100,000.00 County/Town: $76,500.00 State: $127,500.00 Total: $204,000.00
Doc Surcharge Paid Town: SUSSEX COUNTY

TAX PARCEL #: 3-34-18.00-40.01

PREPARED BY & RETURN TO:
Parkowski, Guerke & Swayze, P.A.
19354C Miller Road
Rehoboth Beach, DE 19971
File No. 015-22/VGR

NO SURVEY WAS PERFORMED OR REQUESTED

**THIS DEED**, made this 3 day of June, 2022,

- BETWEEN -

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED** and **THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**, of 722 NE 2nd Street, Delray Beach, FL 33483, parties of the first part,

- AND -

**BELMEAD FARM, LLC**, a Delaware limited liability company, of 28855 Lewes Georgetown Hwy, Lewes, DE 19958, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of Ten Dollars and 00/100 ($10.00), lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

**ALL** that certain lot, piece and parcel of land lying and being in Lewes and Rehoboth Hundred, Sussex County and State of Delaware, lying and being along the southeastern right of way of State Route 24 (50 feet wide), more particularly described as follows, to wit:

**BEGINNING** at an iron pipe situate along the aforesaid southwesterly right of way of State Route 24, said point being the common boundary of these lands and lands now or formerly of Mudiwa and Preachess Vellah Munyikwa; thence by and with said right of way North 42 degrees 12 minutes 08 seconds East, 1,451.40 feet to a capped rebar; thence leaving the aforesaid right of way and running by and with lands now or formerly of Cape Henlopen School District South 47 degrees 36 minutes 26 seconds East, 1,205.68 feet to a found rebar; thence running by and with lands now or formerly of Alfred G. Best, Trustee, and lands now or formerly of Linda Elizabeth Best, South 40 degrees 01 minutes 32 seconds West, 365.05 feet to an iron pipe;

thence by and with other lands of Grantor, South 40 degrees 40 minutes 22 seconds West, 1,064.47 feet to a found rebar; thence by and with lands now or formerly of John and Deanna Hoover, North 48 degrees 38 minutes 42 seconds West, 611.81 feet to a found rebar; thence by and with lands now or formerly of Frank and Marlene Bracale, North 48 degrees 40 minutes 10 seconds West, 411.81 feet to an iron pipe; thence by and with lands now or formerly of Mudiwa and Preachess Vellah Munyikwa, North 48 degrees 36 minutes 49 seconds West, 224.47 feet to the point and place of Beginning, said to contain 40.61 acres of land as depicted on the Perimeter Survey prepared by Compass Point Associates dated January 17, 2011, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, Delaware.

**BEING** the same lands and premises which were conveyed unto Mark H. Ronald Trust dated 3/8/2007, as amended, Mark H. Ronald and Mary Ann Ronald, Trustees, either of whom may act independently, and Mary Ann Ronald Trust dated 3/8/2007, as amended, Mary Ann Ronald and Mark H. Ronald, Trustees, either of whom may act independently, by Deed of J.G. Townsend, Jr. & Co. dated January 28, 2011, and recorded February 1, 2011, in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 3862, Page 170.

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

**THE MARK H. RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ TRUSTEE (SEAL)
**Mark H. Ronald, Trustee**

**THE MARY ANN RONALD TRUST DATED MARCH 8, 2007, AS AMENDED**

Witness

By: _____ Trustee (SEAL)
**Mary Ann Ronald, Trustee**

Document# 2022000032608 BK: 5734 PG: 292
Recorder of Deeds, Scott Dailey On 7/7/2022 at 1:08:33 PM Sussex County, DE
Doc Surcharge Paid

STATE OF Florida, COUNTY OF Palm Beach: to-wit

**BE IT REMEMBERED**, that on 06/03, 2022, personally came before me, the subscriber, Mark H. Ronald, Trustee of the Mark H. Ronald Trust dated March 8, 2007, as amended, and Mary Ann Ronald, Trustee, of the Mary Ann Ronald Trust dated March 8, 2007, as amended, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

GIVEN under my Hand and Seal of Office the day and year aforesaid.

JUNAE MCPHERSON
Notary Public - State of Florida
Commission # HH 206991
My Comm. Expires Dec 13, 2025

Notary Public

My Commission Expires: 12/13/25

File #: ORD 24-04
2024 12025

# Sussex County Comprehensive Plan Amendment Request Form

## Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
☎ 302-855-7878
✉ pandz@sussexcountyde.gov

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**Type of Amendment Requested (e.g Future Land Use Map, Existing Land Use Map, or Text Revision)**
Future Land Use Map

**Year that Comprehensive Plan was Adopted:**
2019

**If Applicable, the Date(s) of any PLUS Review by the State of Delaware**
N/A

**Tax Map #:** 135-11.00-65.00 **Total Acreage:** +/- 9.623 Acres

**Applicant Information**
Applicant Name: J AND C INVESTMENT PROPERTIES, LLC, successors and assigns
Applicant Address: 29762 Oliver Wolcott Drive
City: Millsboro State: DE ZipCode: 19966
Phone #: (302) 632-2711 E-mail: cetelt@msn.com

**Developer Information**
Developer Name: J AND C INVESTMENT PROPERTIES, LLC, successors and assigns

**Attorney Information (If Applicable)**
Attorney Name: Saul Ewing LLP c/o Mackenzie Peet, Esquire
Attorney Address: 1201 N. Market Street, Suite 2300
City: Wilmington State: DE ZipCode: 19801
Phone #: (302) 421-6865 E-mail: mackenzie.peet@saul.com

**Description of Request:** (Please provide a written description of the request, along with details of the Tax Parcel ID(s) of the relevant parcels to which the amendment request relates. If you are requesting a text amendment to the Comprehensive Plan, please also clearly explain which Chapters of the Comprehensive Plan your request relates)

See attached.

# Check List for Comprehensive Plan Amendment Request Applications

**The following shall be submitted with any request**

[X] **Completed Application (including relevant Application Fee)**

[X] **A scaled survey drawing is appended to this Application that clearly shows the location of all parcels to which the amendment request relates.**

[X] **The Applicant understands that Sussex County Council may submit a copy of this application, along with copies of all documents received, to the State of Delaware Office of Management and Budget for the purposes of any enabling the State of Delaware to review the requested revision.**

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

***Signature of Applicant/Attorney***

_____

*For office use only:*
Date Submitted: 8-24-2024
Staff member receiving Application: _____

Application & Case # : CPD 24-04
Fee: $1,000.00, Check #: Receipt No. 5609770

Location of property: _____

Date of Commission Hearing: _____ Recommendation: _____

Date of Council Hearing: _____

**Sussex County, DE Comprehensive Plan Amendment Request Form Attachment**

**Owner:** J AND C INVESTMENT PROPERTIES, LLC[1]

**Property; Tax Map Parcel No:** Silver Oaks Trailer Park, Lewes-Georgetown Highway, Georgetown, Delaware 19947;135-11.00-65.00 (the "Property")[2]

**Current Future Land Use Designation:** Low Density

**Proposed Future Land Use Designation:** Commercial Area

**Current and Proposed Zoning District**: AR-1 Agricultural Residential District, an applicable zoning district in the Commercial Area.

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**Existing Use**

Silver Oaks Trailer Park, which was established on April 6, 1966.[3]

**Intended Use of the Property**

The proposed project involves the development of a multifamily community consisting of approximately 108 rental units under the Sussex County Rental Program (SCRP),[4] as more fully shown on the attached Conceptual Site Plan prepared by Merestone Consultants, Inc.

**Surrounding Land Use Districts and Future Land Use Designations**

Adjacent properties are zoned AR-1 and are designated as Low Density. Properties in the vicinity of the site are zoned AR-1, C-1, C-2, B-1, HI-1, MR and CR1.[5] Properties in the vicinity of the site have varying Future Land Use Classifications, including Low Density, Commercial, Industrial, Existing Development and Developing Area.[6]

**Surrounding Uses**[7]

Weston Willows Apartment Complex, Azalea Woods, Hawthorne, Besche Furniture, A.P. Croll & Sons, Peninsula Paving, DelDOT Area 4

**Sussex County Comprehensive Plan Considerations:**

The proposed development would be consistent with the goals and objectives established in Sussex County Comprehensive Plan (the "Plan"), particularly regarding the Commercial Area and vision for Route 9. Specifically, 4-17 of the Plan describes the Commercial Area as follows:

> Commercial Areas include concentrations of retail and service uses that are mainly located along arterials, and highways. As opposed to small, traditional downtown

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[1] *See* Property Information Sheet and Property Deed attached as Exhibit A.
[2] *See* Aerial Map of Property attached as Exhibit B.
[3] *See* Exhibit C.
[4] *See* copy of SCRP Code requirements attached as Exhibit D.
[5] *See* Zoning District Map attached as Exhibit E.
[6] *See* Future Land Use Map attached as Exhibit F.
[7] *See* Surrounding Uses Aerial Image attached as Exhibit G.

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> areas that are often historic and pedestrian-friendly, Commercial Areas include commercial corridors, shopping centers, and other medium and large commercial vicinities geared towards vehicular traffic. In addition to primary shopping destinations, this area would also be the appropriate place to locate hotels, motels, car washes, auto dealerships, I and other medium and larger scale commercial uses not primarily targeted to the residents of immediately adjacent residential areas. These more intense uses should be located along main roads or near major intersections. Institutional and commercial uses may be appropriate depending on surrounding uses. Mixed-use buildings may also be appropriate for these areas.

This SCRP development will not only provide essential housing options for local residents but will also support the commercial landscape of the area by increasing the population base that can access nearby services and amenities.

Furthermore, Chapter 13.3.4 of the plan discusses the vision for Route 9 as a business corridor that integrates residential and commercial uses, ensuring that local residents have convenient access to necessary services. The development will contribute to this vision by facilitating housing population in this area, which can drive demand for local businesses along Route 9.

# Exhibit D
# SCRP Code Requirements

52796739.1

## § 115-20. Permitted uses.

A. A building or land shall be used only for the following purposes:

(1) Detached single-family dwellings on individual lots. A manufactured home may be used as a detached single-family dwelling on an individual lot, provided that it conforms to the following restrictions: **[Amended 7-8-1997 by Ord. No. 1153; 5-18-1999 by Ord. No. 1308; 10-12-2010 by Ord. No. 2152; 10-8-2019 by Ord. No. 2682]**

(a) The lot is not within a major subdivision created prior to the effective date of this section.

(b) There is a minimum width along any exterior front, side or rear elevation of 24 linear feet, exclusive of any garage area or other attached accessory structures .

(c) It is permanently mounted on a solid foundation or pier foundation system and anchored and, in each case, in accordance with the manufacturer's installation instructions.

(d) All wheels, axles, transportation lights and removable towing apparatus, if any, shall be removed from the manufactured home when it is placed on the foundation in accordance with Subsection A(1)(c) above.

(e) All utilities shall be permanently connected in accordance with applicable Sussex County Code provisions.

(f) The siding of all manufactured homes shall be continuous so as to enclose any joining of two or more sections.

(g) It complies with all pertinent provisions of the Housing Code of Sussex County and the Fire and Health Codes of the State of Delaware.

(h) All multisectional manufactured homes, initially placed pursuant to the provisions of this section, shall be not more than 10 years old. All replacement multisectional manufactured homes shall not be of an older model than the manufactured home being replaced and shall conform to this section. Any other manufactured home which, at the effective date of this section, does not conform to the requirements of this section, may be replaced with a manufactured home which is not of an older or smaller model than the manufactured home being replaced. A single section manufactured home may be replaced by a single section manufactured home; a single section manufactured home may be replaced by a multisectional manufactured home; a multisectional manufactured home may be replaced by a multisectional manufactured home; a multisectional manufactured home shall not be replaced by a single section manufactured home.

(i) In addition to the requirements herein, a manufactured home shall comply in all respects with the design and technical requirements of § 115-187.

(2) On a property of less than five acres, any farm, truck garden, orchard or nursery uses.

(3) Temporary removable stands for not over six months' use per year, for seasonal sales of

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products raised on the premises and products raised on other lands in Sussex County owned or leased by the owner of the premises on which the stand is located, and no business office or store is to be permanently maintained on the premises, except as provided in § 115-22 regarding stores or shops for sale of farm products, farm supplies, groceries, beverages, drugs, food and similar stores and shops. **[Amended 11-30-2004 by Ord. No. 1729]**

(4) Churches, rectories, parish houses, convents and monasteries, temples and synagogues.

(5) Golf courses, not lighted for night play and not including miniature golf courses, putting greens, driving ranges and similar activities operated as a business, but including a building for a golf pro shop, locker room and snack bar as an accessory use to a permitted golf course, provided that no such building is located closer than 100 feet to adjoining property lines. Practice greens and tees may accompany a standard nine-hole or eighteen-hole golf course occupying at least 75 acres.

(6) Public parks, public and private forests, wildlife reservations and similar conservation projects.

(7) Recreational uses such as tennis courts, swimming pools and other similar activities operated exclusively for the use of private membership and not for commercial purposes, provided that no such use, structure or accessory use is located closer than 50 feet to any adjoining property line, unless such property line fronts a public street or waterway with rights-of-way not less than 25 feet, in which instance the required setback need not exceed 25 feet, and provided further that all such facilities must be located on a site having a minimum of two acres.

(8) Stable structures or feed lots, private, or keeping and feeding of horses, ponies, cattle, sheep, goats, hogs or poultry for personal enjoyment and not as a business, provided that any building for keeping of animals shall be located at least 50 feet from any lot lines and 100 feet from any dwelling not on the premises.

(9) Greenhouses, commercial, provided that the lot area shall be five acres or more.

(10) Swimming pools, game courts, picnic grounds, boat basins, lakes or similar activities in a development or subdivision when such facilities are situated on a separate lot or parcel within said development or subdivision for use of the residents and their guests and not commercially operated, may be on less than two acres. Such facilities will be subject to a site plan review, and setbacks will be determined by the Commission.

(11) Transmission lines and their supporting elements.

(12) Open space as defined in § 115-4. **[Added 12-16-2008 by Ord. No. 2022[1]]**

(13) Special events. **[Added 9-18-2018 by Ord. No. 2599]**

(a) Special events held outdoors or within a temporary structure for a purpose different from the permitted use and usual occupancy of a premises or site that are

1. **Editor's Note: This ordinance also provided that it shall apply to applications filed after 1-1-2009.**

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administratively approved by the Director or his or her designee, when the event: will not impair the purpose and intent of the Zoning Ordinance; is not so recurring in nature as to constitute a permanent use not otherwise permitted in the district; and will not significantly affect the surrounding properties. Events that are consistent with the permitted use and usual occupancy of a site or that occur on land owned by the United States of America, the State of Delaware, Sussex County, municipalities and educational institutions are permitted. "Special events" include circuses, carnivals, midways, promotional and tent sales events, fairs, festivals, concerts, rodeos, shows, races/walks or any other event or mass gathering.

(b) No more than three special events shall be approved for the same property or premises during a calendar year. Each special event shall be counted as one calendar day, not including reasonable set up and removal time when the event is not otherwise underway.

(c) In determining whether to administratively approve a special event, the Director or his or her designee shall consider the following:

1. The estimated number of attendees;

2. The size of the parcel where the special event is to be located;

3. The parking requirements of the special event;

4. Roads and traffic patterns providing access to the special event;

5. Prior events conducted by the applicant;

6. Noise, light, odor, and dust generated by the special event;

7. Proposed hours of operation and number of consecutive days; and

8. Such other considerations that may be applicable to the requested event.

(d) The Director or his or her designee may impose conditions upon an administrative approval.

(e) All special events, regardless of size, location, use or duration, shall be subject to the requirements of the Sussex County Special Event and Public Safety Services Policies and Procedures. Failure to abide by the Sussex County Special Event and Public Safety Services Policies and Procedures may result in the termination of the special event's administrative approval.

(f) Special events that do not meet these requirements or which are not administratively approved shall require a conditional use.

(14) Use of a manufactured home as a single-family dwelling to meet an emergency or hardship situation that is administratively approved by the Director or his or her designee and subject to the following: **[Added 10-22-2019 by Ord. No. 2684]**

(a) The applicant must provide an affidavit from a doctor confirming the existence of

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the emergency or hardship situation.

(b) There shall be a fee of □50 to request the administrative approval which shall be credited towards a Board of Adjustment application fee should consideration by the Board become necessary.

(c) The applicant shall submit a survey signed and sealed by a surveyor licensed in the State of Delaware to the Director showing the location of the proposed manufactured home.

(d) The Director shall give written notice to adjacent property owners of the requested manufactured home and accept written statements within 10 working days from the date of mailing. If any objection is received, the Director shall refer the application to the Board of Adjustment for a special use exception.

(e) The Director shall consider factors, including whether the manufactured home will have a substantially adverse effect on neighboring properties.

(f) Within 30 working days after the request is submitted, the Director or his or her designee may approve the manufactured home or advise the applicant that an application must be submitted to the Board of Adjustment for a special use exception.

(g) Such an approval shall not exceed two years. The Director may grant an extension for an emergency or hardship situation upon receipt of a subsequent affidavit from a doctor stating that the emergency or hardship situation still exists. Such an extension may be granted annually as long as the emergency or hardship still exists.

(15) Garage/studio apartment with at least one parking space for the exclusive use of the tenant included on the premises that is administratively approved by the Director or his or her designee, and subject to the following: **[Added 10-22-2019 by Ord. No. 2684]**

(a) There shall be a fee of □50 to request the administrative approval which shall be credited towards a Board of Adjustment application fee should consideration by the Board become necessary.

(b) The applicant shall submit a survey signed and sealed by a surveyor licensed in the State of Delaware to the Director showing the location of the garage/studio apartment.

(c) The Director shall give written notice to adjacent property owners of the requested garage/studio apartment and accept written statements within 10 working days from the date of mailing. If any objection is received, the Director shall refer the application to the Board of Adjustment for a special use exception.

(d) The Director shall consider factors including whether the garage/studio apartment will have a substantially adverse effect on neighboring properties.

(e) Within 30 working days after the request is submitted, the Director or his or her designee may approve the garage/studio apartment or advise the applicant that an

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application must be submitted to the Board of Adjustment for a special use exception.

(16) Use of a manufactured-home-type structure for any business, commercial or industrial use that is administratively approved by the Director or his or her designee, and subject to the following: **[Added 10-22-2019 by Ord. No. 2684]**

(a) There shall be a fee of □50 to request the administrative approval which shall be credited towards a Board of Adjustment application fee should consideration by the Board become necessary.

(b) The applicant shall submit a survey signed and sealed by a surveyor licensed in the State of Delaware to the Director showing the location of the manufactured-home-type structure.

(c) The Director shall give written notice to adjacent property owners of the requested manufactured-home-type structure and accept written statements within 10 working days from the date of mailing. If any objection is received, the Director shall refer the application to the Board of Adjustment for a special use exception.

(d) The Director shall consider factors including whether the manufactured-home-type structure will have a substantially adverse effect on neighboring properties.

(e) Within 30 working days after the request is submitted, the Director or his or her designee may approve the manufactured-home-type structure or advise the applicant that an application must be submitted to the Board of Adjustment for a special use exception.

(17) A Sussex County Rental Program, or SCRP, townhouse or multifamily development governed by, and subject to, Chapter 72, where at least 25% of all dwelling units are SCRP Units pursuant to Chapter 72. The SCRP development must satisfy the following criteria: **[Added 10-18-2022 by Ord. No. 2889]**

(a) The site must be located within a Town Center, a Developing Area, Commercial Area or the Coastal Area as described within the Land Use Element and as shown on the Future Land Use Plan of the adopted Sussex County Comprehensive Plan.

(b) The site shall be located within 2,640 feet of a principal arterial road, minor arterial road or major collector road as classified by the Delaware Department of Transportation. In addition, an Applicant should make every effort to coordinate with DART for transit access to and from the site.

(c) The site must be served by a central sewer system and a central water system.

(d) The total maximum number of dwelling units (including both SCRP Units and non-SCRP Units) that may be permitted shall be determined by dividing the gross area by 3,630 square feet. "Gross area" shall exclude any area designated as a tidal tributary stream or tidal wetlands by § 115-193.

(e) There shall be a one-hundred-foot-wide setback around the entire site, which shall incorporate the forested and/or landscaped buffer strip identified in § 99-5. This

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setback may include walking and biking trails.

(f) The height of any townhouse or multifamily buildings shall not exceed 52 feet or four stories, whichever is greater; provided, however, that if the height does not exceed 42 feet, then the setback described in this subsection shall be reduced from 100 feet to 50 feet.

(g) There shall be sidewalks on at least one side of all streets, roadways and parking areas, with interconnectivity to adjacent walkway systems wherever possible.

(h) There must be interconnectivity with any adjacent property that is zoned C-1, CR-1, C-2, C-3, C-4, C-5, B-1, B-2 or B-3.

(i) There shall be open space that exceeds 50% of the gross area of the entire site.

(j) Sussex County shall commence a comprehensive review of the provisions of this SCRP program as set forth herein on or before January 1, 2028.

B. On a farm of five acres or more, a building or land may be used for the following additional purposes:

(1) Agriculture, including horticultural, hydroponic, chemical or general farming, truck gardens, cultivating of field crops, orchards, groves or nurseries for growing or propagation of plants, trees and shrubs, forest use (tree farming), including use of heavy cultivating machinery, spray planes or irrigating machinery, dairy farming, keeping or raising for sale of large or small animals, reptiles, fish, birds or poultry and including structures for processing and sale of products raised on the premises, provided that: **[Amended 11-26-1991 by Ord. No. 806; 6-15-1993 by Ord. No. 894]**

(a) Any commercial grain drier shall be located at least 300 feet from any boundary of the premises on which such use is located, and any noncommercial drier shall be located at least 100 feet from any boundary.

(b) Any feed lot or structure used for the commercial feeding and housing of cattle, sheep and hogs or structure for storage of animal manure or animal waste composting shall be located at least 100 feet from all boundary lines of the premises on which such use is located and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. **[Amended 2-1-1994 by Ord. No. 953]**

(c) Structures for commercial poultry raising, structures for storage of poultry manure and structures for poultry product composting shall be located at least 50 feet from all boundary lines and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. **[Amended 2-1-1994 by Ord. No. 953]**

(d) Commercial slaughtering and processing of large animals such as horses, cows, pigs, sheep or goats shall not be conducted on the premises.

(e) Structures for commercial aquaculture, fish and frog farming, structures for storage of fish or frog waste and structures for fish or frog product composting shall be

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located at least 50 feet from all boundary lines and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. Farm ponds utilized for aquaculture, fish or frog farming shall be located at least 50 feet from all boundary lines and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. **[Amended 2-2-1999 by Ord. No. 1287]**

(2) Dog kennels, commercial, provided that any open pens, runs, cages or kennels shall be located at least 200 feet from any lot lines.

(3) Grain storage structures.

(4) Hospitals or clinics for large or small animals, provided that all buildings, structures, pens or open kennels shall be located at least 200 feet from any lot lines.

(5) Stables, public, provided that any building for keeping of animals shall be located at least 200 feet from any lot lines.

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ARTICLE II
**Affordably Priced Rental Units**
**[Added 12-9-2008 by Ord. No. 2016]**

### § 72-16. Intent. [Amended 11-1-2016 by Ord. No. 2474]

This chapter seeks to better protect the health, safety and welfare of Sussex County's residents and workforce by stimulating the provision of affordable rental housing for residents with low and moderate incomes and is hereafter known as the "Sussex County Rental Program" or "SCRP" or "program."

### § 72-17. Governmental findings. [Amended 11-1-2016 by Ord. No. 2474]

The Sussex County Council hereby finds that a shortage exists within the County for housing for residents with low and moderate incomes. Specifically, the Council finds that:

A. It is well known that Sussex County rents have inflated far beyond the ability of an average wage earner to pay. It is also known that federal rental assistance programs, such as the state-administered Public Housing and Section 8 Housing Choice Voucher Programs, are unable to completely satisfy the need for affordable rental housing.

B. Council finds that new development is not adequately addressing the rental housing needs of the County's low- and moderate-income residents and workforce. Without influencing this trend, local employers will have a difficult time maintaining an ample workforce.

C. Without an adequate supply of affordable rental housing in close proximity to employment and Town Centers, the County's workforce must commute a great distance for work. Not only do long commutes have a negative effect on the environment and transportation, but commuting also comes with high fuel expenses.

D. Given the proper incentives, the private sector possesses the necessary resources and expertise to provide the type of affordable rental housing needed in Sussex County.

### § 72-18. Declaration of public policy. [Amended 11-1-2016 by Ord. No. 2474]

The Sussex County Council hereby declares it to be the public policy of the County to:

A. Encourage the creation of a full range of housing choices, conveniently located in suitable living environments, for all incomes, ages and family sizes.

B. Encourage the production of affordable rental units to meet the existing and anticipated future employment needs in the County.

C. Assure that affordable rental units are dispersed throughout the County consistent with the Comprehensive Plan.

D. Encourage developments in Growth Areas as defined within the County's most current comprehensive plan and Areas of Opportunity as defined by the Delaware State Housing Authority to include affordable rental units on public water and sewer systems. **[Amended 10-18-2022 by Ord. No. 2889]**

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E. Provide incentives for developers to construct affordable rental units through tools such as the density incentive and expedited review (defined below).

**§ 72-19. Definitions.**

The following words and phrases have the following meanings:

APPLICANT — Any person, firm, partnership, association, joint venture, corporation, or other entity or combination of entities owning or controlling via contract qualifying land (defined below) and any transferee or successor in interest of all or part of the qualifying land pursuing the development of affordable rental housing under the SCRP that:**[Amended 11-1-2016 by Ord. No. 2474]**

A. Submits to the County for approval or extension of approval a plan of housing development for any type of site plan review, subdivision plan or development approval (hereinafter, a "site plan") that provides for the development of affordable rental units on qualifying land in one or more subdivisions, parts of subdivisions, resubdivisions, multifamily townhouse developments or phases of development under the terms and conditions as set forth in this article. **[Amended 10-18-2022 by Ord. No. 2889]**

B. With respect to land in zones not subject to subdivision approval or site plan review, applies for building permits for the construction of affordable rental units on qualifying land under the terms and conditions as set forth in this article.

AREA MEDIAN INCOME — The midpoint family income for Sussex County, calculated each year by the U.S. Department of Housing and Urban Development (HUD), adjusted for household size.**[Amended 11-1-2016 by Ord. No. 2474]**

AT ONE LOCATION — All land of the Applicant if:**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. The property lines are contiguous; or

B. The property lines are separated only by a public or private right-of-way at any point; or

C. The property lines are separated only by other land of the Applicant and not subject to this section at the time of the submission of an application or development plan by the Applicant.[1]

DATE OF LEASE — The date of the initial lease agreement signing of an approved Eligible Tenant for a SCRP Unit.**[Amended 10-18-2022 by Ord. No. 2889]**

DENSITY INCENTIVE — The density permitted by § 72-21 and as a permitted use for SCRP projects in Chapter 115.**[Amended 10-18-2022 by Ord. No. 2889]**

DEPARTMENT — The Sussex County Department of Community Development and Housing or its successors.

DEPARTMENT-DESIGNATED ENTITY (DDE) — Any agency, authority or political subdivision of the State of Delaware or any other public housing development agency or nonprofit

1. **Editor's Note: The definition of "certificate of eligibility," as amended 11-1-2016 by Ord. No. 2474, and the definition of "control period," both of which immediately followed this definition, were repealed 10-18-2022 by Ord. No. 2889.**

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housing corporation, land trust or similar entity designated by the Department and approved by the County Administrator.

DIRECTOR — The head of the Department of Community Development and Housing or head of a DDE, as applicable.

DWELLING — Any building, structure, or portion thereof which is occupied as, or designed or intended for occupancy as, a residence; and any vacant land which is offered for sale or lease for the construction or location thereon of any such building, structure, or portion thereof. "Dwelling" shall not include hotels, motels, motor lodges, boarding and lodging houses, tourist houses, or similar structures.**[Amended 11-1-2016 by Ord. No. 2474]**

ELIGIBLE INCOME — The levels of income designated by the County Administrator which prohibit or severely limit the financial ability of persons to rent a dwelling unit in Sussex County. Eligible Income is low to moderate income, defined as 30% to 80% of the area median income for Sussex County adjusted for household size as defined by the U.S. Department of Housing and Urban Development (HUD). Income includes gross salary, wages, dividends, interest and all other sources recognized by HUD from the Eligible Tenant and all other adults (age 18 and older) who will occupy the SCRP Unit. Income will be verified by a copy of the filed income tax returns from the previous year and any other personal and financial information requested by the Landlord in order to accurately verify the potential tenant's qualifications and income, which may include, but is not limited to, a credit history report and a criminal background report on the proposed adult tenants, so long as these are requirements for all leases in the housing development.**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

ELIGIBLE TENANT — Person(s):**[Amended 11-1-2016by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. Whose household income is within the Eligible Income.

EXPEDITED REVIEW — A project entering the SCRP will receive priority in the County's planning and zoning process, with the Director of Planning and Zoning and the County Administrator to determine the Applicant's placement in the list of pending applications. The expedited review is provided to the Applicant to assist the Applicant in managing, to the extent possible, the risk of changes to cost, interest rates, schedule and other factors that the Applicant is taking on by virtue of participation in the SCRP. If an Applicant at any time during processing elects to withdraw from the SCRP, any approvals granted for the development through the date of withdrawal will be vacated and the Applicant will have to resubmit the project through the normal County process. A project receiving expedited review does not exempt the project from the County's planning and zoning process, nor guarantee approval through that process.**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

FORECLOSURE EVENT — A foreclosure, deed-in-lieu of foreclosure or other court-ordered sale of the rental unit or of the subdivision or development in which the unit is located, subject to rental restrictions continuing in force after foreclosure sale of disposition.

LANDLORD — The owner of the property that contains SCRP Units or an entity designated by the owner to manage and lease dwelling units.[2]**[Amended 10-18-2022 by Ord. No. 2889]**

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2. **Editor's Note: The former definition of "minimum standards of eligibility," which immediately followed, was repealed 11-1-2016 by Ord. No. 2474.**

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QUALIFYING LAND — All land that:**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. Is owned by or under contract to the Applicant; and

B. Allows the SCRP Units as a Permitted Use pursuant to Chapter 115.

SUSSEX COUNTY RENTAL PROGRAM UNIT (SCRP UNIT) — A dwelling which is:**[Amended 11-1-2016 by Ord. No. 2474]**

A. Offered for lease to Eligible Tenants through or pursuant to the provisions of this article and any regulations promulgated thereunder by the Department and approved by the County Administrator; or **[Amended 10-18-2022 by Ord. No. 2889]**

B. Leased under another government program designated by the County Administrator designed to assist in the construction or occupancy of affordable rental housing.

**§ 72-20. Minimum standards of eligibility for tenants. [Amended 11-1-2016 by Ord. No. 2474]**

A. There shall be a preference given to tenants who have worked or resided in Sussex County for at least one year preceding the application to the SCRP. In addition, Eligible Tenants must: **[Amended 10-18-2022 by Ord. No. 2889]**

(1) Have proof of citizenship.

(2) Be of Eligible Income, as defined in § 72-19 above, and be able to pay the first month's rent and any required security deposit.

(3) Comply with the criminal history and credit requirements for tenants of all leases within the proposed housing development.

(4) (Reserved)

(5) Occupy the SCRP Unit as the tenant's principal residence during the lease period. Each Eligible Tenant must certify before taking occupancy that the tenant will occupy the SCRP Unit as the tenant's principal residence. Any tenant who violates occupancy requirements will be subject to eviction procedures.

B. Where necessary or advisable to achieve the objectives of this chapter or to comply with state or federal housing laws, the Department may propose changes to these standards for approval by the County, including changes to eligibility requirements for tenants as recommended by the Department.

**§ 72-21. Density and expedited review incentives. [Amended 10-18-2022 by Ord. No. 2889]**

A. Density incentive. See Permitted Uses in Chapter 115.

B. Expedited review. A project entering the SCRP through execution of an SCRP Agreement will receive expedited review, as defined in § 72-19 above, through the County's Planning and Zoning process.

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C. Incentives will only be granted to projects submitted for new development that meet all requirements of this program.

**§ 72-22. Minimum standards of eligibility for SCRP developments. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. All parcels in the proposed project must be on qualifying land, as defined in § 72-19.

B. All units contributed as SCRP Units will remain at the affordable rental rates specified herein. SCRP Units shall never be leased as market-rate units, regardless of vacancy, except in accordance with § 72-23N(1).

C. (Reserved)

D. SCRP Units must be fully integrated into the communities of which they are a part and shall not be substantially different in external appearance from market-rate units. SCRP Units shall be equipped with the same basic appliances as the market rate units, such as an oven, refrigerator, dishwasher, and washer and dryer.

**§ 72-23. SCRP Agreements. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

To participate in the SCRP and secure any incentives provided for herein, an Applicant must execute an SCRP Agreement prepared by the Department and the County Attorney. Each agreement must include, at a minimum, the following information and/or evidence the following agreements and any others deemed necessary by the Department and the County Attorney to properly implement the chapter:

A. The specific number of SCRP Units to be constructed in the project. If a final site plan has not been approved when the SCRP Agreement is executed, an amendment to the SCRP Agreement will be made to incorporate the approved final site plan.

B. A description of how the SCRP Units will be marketed and delivered. The SCRP Units must be constructed and delivered in equal proportion to non-SCRP Units within the development.

   (1) Applicants shall affirmatively market the SCRP Units to diverse populations, and meet with the surrounding residents early in the development approval process.

C. Any economic risk created by changes, whether within or outside of the Applicant's control, in development and construction costs, interest rates, processing and construction schedules, permitting and any other factor impacting the Applicant's costs and development obligations are borne solely by the Applicant.

D. Building permits, performance bonds and letters of credit. No building permits shall be issued in any subdivision or housing development where SCRP Units are included until the Applicant executes a valid SCRP Agreement which applies to the entire subdivision.

E. Be signed by the Applicant and all other parties having an interest in the property whose signatures are required for the effective and binding execution of contracts conveying real property. SCRP Agreements must be executed in a manner that will enable them to be

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recorded in the land records of the County.

F. Partnerships, associations, corporations and other entities may not evade the requirements of the SCRP Agreement through voluntary dissolution, bankruptcy, or the sale or transfer of qualifying land.

G. The SCRP Agreement may only be assigned with the prior written approval of the Department and only if the proposed assignee demonstrates the financial ability to fulfill all of the Applicant's obligations under the SCRP Agreement.

H. Landlords are responsible for marketing, leasing, and determining tenant eligibility for the SCRP Units. A landlord shall not be permitted to refuse to rent a unit to an Eligible Tenant. The reasons for a refusal to rent to an Eligible Tenant shall be documented and included in the Annual Audit and Certification required by § 72-28.

I. If the Applicant is not also the builder, the relationship between the Applicant and the builder shall be fully disclosed to the Department's satisfaction, as soon as the relationship is established.

J. SCRP Units must be fully integrated into the communities of which they are a part (not separated geographically from the market rate units and not grouped together) and shall not be substantially different in external appearance from non-SCRP Units. When the SCRP Units are a part of a phased development, a proportionate number or percentage of said Units will be placed within each phase and/or constructed within each housing type appearing in the development. The planning and design of individual SCRP Units must be consistent with the planning and design of non-SCRP Units (i.e., market-rate units) within a single project.

(1) The ratio of SCRP Units by type must reflect the ratio by type of market rate units, to the extent feasible. For instance, if a development has 200 two-bedroom dwelling units and 100 one-bedroom dwelling units, the ratio of two-bedroom to one-bedroom SCRP Units should also be 2:1.

K. The SCRP Agreement shall be recorded in the Office of the Recorder of Deeds confirming that:

(1) The covenants contained within it will bind the Applicant, any assignee, mortgagee, or buyer and all other parties that receive title to the property. In the event the mortgagee acquires the property through a foreclosure or acceptance of deed-in-lieu of foreclosure, the SCRP Agreement covenants will continue in effect. The covenants must be senior to all instruments securing financing.

(2) In any deed or instrument conveying title by the Applicant, the property shall remain subject to all of the terms and conditions contained in the SCRP Agreements by the Applicant required under the chapter. The source of the SCRP Agreements and any deed restrictions related thereto must be included in the public land records so that they are readily identifiable in a routine title search.

L. Where the Applicant is a DDE, agreements will be negotiated between the Department and the DDE so as to be consistent with the mission, strategies, business plans and operating procedures of the DDE and may, with Council approval, deviate from the requirements of

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this chapter.

M. The SCRP Agreement requires that the Landlord ensure that the SCRP Units are occupied only by tenants whose annual income levels do not exceed the eligible income limit, and shall prohibit tenants from subletting or subleasing the Units.

(1) In addition, the Landlord must supply the information listed below in a format acceptable to the Director on an annual basis:

(a) The number of SCRP Units, by bedroom count, that are leased to Eligible Tenants and those that are vacant, and the monthly rent charged for each SCRP Unit;

(b) For each SCRP Unit, the tenant's name, household size, and total household income as of the date of the lease, and the effective date of the lease;

(c) A statement that, to the best of the Landlord's information and knowledge, tenants who are leasing the SCRP Units meet the eligibility criteria.

(2) The Department shall audit the report and may require such additional information monthly needed to evaluate and accept the annual report.

N. The tenant must vacate the SCRP Unit if the tenant's household income exceeds 80% of the area median income by 20% at the time of lease renewal. The Applicant must take the necessary action to have the tenant vacate the SCRP Unit within six months of receiving information that the tenant's household income exceeds the Eligible Income limit.

(1) Notwithstanding the provisions of § 72-23N above, if the Applicant immediately designates an additional comparable unit as an affordable dwelling unit to be leased under the controlled rental price and requirements of the SCRP program, the tenant of such SCRP Unit referenced in § 72-23N above may continue to lease such Unit at the market value rent.

O. The Landlord shall comply with the Annual Audit and Certification Requirements of § 72-28.

**§ 72-24. SCRP Units. [Amended 11-1-2016 by Ord. No. 2474]**

A. Rent.

(1) Rent shall be established and updated annually by the Department based upon 25% of household income for 50% of the area median income adjusted for household size and unit size and shall not include trash services, parking, water and sewer utilities and any other charges to be paid by the tenant.

(2) The Eligible Tenant must provide to the Landlord income tax returns (and proof of payment of any taxes owed) from the previous year for all members of the household who were required to file such returns. If an Eligible Tenant was not required to file tax returns or if the Landlord believes that information from the previous tax returns is insufficient to determine income, the Landlord is authorized to request such information as it deems necessary to confirm the income levels of the proposed tenants. **[Amended 10-18-2022 by Ord. No. 2889]**

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B. Unit and household size. Households must be placed in units according to the following distribution:

| Unit Size (number of bedrooms) | Household Size |
|---|---|
| Efficiency | 1 |
| 1 | 1 to 2 |
| 1 plus Den | 2 to 4 |
| 2 | 2 to 4 |
| 2 plus Den | 2 to 4 |
| 3 | 4 to 6 |
| 4 | 5 to 8 |

**§ 72-25. Leasing of SCRP Units. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. Leases to Eligible Tenants.

(1) Every SCRP Unit constructed under this program must be offered to all Eligible Tenants for lease as the Eligible Tenant's principal residence. Notification to the public of SCRP Unit availability will be made by the Landlord and is recommended to be made by advertising on DelawareHousingSearch.org and similar sites. The Department may, but is not obligated to, provide notice of SCRP Unit availability through the Department's website.

(2) The Landlord will determine SCRP tenant eligibility under § 72-20.

(3) Annually, the Department will provide updated income guidelines and rental rates to the Landlord for use in leasing the SCRP Units.

(4) Lease agreements shall contain the same terms and conditions as the lease agreements with market-rate renters with the exception of the rental rates and other terms and conditions as required under this article.

(5) All lease agreements of SCRP Units shall cover a period of one year.

(6) An Eligible Tenant already occupying a SCRP Unit shall have a first-option to renew the lease agreement each year, as long as the tenant maintains good standing with the Landlord and continues to qualify as an Eligible Tenant.

B. Tenants of SCRP Units shall provide an executed affidavit on an annual basis certifying their continuing occupancy of the unit as their principal residence. Tenants shall provide such affidavit to the Landlord by the date that may be specified in their lease or that may otherwise be specified by the Landlord.

C. In the event the tenant of an SCRP Unit fails to provide his or her Landlord with an executed affidavit as provided for in the preceding subsection within 30 days of written request for

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such affidavit, then the lease shall automatically terminate, become null and void and the occupant shall vacate the Unit within 30 days of written notice from the Landlord.

**§ 72-26. Foreclosure or default. [Amended 10-18-2022 by Ord. No. 2889]**

A. The Landlord must provide the Department with a copy of any mortgage default notification immediately upon receipt and a written explanation of how the default will be remedied.

B. If a foreclosure event occurs, the covenants endure through the transfer of property.

**§ 72-27. Implementation. [Amended 11-1-2016 by Ord. No. 2474]**

Improvements to concepts, processes and rules and regulations of the SCRP program will be incorporated into future amendments of this article. Council views this article as a living document that will be modified as needed to respond to economic, housing, development, land use and other trends in the County and to best practices in affordable rental programs.

**§ 72-28. Annual Audit and Certification. [Added 10-18-2022 by Ord. No. 2889[3]]**

The Landlord shall contract with an independent Delaware Certified Public Accountant that has no other relationship with the Landlord/Developer/Owner/Manager to audit the Landlord's Compliance with this Chapter 72, the conditions of approval for the project, the terms of the SCRP Agreement, the rental of the SCRP Units and the status of the Eligible Tenants (and their Eligible Income) within the project. In this engagement, the Delaware Certified Public Accountant will perform this obligation in accordance with attestation standards established by the American Institute of Certified Public Accountants. This annual audit and report shall certify that the project remains in compliance with i) all of the Chapter 72 requirements and the terms of the SCRP Agreement; ii) the status of each of the SCRP Units (whether leased or vacant); iii) certification that each of the Eligible Tenants renting an SCRP Unit within the project is an Eligible Tenant as of the date of the annual audit and report; iv) the status and duration of any vacancy of any SCRP Unit; v) the marketing efforts to re-let any vacant SCRP Unit to an Eligible Tenant; vi) the status of any list of Eligible Tenants waiting for an SCRP Unit to come available; and vii) such other information as the Delaware Certified Public Accountant and/or the Community Development and Housing Office may deem appropriate and necessary. This annual audit and report shall be submitted to both the Office of Planning and Zoning and the Community Development and Housing Office no later than March 1 of each year.

**§ 72-29. Government regulations; enforcement. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. The Department will maintain a list of all SCRP Units constructed and leased under this program, and the Council hereby authorizes the County Administrator to promulgate and adopt regulations and approve the various agreements/documents necessary to administer this program. Therefore, Sussex County shall commence a comprehensive review of this SCRP Program on or before January 1, 2028.

B. The Director may, with Council approval, waive or modify the provisions of the program if

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3. **Editor's Note: This ordinance also renumbered former § 72-28 as § 72-29.**

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the Director finds the program in conflict with state or federal housing laws.

C. This program applies to all agents, successors, and assigns of an Applicant. A building permit shall not be issued and a preliminary plan of subdivision, development plan, or site plan shall not be approved for a development that will contain affordable rental units to be submitted to this program unless it meets the requirements of this program. The County Administrator may deny, suspend, or revoke any building or occupancy permit upon finding a violation of this program. Any prior approval of a preliminary or final plan of subdivision, development plan or site plan may be suspended or revoked upon the failure to meet any requirement of this chapter. An occupancy permit shall not be issued for any building to any Applicant, or a successor, or assign of any Applicant, for any construction that does not comply with this program. The County Administrator may also withhold or call in performance bond funds, letters of credit, and certificates of compliance or occupancy from the Applicant for any violation of this program.

D. In the event that the Landlord rents any of the SCRP Units at non-SCRP Unit rates (i.e., market rental rates) so that the proportionate share of SCRP Units versus non-SCRP Units as originally approved is not maintained, the Landlord of the project shall be required to pay to Sussex County the monthly market rent collected from any such SCRP Unit that is rented at a non-SCRP Unit Rate. Any such funds collected by Sussex County shall be used for housing purposes and administered by the Sussex County Office of Community Development and Housing.

E. The Director is authorized to pursue any available remedy, legal or equitable in nature, to enforce the requirements of this program or to prevent or abate a violation of this program.

F. The Director may take legal action to stop or cancel any lease of an SCRP Unit if any party does not comply with all requirements of this program. The Director may recover any funds improperly obtained from the rental of a SCRP Unit in violation of this chapter.

G. In the event of litigation to enforce the terms and conditions of this chapter or any agreement or obligation under the SCRP program, the Department shall be entitled to an award of legal costs and fees to be collected from the party who is determined to be in violation of such agreements and obligations.

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## Ashley Paugh

**From:** Peet, Mackenzie M. <mackenzie.peet@saul.com>
**Sent:** Wednesday, August 14, 2024 6:38 PM
**To:** Jamie Whitehouse
**Cc:** Roger Gross; Planning and Zoning; Chuck Turner
**Subject:** J AND C INVESTMENT PROPERTIES LLC - FLUM AMENDMENT
**Attachments:** 52796819-v1-J AND C _FLUM Amendment Application with Exhibits.pdf

**Categories:** Ashley

**CAUTION:** This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Good Evening, Director Whitehouse,

Our firm represents J AND C INVESTMENT PROPERTIES LLC, the owner of TMP No. 135-11.00-65.00, who is seeking an amendment to the future land use map amendment (from Low Density to Commercial Area) in order to develop workforce housing units as depicted in the enclosed Conceptual Plan prepared by Merestone Consultants.

In light of our client's intention to develop a project that will enter the SCRP, my client requests an expedited review of its application in accordance with Chapter 72 of the Code. We appreciate any efforts to facilitate an introduction of this application to County Council in the short term, followed by an expedited hearing before the Commission and Council.

I will submit the original executed application, along with a copy of the exhibits and application fee, by the end of this week for the official processing of the application.

Should you have any questions or need further information, please reach out to me via email or phone.

Thank you for your attention to this matter.

Best regards,

Mackenzie

**Mackenzie M. Peet**
Associate
(302) 421-6826
mackenzie.peet@saul.com

SAUL EWING LLP
1201 North Market Street, Suite 2300
Wilmington, DE 19801

"Saul Ewing LLP (saul.com)" has made the following annotations:
+~~~~~~~~~~~~~~~~~~~~~~~~~~+

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+~~~~~~~~~~~~~~~~~~~~~~~~~~+

# Exhibit B
# Aerial Map

52796739.1

# Sussex County

August 11, 2024

- Override 1
- Override 1
- Tax Parcels
- Streets
- County Boundaries

1:4,514

0 0.04 0.09 0.17 mi

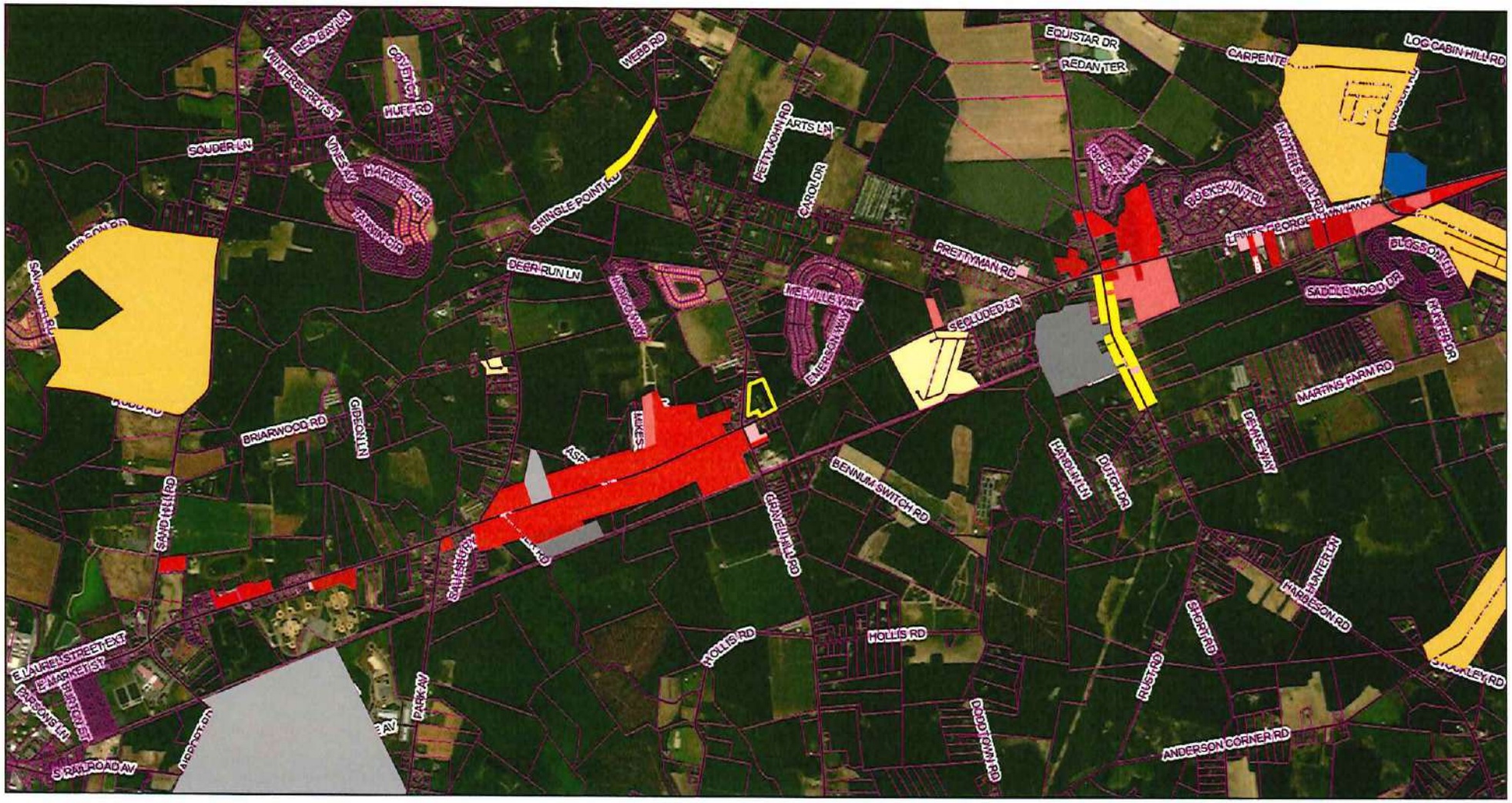
0 0.05 0.1 0.2 km

Delaware Department of Education, Wetland mapping is supported with funding provided by the Environmental Protection Agency., Delaware Geological Survey, U.S. Geological Survey, Delaware Public Service Commission, FEMA, DNREC, Division of Watershed Stewardship, Drainage Program, john.inkster@state.de.us, Sussex

# Exhibit E
# Zoning District Map

52796739.1

# Sussex County




August 11, 2024

polygonLayer

- Override 1
- Override 2

Zoning

- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- Commercial Residential - CR-1
- Institutional - I-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- B-1: Neighborhood Business
- B-2: Business Community District
- Tax Parcels
- Streets
- County Boundaries
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations
- 9.6m Resolution Metadata

1:36,112

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0 0.5 1 2 km

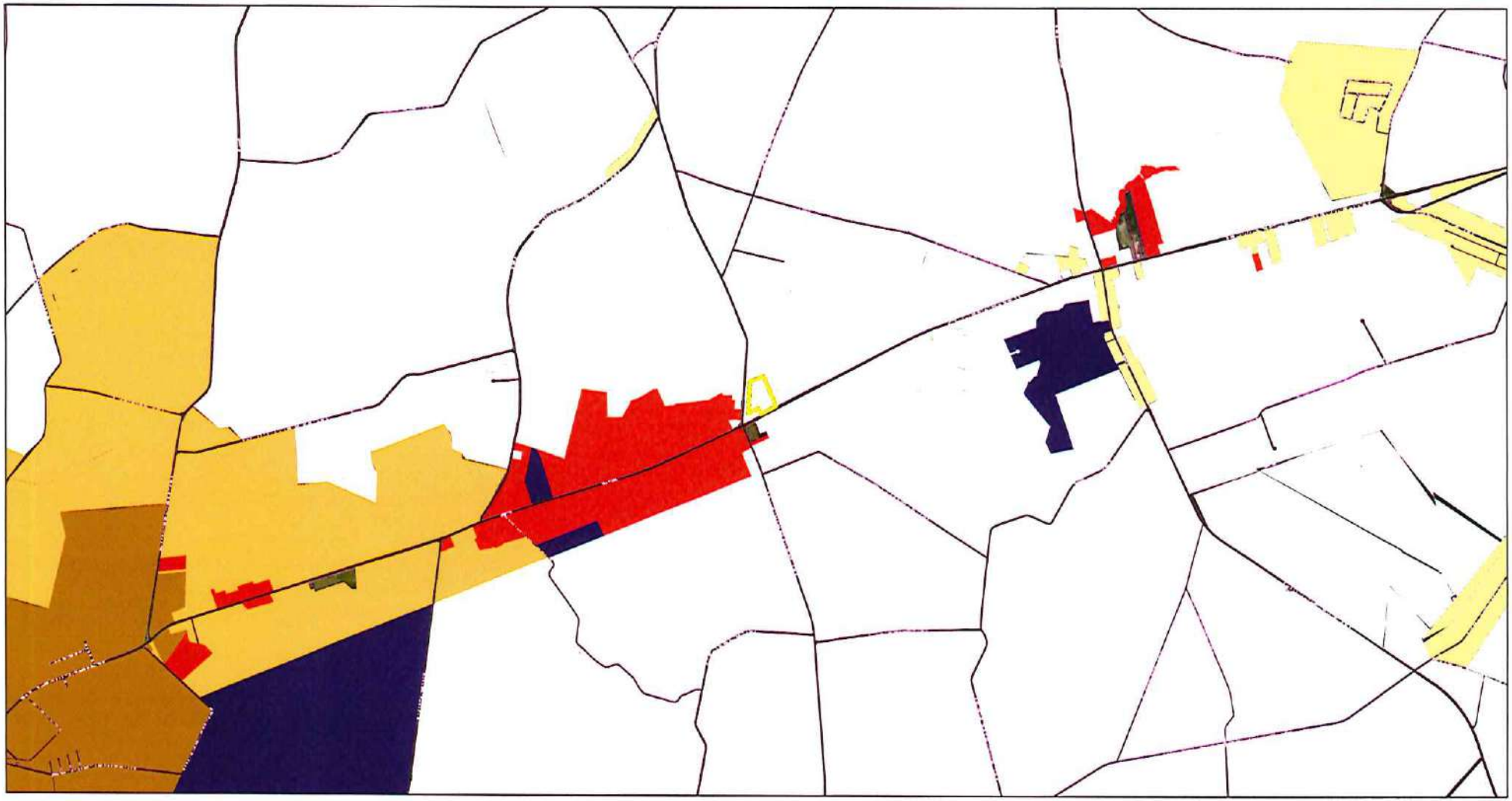
Sussex County Government, Maxar

# Exhibit F

# Future Land Use Map

52796739.1

# Sussex County



August 11, 2024

polygonLayer

Override 1

Override 2

2019 Future Land Use

Low Density

Commercial

Developing Area

Existing Development Area

Industrial

Municipalities

Town Center

Tax Parcels

Streets

County Boundaries

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

9.6m Resolution Metadata

1:36,112

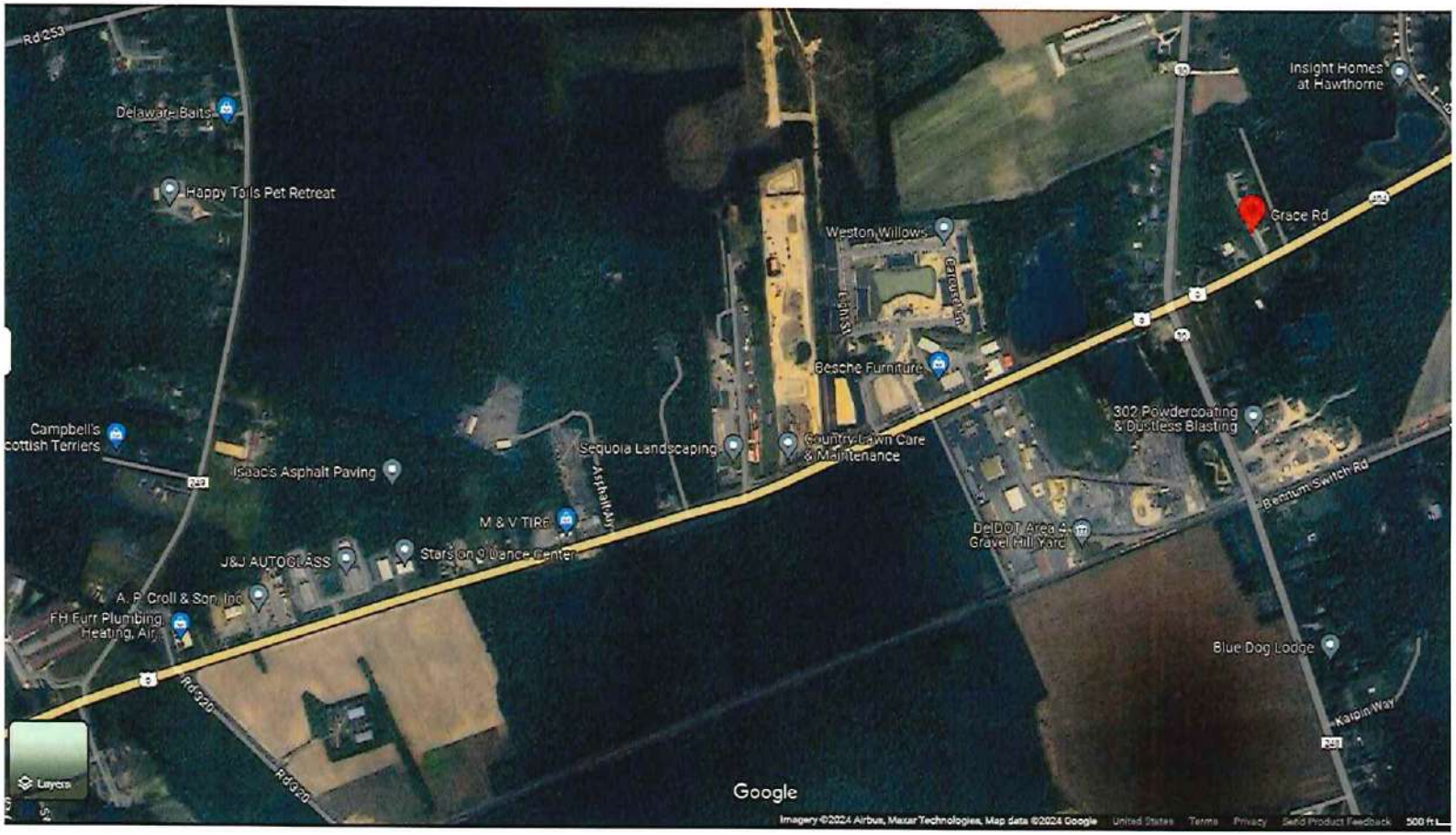
0 0.35 0.7 1.4 mi

0 0.5 1 2 km

Sussex County Government, Maxar

# Exhibit G
# Surrounding Uses Aerial Image

52796739.1


Rd 253
Delaware Baits
Happy Tails Pet Retreat
Campbell's
cottish Terriers
Isaac's Asphalt Paving
M & V TIRE
J&J AUTOGLASS
A. P. Croll & Son, Inc
FH Furr Plumbing
Heating, Air
Rd 320
Rd 320
Asphalt Alley
Sequoia Landscaping
Country Lawn Care
& Maintenance
Weston Willows
Besche Furniture
Insight Homes
at Hawthorne
Grace Rd
302 Powdercoating
& Dustless Blasting
DelDOT Area 4
Gravel Hill Yard
Blue Dog Lodge
Kaiolin Way
Layers
Google
Imagery ©2024 Airbus, Maxar Technologies, Map data ©2024 Google
United States
Terms
Privacy
Send Product Feedback
500 ft

52796708.1

# Exhibit C
# Land Use History

52796739.1

TAX Map 135-11.00-65.00 PARK

To All Mobile Home Parks or Courts:

It is necessary that the Planning and Zoning Commission have the following information prior to the adoption of the Comprehensive Zoning Ordinance for Sussex County:

NAME OF TRAILER COURT OR PARK Silver Oak Trailer Park

LOCATION N/S 18 1000' E of 30 Gravel Hill

ELECTION HUNDRED Georgetown

NAME IN WHICH DEED IS RECORDED Milton McCabe

MAILING ADDRESS Georgetown Del.

NUMBER OF ACRES 8.4 acres

NUMBER OF LOTS 38

NUMBER OF LOTS NOW OCCUPIED 21

SIZE OF LOTS 9 lots 40' x 62.2' 14 lots 32' x 70'

PLOT OF PARK (Acres or Square Feet)

PLOT OF ADJACENT PROPERTY UNDER SAME OWNERSHIP FOR FUTURE EXPANSION

DATE PARK WAS ESTABLISHED April 6, 1966

Zoning Inspector Roland Derrickson 1/7/70

Application for Extension of Park:
Board of Adjustment #116 approved 1-12-70
Extend Park adding 8 additional spaces 40'x70'

# SUSSEX COUNTY COUNCIL - GEORGETOWN, DELAWARE, FEBRUARY 7, 2023

A regularly scheduled meeting of the Sussex County Council was held on Tuesday, February 7, 2023, at 10:00 a.m., in Council Chambers, with the following present:

| | |
|---|---|
| Michael H. Vincent | President |
| John L. Rieley | Vice President |
| Cynthia C. Green | Councilwoman |
| Douglas B. Hudson | Councilman |
| Mark G. Schaeffer | Councilman |
| Todd F. Lawson | County Administrator |
| Gina A. Jennings | Finance Director |
| J. Everett Moore, Jr. | County Attorney |
| Vince Robertson | Assistant County Attorney |

**Call to Order**

The Invocation and Pledge of Allegiance were led by Mr. Vincent.

Mr. Vincent called the meeting to order.

**M 063 23 Approve Agenda**

A Motion was made by Mr. Hudson, seconded by Mr. Rieley, to approve the Agenda, as presented.

Motion Adopted: 5 Yeas

Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea

**Minutes**

The minutes from January 31, 2023, were approved by consensus.

**Correspondence**

There was no correspondence.

**Public Comments**

Public comments were heard, and the following people spoke:

Ms. Jill Hicks spoke about the need to amend the Cluster Subdivision Code.

Mr. Jeff Simmons spoke about the Sussex County Zoning Code and the Cluster Development Ordinance.

**Board of Assessment Review App.**

Mr. Lawson reported that a reappointment of Mrs. Julie Rigby is needed to the Board of Assessment Review. This board sits in the review of assessment calculations that are done annually.

**M 064 23 Approve Board of Assessment Review Appointment**

**A Motion was made by Mr. Schaeffer, seconded by Mr. Hudson, that be it moved that the Sussex County Council reappoints Mrs. Julie Rigby to the Sussex County Board of Assessment Review effectively immediately for a term of five years or until February 2030.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Administrator's Report**

**Mr. Lawson read the following information in his Administrator's Report:**

1. **Project Receiving Substantial Completion**

   **Per the attached Engineering Department Fact Sheet, Chase Oaks – Phase 2 (Construction Record) received Substantial Completion on February 2nd.**

2. **Council Meeting Schedule**

   **A reminder that Council will not meet on Tuesday, February 14th. The next regularly scheduled Council meeting will be held on Tuesday, February 21st, at 10:00 a.m.**

**[Attachments to the Administrator's Report are not attached to the minutes.]**

**Permission to Prepare & Post Notices/Newdale Acres Extension Into SCUSSD**

**John Ashman, Director of Utility Planning and Design Review presented a request to prepare and post notices for Newdale Acres Extension Annexation into the Sussex County Unified Sanitary Sewer District. The Engineering Department received a request from the owners/developers of parcel 230-31.00-31.00 along Route 113 and adjacent to their existing project of Newdale Acres. The parcel was annexed into the Town of Ellendale; Sussex County provides the sanitary sewer for the Town. The parcel is located in the Tier 2 Area for sewer service. The project will be responsible for System Connection Charges of $6,600 per EDU based on current rates.**

**M 065 23 Approve Prepare & Post Notices/ Newdale Acres**

**A Motion made by Mrs. Green, seconded by Mr. Schaeffer, be it moved by the Sussex County Council that the Sussex County Engineering Department is authorized to prepare and post notices for the Newdale Acres Expansion of the Sussex County Unified Sanitary Sewer District to include parcel 230-31.00-31.00 as presented.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea;**

**Mr. Hudson, Yea; Mr. Rieley, Yea;**
**Mr. Vincent, Yea**

**EMS Public Safety Building/CO No. 21**

**Hans Medlarz, County Engineer presented Change Order No. 21 for EMS Public Safety Building – Project C19-04 for Council's consideration. Mr. Medlarz reviewed the items that were included in the Change Order.**

**M 066 23 Approve CO No. 21/EMS Public Safety Building**

**A Motion was made by Mr. Hudson, seconded by Mr. Schaeffer, be it moved based on the recommendation of the Sussex County Engineering Department, that Change Order No. 21, for Contract C19-04, Sussex County Public Safety Building be approved, for an increase of $40,127.15.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea;**
**Mr. Hudson, Yea; Mr. Rieley, Yea;**
**Mr. Vincent, Yea**

**Public Hearing/ CDBG Program**

**A Public Hearing was held for the 2023 Community Development Block Grant application, to be submitted to the Delaware State Housing Authority. The Community Development Block Grant (CDBG) is a federal grant from the Department of HUD to the Delaware State Housing Authority (DSHA). Kent and Sussex Counties compete for the funding by making application to DSHA.**

**Brandy Nauman, Director of Sussex County Community Development & Housing, reported that the guidelines dictate the use of the funding. The funding is used mostly for owner-occupied housing rehabilitation. Rehabilitations include roofing, doors, windows, electrical, plumbing upgrades and energy upgrades. In order to qualify, a home must be owner-occupied, primary residence of the owner, low to moderate income household (80% of AMI or below), the home must be insured or insurable, County taxes and utilities must be current. Mrs. Nauman explained that a lien is placed on every property that receives assistance regardless of the age of the beneficiary. For anything less than $15,000, a five-year, zero percent pre-rated lien is placed on the property, for anything $15,000 to $40,000 of funding, a ten-year zero interest pro-rated lien is placed on the property.**

**Mrs. Nauman reviewed the current income guidelines for program eligibility. Mrs. Nauman reviewed the funding that has been spent and noted that County Council provided an additional $250,000 to assist with emergency repairs.**

**Mr. Mike Jones, Rehabilitation Program Coordinator shared what has been completed to date in the current fiscal year. In addition, he discussed contractors as well as the delays and price increases that they are experiencing. Mr. Jones shared pictures of some projects that have been completed.**

**Public Hearing/ CDBG Program (continued)**

**Mrs. Nauman reviewed what was being completed with the federal dollars that are being received. She noted that individuals with disabilities, those over 65 and low-income households are prioritized.**

**Mrs. Nauman stated that Sussex County's application will consist of projects in the County in Rural communities and in municipalities. She reported that staff has met with all the municipalities who have asked for the County's assistance to make application to the DSHA, and that the Department has held Public Hearings in all of the municipalities listed and the projects presented represent their requests.**

**Mrs. Nauman reported that the total program activity cost is $1.7M; the state has allowed the County to seek $250,000 in administration which would have to be matched. Therefore, the total program cost would be $2.3M.**

**There were no public comments.**

**The Public Hearing and public record were closed.**

**M 067 23 Adopt Resolution R 006 23/ Affirmatively Furthering Fair Housing**

**A Motion was made by Mr. Rieley, seconded by Mr. Hudson, to Adopt Resolution No. R 006 23 entitled "AFFIRMATIVELY FURTHERING FAIR HOUSING".**

**Motion Adopted:** 5 Yeas

**Vote by Roll Call:** Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea

**M 068 23 Adopt Resolution R 007 23/ Authorization to Submit Applications**

**A Motion was made by Mr. Hudson, seconded by Mr. Schaeffer to Adopt Resolution No. R 007 23 entitled "AUTHORIZATION TO SUBMIT APPLICATIONS".**

**Motion Adopted:** 5 Yeas

**Vote by Roll Call:** Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea

**Master Plan Ordinance Discussion**

**Jamie Whitehouse, Planning and Zoning Director presented a Proposed Ordinance entitled "AN ORDINANCE TO DELETE CHAPTER 115, ARTICLE XVII VACATION RETIREMENT – RESIDENTIAL PARK DISTRICT SECTIONS 115-132 THROUGH 115-140 IN ITS ENTIRETY AND TO INSERT ARTICLE XVII MASTER PLAN ZONE, SECTIONS 115-132 THROUGH 115-140 IN ITS PLACE".**

**Vince Robertson, Assistant County Attorney discussed the updates that have been completed to the Ordinance since the last presentation. He noted**

**Master Plan Ordinance Discussion (continued)**

that one of the requirements of a MPZ is that 20% of all multi-family dwellings shall be set aside as SCR units governed by Chapter 72. Mr. Robertson advised that the Ordinance would need to go through PLUS.

Mr. Schaeffer questioned line 447 which states "the plan shall include a Master Transportation Plan approved by DelDOT". He asked if that would give DelDOT the authority to shut this down without their approval. Mr. Robertson replied that the intention was to avoid DelDOT shutting it down. He added that the language can be changed if desired.

**Introduction of Proposed Ordinance/ MPZ**

Mr. Hudson introduced a Proposed Ordinance entitled "AN ORDINANCE TO DELETE CHAPTER 115, ARTICLE XVII VACATION RETIREMENT – RESIDENTIAL PARK DISTRICT SECTIONS 115-132 THROUGH 115-140 IN ITS ENTIRETY AND TO INSERT ARTICLE XVII MASTER PLAN ZONE, SECTIONS 115-132 THROUGH 115-140 IN ITS PLACE".

**Solar Farm CU Ordinance Discussion**

Jamie Whitehouse, Planning and Zoning Director presented a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXIV, SECTION 115-172 AND ARTICLE XXV, SECTION 115-194.5 TO ADD PROVISIONS FOR SPECIAL REQUIREMENTS FOR SOLAR FARM CONDITIONAL USES".

Mr. Robertson reported that recently, there has been many solar farm applications come through the process. It has been discussed to codify the conditions that have been imposing on the solar farm applications. He added that there is a standard set of conditions.

**Introduction of Proposed Ordinance/ Solar Farms CU**

Mr. Schaeffer introduced a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXIV, SECTION 115-172 AND ARTICLE XXV, SECTION 115-194.5 TO ADD PROVISIONS FOR SPECIAL REQUIREMENTS FOR SOLAR FARM CONDITIONAL USES".

**Demostration/Document System**

Jamie Whitehouse, Planning and Zoning Director provided a demonstration of the new document management software.

**Introduction of Proposed Ordinances**

Mr. Vincent introduced a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A GR GENERAL RESIDENTIAL DISTRICT FOR A SOLAR FARM ON A 17.45 ACRE PORTION, MORE OR LESS, OF A CERTAIN PARCEL OF LAND LYING AND BEING IN LITTLE CREEK HUNDRED, SUSSEX COUNTY, CONTAINING 29.45 ACRES, MORE OR LESS" filed on behalf of Consolidated Edison Development, Inc.

Mr. Hudson introduced a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR A SOLAR FARM TO

**BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN DAGSBORO HUNDRED, SUSSEX COUNTY, CONTAINING 28.81 ACRES, MORE OR LESS" filed on behalf of Dagsboro Thorogoods Solar 1, LLC**

**Mr. Rieley introduced a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR A SOLAR FARM TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN INDIAN RIVER HUNDRED, SUSSEX COUNTY, CONTAINING 15.97 ACRES, MORE OR LESS" filed on behalf of Lewes Saddle Ridge Solar 1, LLC**

**The Proposed Ordinance will be advertised for Public Hearings.**

**Council Member Comments**

**Mrs. Green commented that in the last week, the issue and topic of Ethics and Code of Conduct form as it relates to Council members has been discussed. She added that she has made the public statement that she choose not to sign the form. The reason for her not signing the form was because it came from the HR department. It is her position that it needs to come from the County Council; that it would either be an Ordinance or a vote that would come from the Council. Mrs. Green stated that she has no conflicts of interest, and she will answer to the constituents in her district. If it is brought back to Council for a vote, then, she will sign the form.**

**Mr. Vincent commented that the request for this document came from County Council, not Administration or HR. It was after a meeting was held a few years ago with the same presenter that presented last week. It was requested that they develop some kind of form which Council was in support of. Until now, all of Council have signed that document which is the same form that Mrs. Green signed last year. Mr. Vincent explained that this request came from the County Council to Administration and HR to develop the form which was all agreed to at that time.**

**Mr. Hudson commented about forested buffers; he believes that it is time to look further into this and get some teeth into it.**

**Mr. Rieley agreed with Mr. Hudson's comments. He added that he was outraged by what was shared this morning by Mrs. Hicks. If what was shared is not a violation of the Ordinance, then the Ordinance is not what he envisioned to be when it was past. He added that he would like to see the loopholes closed and get it done quickly.**

**Mr. Vincent commented that recently, a gentleman in the County was in a container of sand up to his shoulders. All of the emergency operations department, EOC, fire, EMS, County services and technical rescue team were on site. It was a six-hour operation to remove that gentleman who is now recovering.**

**M 069 23 Go Into Executive Session**

**At 11:01 a.m., a Motion was made by Mr. Hudson, seconded by Mrs. Green to recess the Regular Session, and go into Executive Session for the purpose of discussing matters relating to land acquisition.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Executive Session**

**At 11:06 a.m., an Executive Session of the Sussex County Council was held in the Basement Caucus Room to discuss matters relating to land acquisition. The Executive Session concluded at 11:42 a.m.**

**M 070 23 Reconvene**

**At 11:44 a.m., a Motion was made by Mr. Hudson, seconded by Mrs. Green, to come out of Executive Session and reconvene the Regular Session.**

**Motion Adopted:** **4 Yeas, 1 Absent**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Absent; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**E/S Action**

**There was no action on Executive Session matters.**

**M 071 23 Recess**

**A Motion was made by Mr. Hudson, seconded by Mr. Rieley to recess until 1:30 p.m. Public Hearings.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 072 23 Reconvene**

**At 1:30 p.m., a Motion was made by Mr. Schaeffer, seconded by Mr. Rieley to reconvene.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Rules**

**Mr. Moore read the rules and procedures for public hearings.**

**Public Hearing/ Ord. No. 22-08/CZ1959/**

**A Public Hearing was held on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE FUTURE LANDS USE MAP OF THE COMPREHENSIVE PLAN IN RELATION TO TAX PARCEL 135-11.00-65.00" (property is located on the north side of Lewes Georgetown Highway**

**CU2320** **[Rt. 9], approximately 620 feet northeast of Gravel Hill Road [Rt. 30]) (911 Address: N/A) (Tax Parcel: 135-11.00-65.00)**

**The Planning and Zoning Commission held a Public Hearing on the application on December 8, 2022. At the meeting of January 12, 2023, the Planning & Zoning Commission recommended denial of the application for the 7 reasons stated as outlined.**

**(See the minutes of the Planning & Zoning Commission dated December 8, 2022 and January 12, 2023.)**

**Mr. Jamie Whitehouse, Planning and Zoning Director, presented the application.**

**A Public Hearing was held on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS" (property located on the north side of Lewes Georgetown Highway [Rt. 9], approximately 620 feet northeast of Gravel Hill Road [Rt. 30]) (911 Address: N/A) (Tax Parcel: 135-11.00-65.00) filed on behalf of Charles E. Turner, Jr.**

**The Planning & Zoning Commission held a Public Hearing on the application on December 8, 2022. At the meeting of January 12, 2023, the Planning & Zoning Commission recommended denial of the application for the 5 reasons stated as outlined.**

**(See the minutes of the Planning & Zoning Commission dated December 8, 2022 and January 12, 2023.)**

**Mr. Jamie Whitehouse, Planning and Zoning Director, presented the application.**

**A Public Hearing was held on a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM DENSITY RESIDENTIAL DISTRICT FOR MULTI-FAMILY DWELLINGS (42 UNITS) TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS" (property located on the north side of Lewes Georgetown Highway [Rt. 9], approximately 620 feet northeast of Gravel Hill Road [Rt. 30]) (911 Address: N/A) (Tax Parcel: 135-11.00-65.00) filed on behalf of Charles E. Turner, Jr.**

**The Planning & Zoning Commission held a Public Hearing on the application on December 8, 2022. At the meeting of January 12, 2023, the**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**Planning & Zoning Commission recommended denial of the application for the 3 reasons stated as outlined.**

**(See the minutes of the Planning & Zoning Commission dated December 8, 2022 and January 12, 2023.)**

**Mr. Jamie Whitehouse, Planning and Zoning Director, presented the application.**

**The Council found that Ms. Mackenzie Peet, Esq. was present on behalf of the Applicant, Mr. Charles Turner; that Mr. Turner was also present; that in light of the Commission's recommendation for denial for all three applications, she intends to present each application in a consolidated but detailed manner; that in addition to reviewing the Commission's decision, that was inconsistent with the record made and included reasons and support of their decision that were inaccurate and misstated what the Sussex County Comprehensive Plan states; that a transcript was prepared of Commissioner Hoey-Stevenson's motion to recommend denial that was seconded by Commissioner Wingate; that the motion was recommended for denial by a vote of 4-0 by Commissioners Hoey-Stevenson, Wingate, Hopkins and Wheatley; that Commissioner Mears was absent; that a copy of the transcript, a copy of the decision and a noted and highlighted section of Section 4-16 of the Comprehensive Plan and Future Land Chapter that concerns the existing development area was submitted in the record; that the applicant has three requests; that the existing property is 9.72 acres and is the present location of Silver Oaks Trailer Park; that this area is adjacent to the open space within the Hawthorne Community; that to the rear of the property is a tax ditch prong; that on the other side of the property, is a property that is subject to a Conditional Use where the Burns Pet Store was previously located; that across the road are some residential homes and some property that was rezoned to B-1 (Neighborhood Business District) which is owned by Two Farms, Inc.; that the existing Silver Oaks Trailer Park was established on April 6, 1966 as confirmed by a notice that was included in the packet specifically as Exhibit B; that she clarified and explained the purpose of the notice; that the purpose of the notice was to inform the then Planning and Zoning Commission of the existing Silver Oak mobile park that had 38 mobile home lots approved; that 21 of the lots had been occupied as of 1970; that the Board of Adjustment had historically approved an expansion of the park by eight additional lots; that today there are eleven (11) mobile home lots on the site; that all existing mobile home owners leasing land have been notified of Mr. Turner's plan to develop the site; that the property is currently zoned AR-1 (Agricultural Residential District); that the properties adjacent to the subject property are also zoned AR-1; that along Route 9 there is a mixture of zoning districts mainly C-1, AR-1 and some B-1; that the Future Land Use Designation presently is Low-Density Area and is surrounded by properties designated as Commercial Area and Industrial Area; that the project is located in Investment Level IV; that the Cabinet Committee on State planning issues through the Office of State Planning Coordination developed the first**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**Delaware Strategies for State polices and Spending Maps in 1999 to be updated every five years; that the most recent update was completed in 2020; that the State Strategies were designed to help the committee guide State investment decisions and serve as a frame work for coordinating plans and actions of local government; that Chapter 4 of the Comprehensive Plan explains that State Strategies for State polices and spending map classifies four different investment level areas; that the four investment levels clarify the State's policies and priorities for the expenditure of State funds on infrastructure; that the Comprehensive Plan states that policy and the spending map are not parcel based and are not a land use plan; that with respect to the Future Land Use Map request the property is currently designated as a Low-Density Area; that the Low Density Area is considered to be a rural area; that as of 2018, all lands designated as Low Density Areas are also zoned AR-1; that AR-1, B-2, C-2, M, I-1 and new zoning districts are considered to be consistent in that designation and classification; that Section 4.4.3 of the plan details the permitted uses and visions in that area; that those uses include agricultural and residential uses as well as development that is largely confined to businesses addressing the needs of agricultural and residential uses; that Ordinance 22-08 seeks to amend the Future Land Use Map from Low Density to and Existing Development Area–a growth area; that Chapter 4 of the Comprehensive Plan explains that this area consists of primarily existing residential developments similar to this one presently under General Residential or Medium Residential zoning districts and some commercial uses; that these areas are scattered throughout the County and often times next to Low Density Areas; that the land use history of the property is relevant in that this property was permitted as a Mobile Home Park and approved for 38 lots; that this property has been an existing residential development since 1966; that it is the belief that the property should have been designated as an Existing Development Area because of its past and current use; that this area permits a full range of housing types including single-family homes, townhomes and multi-family units; that non-residential developments consists of uses found in the neighborhood business districts and commercial districts which is relevant considering the property is zoned C-1 and commercial right near the site; that the proposed use is consistent with the Existing Development Area; that as an existing mobile home development and a proposed multi-family development; that there are Existing Development Area in the vicinity of the subject property close to Route 9 and Route 5; that infrastructure is already in the area and central water and sewer are encouraged for the Existing Development Area; that sewer and water will be provided by Artesian; that a will serve letter from Artesian was submitted; that the applicable zoning districts in the Existing Development Area include MR and GR as well as some commercial areas and would be consistent with the Land Use change; that the application was presented to PLUS on December 21, 2022; that the Applicant responded and specifically the Applicant's engineer to each comment on January 23, 2023; that in that comment, the State noted specifically that rezonings and development applications have increased along Route 9; that they stated that the cumulative effects of continuing to review and approve rezonings**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**and land use development proposals outside of planned growth areas will have long term negative impacts on the State and County both physically and environmentally because infrastructure and services to support these developments are not planned for the areas; that this comment suggests that the state is making a more general comment about development in Investment Level 4 areas rather than a project specific comment; that the property is near commercial and residential developments and has access to existing infrastructure as stated; that the Applicant's second request is CZ1959 to rezone the property from AR-1 to MR to ultimately develop 42 multi-family units; that the MR district provides for medium density residential development in areas which are or are expected to become generally urban in character where sanitary sewer and public water may or may not be available at the time of construction; that AR-1 permits low-density multi-family through the pursuit of a Conditional Use application but the Applicant wishes to rezone to MR which permits the medium density residential to allow for the development of 42 multi-family units at a density of 4.36 units per acre; that the proposed rezoning is compatible with the surrounding land uses which includes a mix of residential, business, and commercial uses nearby; that there are other multi-family residential units nearby including Weston Willows Apartment Complex (287 units apartment complex on 27 acres), Azelea Woods single-family subdivision, Hawthorne subdivision, Windsor Reserve which was just recently approved for another 100 single family lots and Deerwood Subdivision; that Table II shows the bulk requirements for multi-family units must meet the same height, area and bulk requirements; that this is relevant considering the C-1 zoning district near the property; that there were three change of zone applications approved within a mile of this site; that CZ1838 from AR-1 to B-1 for the Two Farms property; that CZ1902 CR-1 to HI-1, that applicant noted on the record where Magee Plumbing, AP Croll Sons and Peninsula Paving; that the third use was CZ1944 that amended a AR-1 district to a C-2 district for the executive lawn property management to expand its landscaping business; that the Planning and Zoning Memorandum also concludes that the intended development could be considered consistent with surrounding land uses; that Table 4.5-2 Title Zoning Districts applicable to Future Land Use Categories confirms that the MR district is an applicable district in the Existing Development Area; that the final request is CU 2320 for a Conditional Use of land in a MR zoning district for the development of 42 multi-family units; that the purpose of Section 115-171 on Conditional Uses states that it provides for certain uses which cannot be well adjusted to their environment in particular locations with full protection offered to surrounding properties by rigid application of the district regulations; that these uses are generally of a public or semi-public character and are essential and desirable for the general convenience and welfare but because of the nature of the use, the importance of the relationship to the Comprehensive Plan and possible impact not only on neighboring properties but on a large section of the County require the exercise of planning judgment on location and site plan; that the proposed multi-family development will be accessed off of Route 9; that the proposed density for the development is 4.36 dwelling units per acre subject to a**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**rezoning and Future Land Use Map change; that there are eight (8) buildings proposed and each building contains between 3 to 6 units each; that there is also a community building and pool amenity is proposed; that 6.43 acres or 66.7% of the site to remain as open space subject to final site engineering; that adjacent developments that were developed as single-family homes would be required per code under the AR-1 district to meet 30% open space requirement in Cluster Subdivision; that there will be 92 parking spaces which exceed the 84 required spaces; that the non-tidal wetlands will remain undisturbed; that stormwater management will be in accordance with local and state regulations; that water and sewer will be served by Artesian; that the increase in traffic on area roadways will be analyzed, reviewed and approved by DelDOT; that preliminarily the response to the Service Level Evaluation Request state that the impact is considered to be negligible; that the developer will work with DelDOT to develop an entrance plan; that it is intended to eliminate one existing entrance and provide a continuation of the shared use path from the Hawthorne development; that the developer intends to work with DART to provide the requested shelter pad and bus pull off area; that section 115-31 of the Code concerning multi-family units confirms that these units may be permitted as conditional uses subject to the provisions in the Code; that the proposed use is in compliance with all Code requirements; that if the Future Land Use Amendment is adopted then the proposed use will be compliant and consistent with the Comprehensive Plan update; that on December 8, 2022, the Commissioners heard these applications for the first time; that at the December 8, 2022 meeting, there were three Commissioners present, Chairman Wheatley, Commissioners Hopkins and Mears; that Commissioners Hoey-Stevenson and Wingate were absent; that during that meeting, none of the Commissioners present asked any questions at the conclusion of the presentation to the applicant that would even remotely suggested a recommendation for denial was forthcoming; that there were no opposition and it was a complete and total surprise that there was a recommendation and a vote of 4-0 for denial; that the record suggests that the Commission considered that this property may have been missed as a property that should have been appropriately classified as an existing development area; that specifically during the discussion of the three applications, Commissioner Hopkins asked staff a question trying to figure out why this property as an existing development was not designated as GR to match what was there; that Chairman Wheatley said that he had the same question and specifically said "since the 60s, there has been an approval and for 38 units, you would have thought that someone may have noticed that but apparently we did not"; that in response, Commissioner Hopkins states "and we see this happen more in your neck of the woods, if you look at the zoning map, there are all of these oddball GR spots that don't seem to tie in with anything but then because they have been manufactured home parks or whatever, they have been there forever and they established them from day one as GR zoning, it's just, you know, interesting why this one never was"; that Commissioner Hopkins even went on to say that this property seems like an "outlier"; that Ms. Peet agrees that it is an outlier because the property should have been classified as an**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**existing development area for all of the reasons stated and should not have been designated as a low density area or zoned AR-1; that on January 12, 2023, Commissioner Hoey-Stevenson motioned to deny the Future Land Use Map Amendment which resulted in the other applications being recommended for denial as well; that Ms. Peet discussed Commissioner Hoey-Stevenson's motion; that in the motion, Commissioner Hoey-Stevenson stated "the existing development area is designated in the Comprehensive Plan for existing residential development under the current general residential and medium residential zoning districts as well as some commercial uses"; that is undisputed and agreed upon; that the Commissioner goes on to say "the plan further states that this particular classification is simply being used to identify these existing scattered zoning areas that have no direct relationship to their surrounding zoning and/or Future Land Use Map"; that the Comprehensive Plan states the existing development areas are scattered and are surrounded by low-density areas; that significantly, this description of existing development areas is consistent with the Silver Oaks trailer park use for reasons stated; that the Commissioner continued stating "the plan emphasizes that this area should only be used for existing GR or MR-zoned properties"; that this misquotes the plan; that the plan as written states that the existing development area consist primarily of existing residential development under current GR and MR zoning district as well as some commercial uses; that the existing development area is not only used for GR and MR zoned properties as directly quoted in the plan, the existing development area primarily includes existing residential developments under current GR and MR zoning districts as well as commercial uses; that the reasons in support of the motion continued to rely on this misquoted section of the plan; that in fact, the Commissioner goes on to say that the Comprehensive Plan also reiterates the Existing Development Area is limited to existing GR and MR land by providing that, there is no intention to expand this land use classification; that it may be true that there is no intention to expand this land use classification, but, there is nothing against expanding this classification especially when it appears that this property should have been classified as an existing development area based on its use historically since 1966; that the Commissioner added "There is no dispute that the property is currently developed as a small, manufactured home park that has been in existence for decades, however, it is situated upon land that is zoned AR-1 and it was never rezoned to GR"; that the property could not be rezoned to GR without a Future Land Use Map amendment like the one being presented and a rezoning request; that the Commissioner emphasized that the existing mobile home park is a legally non-conforming use as a reason in support of her motion; that even if that it is true, that does not mean that the property could not be designated as a existing development area as requested; that there is a property in a local municipality that does not have a certified Comprehensive Plan for a related use; that the property is the Rehoboth Art League in the municipality of Henlopen Acres; that the community has its first Comprehensive Plan in 2004; that it performed its first Comprehensive Plan review in 2012; that the primary reason that plan was not certified concerned the art league's non-conforming use; that the**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**issue is that the art league wanted to be rezoned to a cultural district from an existing residential district; that the town wanted the art league to remain as a residential use; that in 2014, Ms. Constance Holland, the then Director of State Planning confirmed that she could not send the current plan to the Governor with the art league remaining as a residentially zoned district; that Ms. Holland recommended that the art league property be rezoned because of its current use; that this is an example of the State Planning Office looking at property and not certifying a Comprehensive Plan because of a municipality's decision to maintain a property zoning district that was inconsistent with the current zoning district in light of the properties past legally non-conforming use; that the State's position on the art league had everything to do with the current and future intended use of the art league; that because Henlopen Acres decided to keep the property as a legally non-conforming use zoned residentially and not zoned to a use consistent with its current and intended future use, its plan in part was not certified; that similarly, Mr. Turner's property operates as a legally non-conforming use in a AR-1 zoning district and a low density Future Land Use classification; that the Art League property was intended to not be rezoned, it is being argued here that it seems that the property has been overlooked when designating the property as a AR-1 district and low density area; that there is nothing in the record to the contrary to suggest that there was any actual intent to leave the property zoned AR-1 and to classify the property as low density; that it is her position that Mr. Turner's property should have been designated to a classification and zoned in a manner consistent with its past and current use that is operated on the site since 1966; that she reminded the Council that on the record, Commissioner Hopkins and Chairman Wheatley suggested that this may have been missed; that there is no substantial evidence on the record contrary to support the Commission's reasons for denying the Future Land Use Map Amendment, associated rezoning and conditional use request; that it is the applicant's position that the paper and spoken record overwhelming suggests that the property should have been classified as an existing development area; that the requested Future Land Use Amendment would correct what appears to be based on the record an oversight; that in looking at the Future Land Use Map Amendment request, the applicant encourages this Council to review all of the materials presented today and take its time in reviewing those materials and considered the intended use (a 42 unit multi-family unit); that it is only four more units than the approved thirty-eight units for a legally non-conforming use that has been there for nearly 60 years; that it is proposed adjacent to and in the immediate vicinity of other single family and multi family units as well as other commercial uses with almost 67% of the site designated as open space and with access to public water and sewer on Route 9 that would be consistent with the Comprehensive Plan's direction for possible development of the Route 9 corridor as a business corridor with a mix of residential and commercial uses; that in addition to contributing to the plans goal of reducing access points from the number of entrances from two to one; that this intended development will compliment Route 9 growth and offer another option for housing for present and future residents who may desire to not purchase a**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**single-family home or may not be able to afford the same; that the applicant requests that the Council approve the Future Land Use Amendment, the requested rezoning from AR-1 to MR and the proposed 42 unit multi-family unit development; that a discussion was held regarding an underground plume of a chemical called PCE (tetrachloroethylene); that it is Ms. Pete's understanding that the pollution originated at the campground years ago; that there are monitoring sites currently placed on Hawthrone; that it is on DNREC's radar.**

**Public comments were heard.**

**Ms. Susan Barra spoke in opposition of the application. Ms. Barra stated that there has been a lot of development on Route 9; that she questioned if neighbors are notified when development occurs; that Mr. Whitehouse explained that postcard notifications are sent out to all property owners within 200 feet of the parcel boundary; that notices are done in local newspapers and physical postings on done on the site itself; that it is also displayed on the County's website; that she has lived there a little over six years; that it can take 15 to 20 minutes to get in and out of her community; that the traffic from Route 30 to Route 9 backs up past Hawthrone.**

**Mr. Chris Stuchlik spoke in opposition of the application. Mr. Stucklik stated that he owns land near the proposed site; that he is speaking on behalf of other nearby land areas; that he has concerns with the site plan that sems to eliminate the wooded area on the western edge of 135-11.00-65.00; that he also has concerns with noise and outdoor/street lighting; that there is a concern for a significant negative impact on the prospective value of the parcels.**

**The Public Hearing and public record were closed.**

**M 073 23 Defer Action/ FLUM Ord. 22-08**

**A Motion was made by Mr. Rieley, seconded by Mr. Hudson to defer action on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE FUTURE LAND USE MAP OF THE COMPREHENSIVE PLAN IN RELATION TO TAX PARCEL 135-11.00-65.00"**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 074 23 Defer Action/ CZ1959**

**A Motion was made by Mr. Rieley, seconded by Mr. Schaeffer to defer action on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS"**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 075 23 Defer Action/ CU2320**

**A Motion was made by Mr. Rieley, seconded by Mr. Schaeffer to defer action on a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM DENSITY RESIDENTIAL DISTRICT FOR MULTI-FAMILY DWELLINGS (42 UNITS) TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS"**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 076 23 Adjourn**

**A Motion was made by Mr., Hudson seconded by Mr. Rieley to adjourn at 2:22 p.m.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Respectfully submitted,**

**Tracy N. Torbert**
**Clerk of the Council**

***{An audio recording of this meeting is available on the County's website.}***

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

December 18, 2023

Charles E. Turner, Jr.
29762 Oliver Wolcott Drive
Millsboro, DE 19966

By e-mail to: cetelt@msn.com

RE: Notice of Decision Letter for Conditional Use (CU 2320) for a Multi-Family Residential to be located on the Northwest side of Lewes Georgetown Highway (Route 9) approximately 620 feet northeast of Gravel Hill Road (Route 30).
Tax Parcels: 135-11.00-65.00

Dear Mr. Turner,

At their meeting of Tuesday December 5, 2023, the Sussex County Council denied the Conditional Use application for Conditional Use No. 2320 Charles E. Turner, Jr.

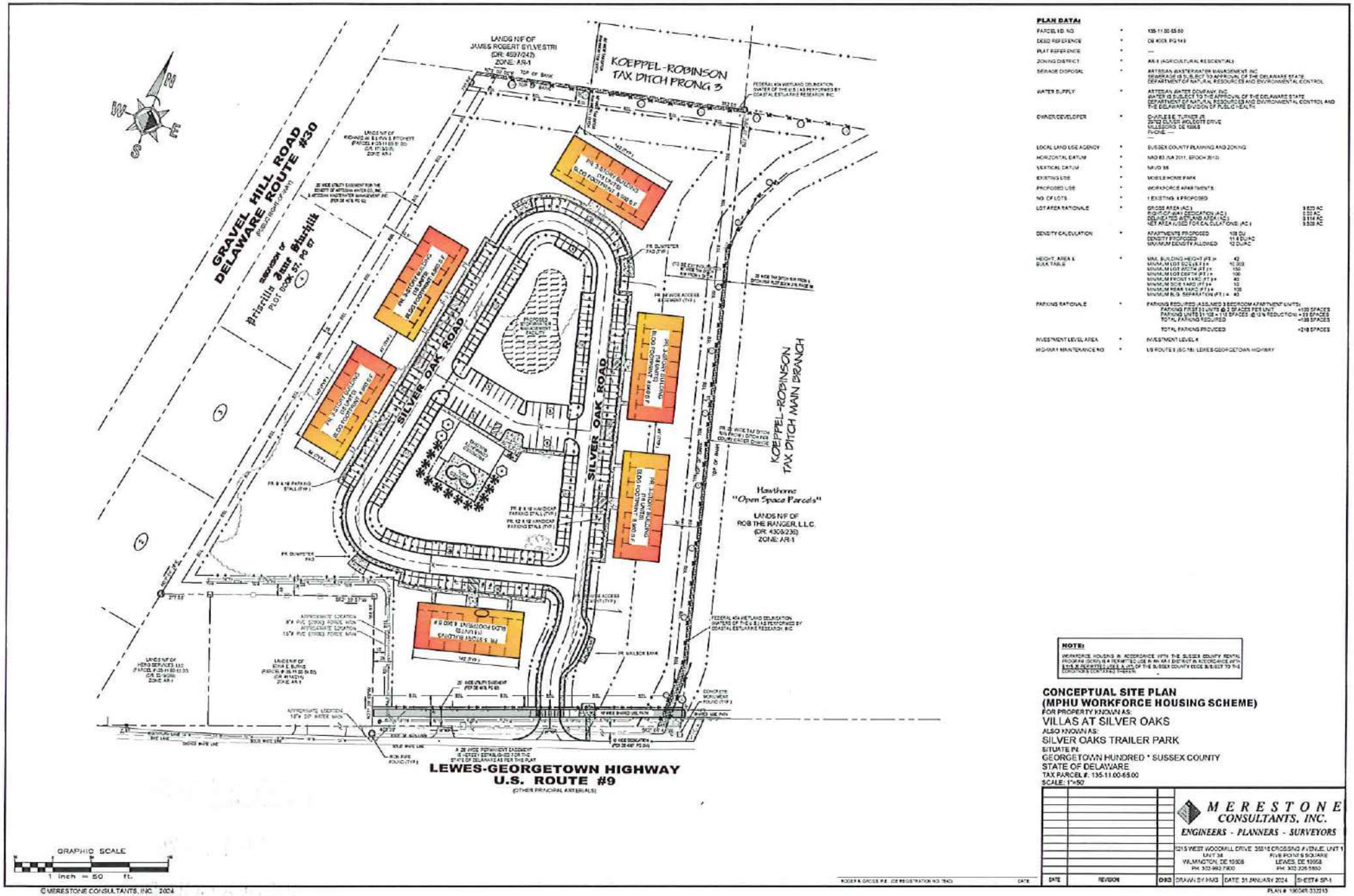
Please feel free to contact the Planning and Zoning Department with any questions during business hours 8:30AM to 4:30PM, Monday through Friday, at (302)-855-7878.

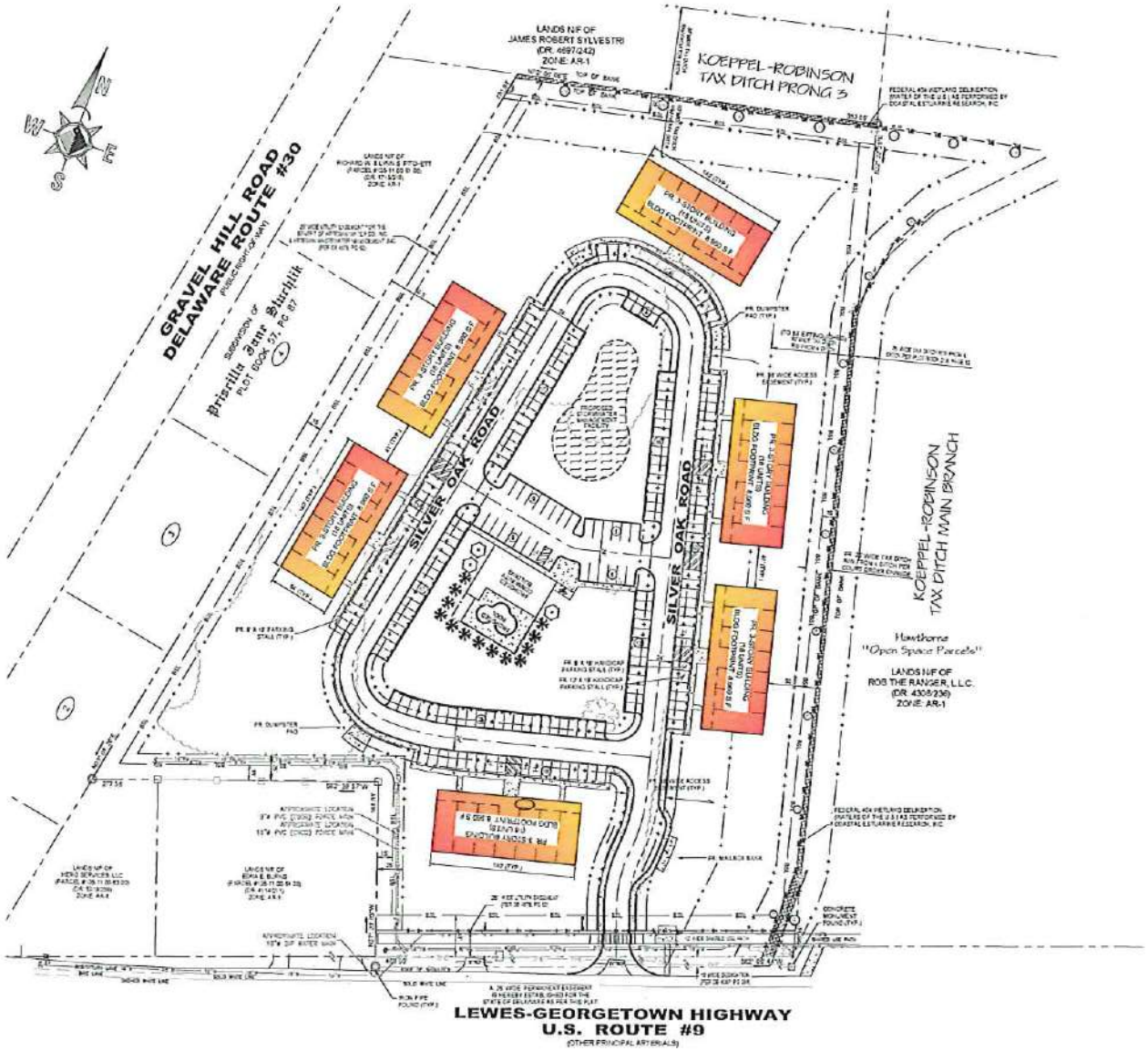
Sincerely,

Ann Lepore

Ann Lepore
Planner I

CC: Ms. Mackenzie Peet, Esq.
Roger A. Gross, P.E.
Mr. Leslie Dick, Sussex County Chief Constable – Constable's Office
Ms. Susan Isaacs, Sussex County Engineering Project Coordinator — Engineering – Public Works
Mr. Andy Wright, Chief of Building Code – Sussex County Building Code
Mr. John Ashman, Director of Utility Planning □ Design – Engineering
CU 2322 Charles E. Turner, Jr. File


GRAVEL HILL ROAD
DELAWARE ROUTE #30
KOEPPEL-ROBINSON
TAX DITCH PRONG 3
SILVER OAK ROAD
SILVER OAK ROAD
KOEPPEL-ROBINSON
TAX DITCH MAIN BRANCH
Hawthorne
"Open Space Parcels"
LANDS N/F OF
ROB THE RANGER, L.L.C.
(DR: 4309/230)
ZONE: AR-1
LANDS N/F OF
JAMES ROBERT SYLVESTRI
(DR: 4697/247)
ZONE: AR-1
LEWES-GEORGETOWN HIGHWAY
U.S. ROUTE #9
(OTHER PRINCIPAL ARTERIALS)
GRAPHIC SCALE
1 inch = 50 ft.
PLAN DATA:
NOTE:
CONCEPTUAL SITE PLAN
(MPHU WORKFORCE HOUSING SCHEME)
FOR PROPERTY KNOWN AS:
VILLAS AT SILVER OAKS
ALSO KNOWN AS:
SILVER OAKS TRAILER PARK
SITUATE IN:
GEORGETOWN HUNDRED * SUSSEX COUNTY
STATE OF DELAWARE
TAX PARCEL #: 135-11.00-65.00
SCALE: 1"=50'
MERESTONE
CONSULTANTS, INC.
ENGINEERS - PLANNERS - SURVEYORS
DATE
REVISION
DWG
DRAWN BY: HJG
DATE: 31 JANUARY 2024
SHEET# SP-1
© MERESTONE CONSULTANTS, INC. 2024




**PLAN DATA:**

| | | |
|---|---|---|
| PARCEL I.D. NO | * | 135-11.00-65.00 |
| DEED REFERENCE | * | DB 4403, PG 149 |
| PLAT REFERENCE | * | — |
| ZONING DISTRICT | * | AR-1 (AGRICULTURAL RESIDENTIAL) |
| SEWAGE DISPOSAL | * | ARTESIAN WASTEWATER MANAGEMENT, INC. SEWERAGE IS SUBJECT TO APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL |
| WATER SUPPLY | * | ARTESIAN WATER COMPANY, INC. WATER IS SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DIVISION OF PUBLIC HEALTH |
| OWNER/DEVELOPER | * | CHARLES E. TURNER JR.<br>32750 OLIVER WOLCOTT DRIVE<br>MILLSBORO, DE 19966<br>PHONE: —<br>— |
| LOCAL LAND USE AGENCY | * | SUSSEX COUNTY PLANNING AND ZONING |
| HORIZONTAL DATUM | * | NAD 83 (NA 2011, EPOCH 2010) |
| VERTICAL DATUM | * | NAVD 88 |
| EXISTING USE | * | MOBILE HOME PARK |
| PROPOSED USE | * | WORKFORCE APARTMENTS |
| NO. OF LOTS | * | 1 EXISTING, 1 PROPOSED |
| LOT AREA RATIONALE | * | GROSS AREA (AC.): 9.623 AC<br>RIGHT-OF-WAY DEDICATION (AC.): 0.00 AC<br>DEDICATED WETLAND AREA (AC.): 0.114 AC<br>NET AREA (USED FOR CALCULATIONS) (AC.): 9.509 AC |
| DENSITY CALCULATION | * | APARTMENTS PROPOSED: 108 DU<br>DENSITY PROPOSED: 11.4 DU/AC<br>MAXIMUM DENSITY ALLOWED: 12 DU/AC |
| HEIGHT, AREA & BULK TABLE | * | MAX. BUILDING HEIGHT (FT.)*: 42<br>MINIMUM LOT SIZE (SF.)*: 15,000<br>MINIMUM LOT WIDTH (FT.)*: 150<br>MINIMUM LOT DEPTH (FT.)*: 100<br>MINIMUM FRONT YARD (FT.)*: 40<br>MINIMUM SIDE YARD (FT.)*: 10<br>MINIMUM REAR YARD (FT.)*: 100<br>MINIMUM B.L.G. SEPARATION (FT.)*: 40 |
| PARKING RATIONALE | * | PARKING REQUIRED (ASSUMED 3 BEDROOM APARTMENT UNITS):<br>PARKING FIRST 50 UNITS @ 2 SPACES PER UNIT: =100 SPACES<br>PARKING UNITS 51-108 x 1.75 SPACES @ 15% REDUCTION: =93 SPACES<br>TOTAL PARKING REQUIRED: =193 SPACES<br>TOTAL PARKING PROVIDED: =213 SPACES |
| INVESTMENT LEVEL AREA | * | INVESTMENT LEVEL 4 |
| HIGHWAY MAINTENANCE NO | * | US ROUTE 9 (SC16) LEWES-GEORGETOWN HIGHWAY |

**NOTE:**
WORKFORCE HOUSING IN ACCORDANCE WITH THE SUSSEX COUNTY RENTAL PROGRAM (SCRP) IS A PERMITTED USE IN AN AR-1 DISTRICT IN ACCORDANCE WITH § 115-25 PERMITTED USES A.(17) OF THE SUSSEX COUNTY CODE & SUBJECT TO THE CONDITIONS CONTAINED THEREIN.

**CONCEPTUAL SITE PLAN**
**(MPHU WORKFORCE HOUSING SCHEME)**
FOR PROPERTY KNOWN AS:
VILLAS AT SILVER OAKS
ALSO KNOWN AS:
SILVER OAKS TRAILER PARK
SITUATE IN:
GEORGETOWN HUNDRED * SUSSEX COUNTY
STATE OF DELAWARE
TAX PARCEL #: 135-11.00-65.00
SCALE: 1"=50'

ROGER A. GROSS, P.E. (REGISTRATION NO. 7840) DATE

| DATE | REVISION | CHKD. | DRAWN BY: HMG | DATE: 31 JANUARY 2024 | SHEET #: SP-1 |
|---|---|---|---|---|---|

MERESTONE CONSULTANTS, INC.
ENGINEERS - PLANNERS - SURVEYORS
4215 WEST WOODMILL DRIVE, UNIT 38, WILMINGTON, DE 19808, PH. 302-892-7900
39615 DIOS BINO AVENUE, UNIT 1, RIVEPOINTE SQUARE, LEWES, DE 19958, PH. 302-226-5500

PLAN #: 19024R332213

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File #: _____

# Sussex County Comprehensive Plan Amendment Request Form
# Sussex County, Delaware

**Sussex County Planning & Zoning Department**
**2 The Circle (P.O. Box 417) Georgetown, DE 19947**
☎ **302-855-7878**
✉ **pandz@sussexcountyde.gov**

**Type of Amendment Requested (e.g Future Land Use Map, Existing Land Use Map, or Text Revision)**
Future Land Use Map

**Year that Comprehensive Plan was Adopted:**
2019

**If Applicable, the Date(s) of any PLUS Review by the State of Delaware**
N/A

**Tax Map #:** 135-11.00-65.00 **Total Acreage:** +/- 9.623 Acres

**Applicant Information**
Applicant Name: J AND C INVESTMENT PROPERTIES, LLC, successors and assigns
Applicant Address: 29762 Oliver Wolcott Drive
City: Millsboro State: DE ZipCode: 19966
Phone #: (302) 632-2711 E-mail: cetelt@msn.com

**Developer Information**
Developer Name: J AND C INVESTMENT PROPERTIES, LLC, successors and assigns

**Attorney Information (If Applicable)**
Attorney Name: Saul Ewing LLP c/o Mackenzie Peet, Esquire
Attorney Address: 1201 N. Market Street, Suite 2300
City: Wilmington State: DE ZipCode: 19801
Phone #: (302) 421-6865 E-mail: mackenzie.peet@saul.com

**Description of Request:** (Please provide a written description of the request, along with details of the Tax Parcel ID(s) of the relevant parcels to which the amendment request relates. If you are requesting a text amendment to the Comprehensive Plan, please also clearly explain which Chapters of the Comprehensive Plan your request relates)

See attached.

# Check List for Comprehensive Plan Amendment Request Applications

**The following shall be submitted with any request**

[X] **Completed Application (including relevant Application Fee)**

[X] **A scaled survey drawing is appended to this Application that clearly shows the location of all parcels to which the amendment request relates.**

[X] **The Applicant understands that Sussex County Council may submit a copy of this application, along with copies of all documents received, to the State of Delaware Office of Management and Budget for the purposes of any enabling the State of Delaware to review the requested revision.**

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

***Signature of Applicant/Attorney***

_____

*For office use only:*

Date Submitted: _____ Application & Case # :_____

Staff member receiving Application: _____ Fee: $1,000.00, Check #:_____

Location of property: _____

_____

Date of Commission Hearing:_____ Recommendation: _____

Date of Council Hearing: _____

**Sussex County, DE Comprehensive Plan Amendment Request Form Attachment**

**Owner:** J AND C INVESTMENT PROPERTIES, LLC[1]

**Property; Tax Map Parcel No:** Silver Oaks Trailer Park, Lewes-Georgetown Highway, Georgetown, Delaware 19947;135-11.00-65.00 (the "Property")[2]

**Current Future Land Use Designation:** Low Density

**Proposed Future Land Use Designation:** Commercial Area

**Current and Proposed Zoning District**: AR-1 Agricultural Residential District, an applicable zoning district in the Commercial Area.

---

**Existing Use**

Silver Oaks Trailer Park, which was established on April 6, 1966.[3]

**Intended Use of the Property**

The proposed project involves the development of a multifamily community consisting of approximately 108 rental units under the Sussex County Rental Program (SCRP),[4] as more fully shown on the attached Conceptual Site Plan prepared by Merestone Consultants, Inc.

**Surrounding Land Use Districts and Future Land Use Designations**

Adjacent properties are zoned AR-1 and are designated as Low Density. Properties in the vicinity of the site are zoned AR-1, C-1, C-2, B-1, HI-1, MR and CR1.[5] Properties in the vicinity of the site have varying Future Land Use Classifications, including Low Density, Commercial, Industrial, Existing Development and Developing Area.[6]

**Surrounding Uses**[7]

Weston Willows Apartment Complex, Azalea Woods, Hawthorne, Besche Furniture, A.P. Croll & Sons, Peninsula Paving, DelDOT Area 4

**Sussex County Comprehensive Plan Considerations:**

The proposed development would be consistent with the goals and objectives established in Sussex County Comprehensive Plan (the "Plan"), particularly regarding the Commercial Area and vision for Route 9. Specifically, 4-17 of the Plan describes the Commercial Area as follows:

> Commercial Areas include concentrations of retail and service uses that are mainly located along arterials, and highways. As opposed to small, traditional downtown

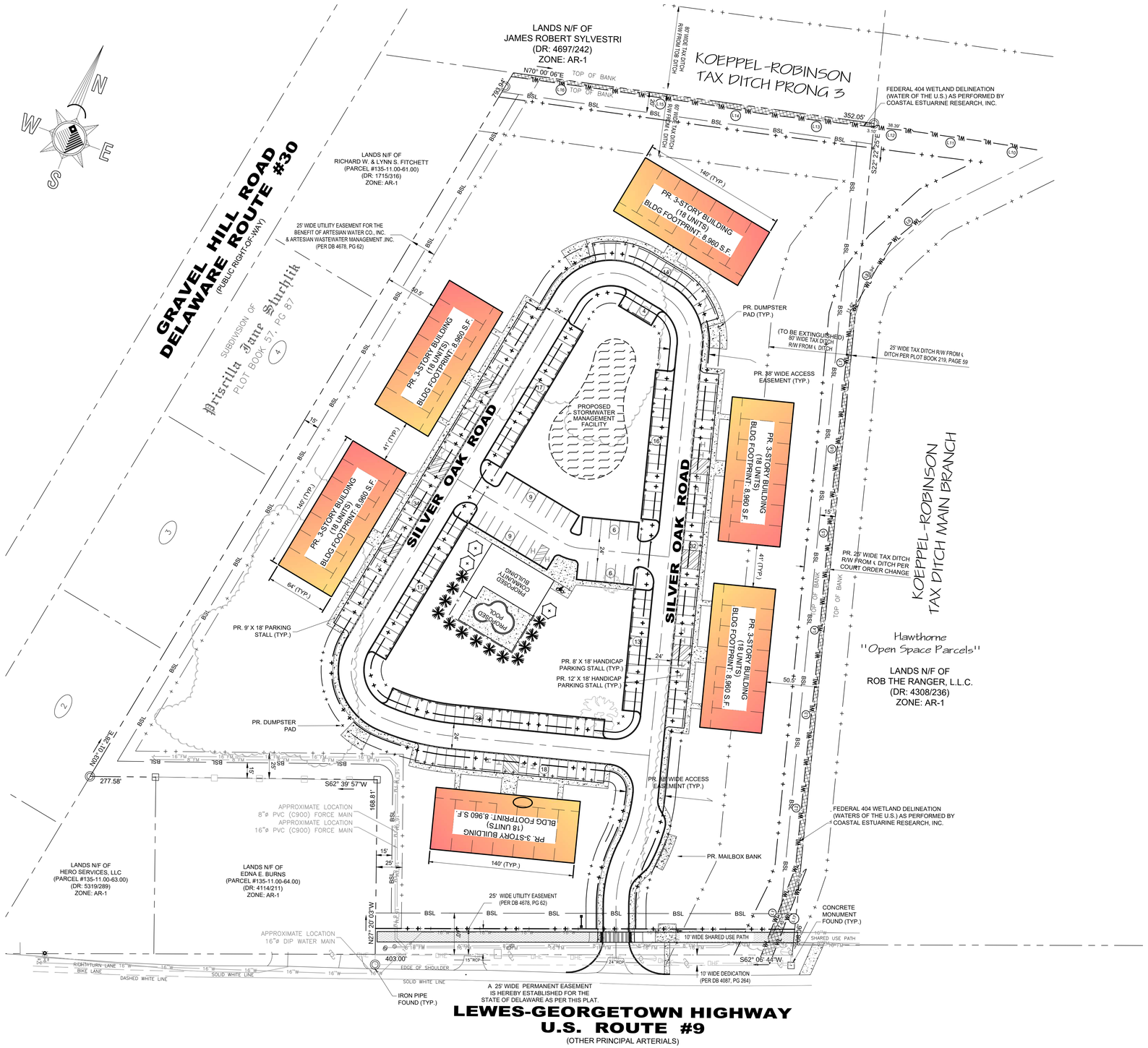
---

[1] *See* Property Information Sheet and Property Deed attached as Exhibit A.
[2] *See* Aerial Map of Property attached as Exhibit B.
[3] *See* Exhibit C.
[4] *See* copy of SCRP Code requirements attached as Exhibit D.
[5] *See* Zoning District Map attached as Exhibit E.
[6] *See* Future Land Use Map attached as Exhibit F.
[7] *See* Surrounding Uses Aerial Image attached as Exhibit G.

> areas that are often historic and pedestrian-friendly, Commercial Areas include commercial corridors, shopping centers, and other medium and large commercial vicinities geared towards vehicular traffic. In addition to primary shopping destinations, this area would also be the appropriate place to locate hotels, motels, car washes, auto dealerships, l and other medium and larger scale commercial uses not primarily targeted to the residents of immediately adjacent residential areas. These more intense uses should be located along main roads or near major intersections. Institutional and commercial uses may be appropriate depending on surrounding uses. Mixed-use buildings may also be appropriate for these areas.

This SCRP development will not only provide essential housing options for local residents but will also support the commercial landscape of the area by increasing the population base that can access nearby services and amenities.

Furthermore, Chapter 13.3.4 of the plan discusses the vision for Route 9 as a business corridor that integrates residential and commercial uses, ensuring that local residents have convenient access to necessary services. The development will contribute to this vision by facilitating housing population in this area, which can drive demand for local businesses along Route 9.




**PLAN DATA:**

| | | |
|---|---|---|
| PARCEL I.D. NO. | * | 135-11.00-65.00 |
| DEED REFERENCE | * | DB 4003, PG 149 |
| PLAT REFERENCE | * | ---- |
| ZONING DISTRICT | * | AR-1 (AGRICULTURAL RESIDENTIAL) |
| SEWAGE DISPOSAL | * | ARTESIAN WASTERWATER MANAGEMENT, INC.<br>SEWERAGE IS SUBJECT TO APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL. |
| WATER SUPPLY | * | ARTESIAN WATER COMPANY, INC.<br>WATER IS SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DIVISION OF PUBLIC HEALTH. |
| OWNER/DEVELOPER | * | CHARLES E. TURNER JR.<br>29762 OLIVER WOLCOTT DRIVE<br>MILLSBORO, DE 19966<br>PHONE: ----<br>---- |
| LOCAL LAND USE AGENCY | * | SUSSEX COUNTY PLANNING AND ZONING |
| HORIZONTAL DATUM | * | NAD 83 (NA 2011, EPOCH 2010) |
| VERTICAL DATUM | * | NAVD '88 |
| EXISTING USE | * | MOBILE HOME PARK |
| PROPOSED USE | * | WORKFORCE APARTMENTS |
| NO. OF LOTS | * | 1 EXISTING, 1 PROPOSED |
| LOT AREA RATIONALE | * | GROSS AREA (AC.) 9.623 AC.<br>RIGHT-OF-WAY DEDICATION (AC.) 0.00 AC.<br>DELINEATED WETLAND AREA (AC.) 0.114 AC.<br>NET AREA (USED FOR CALCULATIONS) (AC.) 9.509 AC. |
| DENSITY CALCULATION | * | APARTMENTS PROPOSED: 108 DU<br>DENSITY PROPOSED: 11.4 DU/AC<br>MAXIMUM DENSITY ALLOWED: 12 DU/AC |
| HEIGHT, AREA & BULK TABLE | * | MAX. BUILDING HEIGHT (FT.)= 42<br>MINIMUM LOT SIZE (S.F.) = 10,000<br>MINIMUM LOT WIDTH (FT.) = 150<br>MINIMUM LOT DEPTH (FT.) = 100<br>MINIMUM FRONT YARD (FT.) = 40<br>MINIMUM SIDE YARD (FT.) = 10<br>MINIMUM REAR YARD (FT.) = 100<br>MINIMUM BLG. SEPARATION (FT.) = 40 |
| PARKING RATIONALE | * | PARKING REQUIRED (ASSUMED 3 BEDROOM APARTMENT UNITS):<br>PARKING FIRST 50 UNITS @ 2 SPACES PER UNIT =100 SPACES<br>PARKING UNITS 51-108 = 116 SPACES (@15% REDUCTION) = 99 SPACES<br>TOTAL PARKING REQUIRED =199 SPACES<br>TOTAL PARKING PROVIDED =218 SPACES |
| INVESTMENT LEVEL AREA | * | INVESTMENT LEVEL 4 |
| HIGHWAY MAINTENANCE NO. | * | US ROUTE 9 (SC-18); LEWES-GEORGETOWN HIGHWAY |

**NOTE:**

WORKFORCE HOUSING IN ACCORDANCE WITH THE SUSSEX COUNTY RENTAL PROGRAM (SCRP) IS A PERMITTED USE IN AN AR-1 DISTRICT IN ACCORDANCE WITH § 115-20 PERMITTED USES. A. (17) OF THE SUSSEX COUNTY CODE SUBJECT TO THE CONDITIONS CONTAINED THEREIN.

CONCEPTUAL SITE PLAN
(MPHU WORKFORCE HOUSING SCHEME)
FOR PROPERTY KNOWN AS:
VILLAS AT SILVER OAKS
ALSO KNOWN AS:
SILVER OAKS TRAILER PARK
SITUATE IN:
GEORGETOWN HUNDRED * SUSSEX COUNTY
STATE OF DELAWARE
TAX PARCEL #: 135-11.00-65.00
SCALE: 1"=50'

ROGER A. GROSS, P.E. (DE REGISTRATION NO. 7842) DATE:

| DATE | REVISION | CHKD. |
|---|---|---|

MERESTONE CONSULTANTS, INC.
ENGINEERS - PLANNERS - SURVEYORS
5215 WEST WOODMILL DRIVE UNIT 38 WILMINGTON, DE 19808 PH: 302-992-7900
35516 CROSSING AVENUE, UNIT 1 FIVE POINTS SQUARE LEWES, DE 19958 PH: 302-226-5880

DRAWN BY: HMG | DATE: 31 JANUARY 2024 | SHEET#: SP-1

PLAN #: 19604R-332213

©MERESTONE CONSULTANTS, INC. 2024

R:\Projects\19604R Silver Oak Trailer Park\dwg\19604R-2024 WFH Concept.dwg, Site Plan, 7/3/2024 8:26:28 AM, DWG To PDF.pc3

# Exhibit A

# Property Information Sheet & Deed

PARID: 135-11.00-65.00
J AND C INVESTMENT PROPERTIES LLC

## Property Information

| | |
|---|---|
| Property Location: | |
| Unit: | |
| City: | |
| State: | |
| Zip: | |
| Class: | EXM-Exempt |
| Use Code (LUC): | MX-MISCELLANEOUS |
| Town | 00-None |
| Tax District: | 135 – GEORGETOWN |
| School District: | 1 - INDIAN RIVER |
| Fire District: | 77-Georgetown |
| Deeded Acres: | .0000 |
| Frontage: | 0 |
| Depth: | .000 |
| Irr Lot: | |
| Plot Book Page: | /PB |
| 100% Land Value: | |
| 100% Improvement Value | $0 |
| 100% Total Value | |

## Legal

| | |
|---|---|
| Legal Description | GIS TIEBACK<br>DUMMY ACCOUNT |

## Owners

| Owner | Co-owner | Address | City | State | Zip |
|---|---|---|---|---|---|
| J AND C INVESTMENT PROPERTIES LLC | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 |

## Sales

| Sale Date | Book/Page | Sale Price | Stamp Value | Parcels Sold | Grantee/Buyer |
|---|---|---|---|---|---|
| 06/25/2024 | 6124/221 | | | | J AND C INVESTMENT PROPERTIES LLC |
| 06/25/2024 | 6124/218 | | | | TURNER CHARLES E JR |

## Owner History

| Tax Year: | Owner: | Co-owner | Address: | City: | State: | Zip: | Deed Book/Page: |
|---|---|---|---|---|---|---|---|
| 2024 | J AND C INVESTMENT PROPERTIES LLC | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/221 |
| 2023 | J AND C INVESTMENT PROPERTIES LLC | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/221 |
| 2023 | TURNER CHARLES E JR | JEFFREY E TURNER | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/218 |
| 2023 | TURNER CHARLES E JR | EMILY L TURNER | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/218 |
| 2023 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2022 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2021 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2020 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2019 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2019 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2019 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |
| 2018 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |
| 2017 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |
| 2017 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |

## Land

| Line | Class | Land Use Code | Act Front | Depth | Calculated Acres | Ag |
|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1 | EXM | MX | 0 | 0 | .0000 |

## Land Summary

| | |
|---|---|
| Line | 1 |
| 100% Land Value | 0 |

## 100% Values

| 100% Land Value | 100% Improv Value | 100% Total Value |
|---|---|---|
| | $0 | |

## 50% Values

| 50% Land Value | 50% Improv Value | 50% Total Value |
|---|---|---|
| | $0 | |

Document# 2024000021618 BK: 6124 PG: 221
Recorder of Deeds, Alexandra Reed Baker On 6/25/2024 at 12:02:35 PM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY



Tax Number: 1-35 11.00 65.00 & 1-35 11.00 65.00-PARK
PREPARED BY & RETURN TO:
Tunnell & Raysor, P.A.
30 E. Pine Street
Georgetown, DE 19947
File No. DO4812A/ERM

NO TITLE SEARCH REQUESTED
NO TITLE SEARCH PERFORMED
NO TITLE GUARANTEE
DEED PREPARATION ONLY

**THIS DEED**, made this 17th day of June, 2024,

- BETWEEN -

**CHARLES E. TURNER, JR.** and **JEFFREY E. TURNER**, of 29762 Oliver Wolcott Drive, Millsboro, DE 19966, parties of the first part,

- AND -

**J AND C INVESTMENT PROPERTIES, LLC, a Delaware limited liability company**, of 29762 Oliver Wolcott Drive, Millsboro, DE 19966, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of **ONE DOLLAR ($1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

**ALL** that certain tract, piece or parcel of land situate in Georgetown Hundred, Sussex County, Delaware, by and on the State Highway leading from Georgetown to Lewes, adjoining land of now or formerly of Charles Bell, lands now or formerly of Gustay H. Koeppel, Frank Holson and Julian Townsend and more particularly described as follows, to wit:

**BEGINNING** at an iron stob on the North side of said road, corner for lands now or formerly of Charles Bell; thence North 11 degrees East 1008 feet to a pipe in the center of a ditch; thence with the same North 76 ½ degrees East 339 feet to Townsend's line;

TUNNELL RAYSOR, P.A.
Georgetown, Delaware

thence with the same 10 ½ feet to said road; thence with the same South 75 degrees West to the place of beginning, containing (10) acres, with all improvements thereon

**EXCEPTING** that portion of said tract, piece or parcel of land which was conveyed by deed dated the 28th day of June, 1956 to Ruth A. Harris and Floyd W. Harris and recorded in the Office of the Recorder of Deeds, in and for Sussex County, on the 29th day of June, 1956 in Deed Record Vol. 462, Page 104; and;

**EXCEPTING** that part of said tract, piece or parcel of land which was conveyed by deed dated the 14th day of September, 1954 to Samuel H. Burns and Melvina B. Burns, his wife, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, on the 14th day of September, 1954 in Deed Record Vol. 437, Page 398.

AND BEING MORE PARTICULARLY DESCRIBED BY A MORE RECENT LEGAL DESCRIPTION PREPARED BY COAST SURVEY, INC., LAND SURVEYING AND PLANNING, AS FOLLOWS TO-WIT:

**BEGINNING** at a concrete monument found on the northerly right-of-way line of Route #9 (60' wide) a corner for this parcel and lands now or formerly of "Townsend, Inc." and being located 935' ± easterly from the right-of-way of Route #30; thence with Route #9, S 70 degrees, 05 minutes, 16 seconds W, 402.13' to an iron pipe set, a corner for this parcel and lands now or formerly of Edna E. Burns; thence leaving Route #9 and with said Burs, N 19 degrees, 21 minutes, 31 seconds W, 178.81' to a concrete monument found; thence turning and with said Burns lands now or formerly of Betty Harris, S 70 degrees, 38 minutes, 29 seconds W, 277.58' (passing over a concrete monument found at 214.28') to an iron pipe set, a corner for this parcel, said Harris and along the line of Lot #2 of the "Priscilla Jane Stuchilk" Subdivision; thence turning and with Lot #2, in part, and Lots #3 & #4 and lands now or formerly of Richard and Lynn Fitchett, N 11 degrees, 00 minutes, 00 seconds E, 793.94' (passing over iron pipes found at 143.97', 343.99' a concrete monument found at 543.74'and an iron pipe found at 778.19') to a point in a 15' wide ditch, a corner for this parcel, said Fitchett and along lands now or formerly of James Sylvestri; thence turning and with said ditch and said Sylvestri, N 77 degrees, 58 minutes 38 seconds E, 352.95' to a 3" galvanized pipe 3' tall with iron pin in center found, a corner for this parcel, said Sylvestri and along lands of said "Townsend's"; thence turning and with said "Townsend's" and with another 15' wide ditch, in part, S 14 degrees, 23 minutes, 52 seconds E, 818.11' to the point and place of beginning containing 9.7216 acres.

**SUBJECT** to Tax Ditch maintenance easements along said ditches.

**BEING** the same lands conveyed to Charles E. Turner, Jr. and Jeffrey E. Turner from Charles E. Turner, Jr., by Deed dated the 17th day of June, 2024, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on the 25th day of June, 2024, in Deed Book 6124, Page 218.

TUNNELL RAYSOR, P.A.
Georgetown, Delaware

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

Witness

Witness

(SEAL)
**Charles E. Turner, Jr.**

(SEAL)
**Jeffrey E. Turner**

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

**BE IT REMEMBERED**, that on June 17, 2024. personally came before me, the subscriber, Charles E. Turner, Jr. and Jeffrey E. Turner, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

GIVEN under my Hand and Seal of Office the day and year aforesaid.

Notary Public
My Commission Expires: N/A

MELANIE BURKE
ATTORNEY AT LAW WITH
POWER TO ACT AS NOTARY PUBLIC
PER 29 DEL. C. SEC 4323 (A) 3

TUNNELL
RAYSOR, P.A.
Georgetown, Delaware

# Exhibit B
# Aerial Map

# Sussex County

August 11, 2024

Override 1

Override 1

Tax Parcels

Streets

County Boundaries

1:4,514

0 0.04 0.09 0.17 mi

0 0.05 0.1 0.2 km

Delaware Department of Education, Wetland mapping is supported with funding provided by the Environmental Protection Agency., Delaware Geological Survey, U.S. Geological Survey, Delaware Public Service Commission, FEMA, DNREC, Division of Watershed Stewardship, Drainage Program, john.inkster@state.de.us, Sussex

# Exhibit C
# Land Use History

TAX map 135-11.00-65.00 PARK

To All Mobile Home Parks or Courts:

It is necessary that the Planning and Zoning Commission have the following information prior to the adoption of the Comprehensive Zoning Ordinance for Sussex County:

NAME OF TRAILER COURT OR PARK Silver Oak Trailer Park

LOCATION N/S 18 1000' E of SR Gravel Hill

ELECTION HUNDRED Georgetown

NAME IN WHICH DEED IS RECORDED Milton McCabe

MAILING ADDRESS Georgetown Del.

NUMBER OF ACRES 8.4 acres

NUMBER OF LOTS 38

NUMBER OF LOTS NOW OCCUPIED 21

SIZE OF LOTS 9 lots 40' x 62.2' 14 lots 32' x 70'

PLOT OF PARK (Acres or Square Feet)

PLOT OF ADJACENT PROPERTY UNDER SAME OWNERSHIP FOR FUTURE EXPANSION

DATE PARK WAS ESTABLISHED April 6, 1966

Zoning Inspector Roland Derrickson 1/7/70

Application for Extension of Park:
Board of Adjustment #116 - approved 1-12-70
Extend Park adding 8 additional spaces 40'x70

**SUSSEX COUNTY COUNCIL - GEORGETOWN, DELAWARE, FEBRUARY 7, 2023**

**A regularly scheduled meeting of the Sussex County Council was held on Tuesday, February 7, 2023, at 10:00 a.m., in Council Chambers, with the following present:**

| | |
|---|---|
| **Michael H. Vincent** | **President** |
| **John L. Rieley** | **Vice President** |
| **Cynthia C. Green** | **Councilwoman** |
| **Douglas B. Hudson** | **Councilman** |
| **Mark G. Schaeffer** | **Councilman** |
| **Todd F. Lawson** | **County Administrator** |
| **Gina A. Jennings** | **Finance Director** |
| **J. Everett Moore, Jr.** | **County Attorney** |
| **Vince Robertson** | **Assistant County Attorney** |

**Call to Order**

**The Invocation and Pledge of Allegiance were led by Mr. Vincent.**

**Mr. Vincent called the meeting to order.**

**M 063 23 Approve Agenda**

**A Motion was made by Mr. Hudson, seconded by Mr. Rieley, to approve the Agenda, as presented.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Minutes**

**The minutes from January 31, 2023, were approved by consensus.**

**Corre-spondence**

**There was no correspondence.**

**Public Comments**

**Public comments were heard, and the following people spoke:**

**Ms. Jill Hicks spoke about the need to amend the Cluster Subdivision Code.**

**Mr. Jeff Simmons spoke about the Sussex County Zoning Code and the Cluster Development Ordinance.**

**Board of Assessment Review App.**

**Mr. Lawson reported that a reappointment of Mrs. Julie Rigby is needed to the Board of Assessment Review. This board sits in the review of assessment calculations that are done annually.**

**M 064 23 Approve Board of Assessment Review Appointment**

**A Motion was made by Mr. Schaeffer, seconded by Mr. Hudson, that be it moved that the Sussex County Council reappoints Mrs. Julie Rigby to the Sussex County Board of Assessment Review effectively immediately for a term of five years or until February 2030.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Administrator's Report**

**Mr. Lawson read the following information in his Administrator's Report:**

**1. <u>Project Receiving Substantial Completion</u>**

**Per the attached Engineering Department Fact Sheet, Chase Oaks – Phase 2 (Construction Record) received Substantial Completion on February 2nd.**

**2. <u>Council Meeting Schedule</u>**

**A reminder that Council will not meet on Tuesday, February 14th. The next regularly scheduled Council meeting will be held on Tuesday, February 21st, at 10:00 a.m.**

**[Attachments to the Administrator's Report are not attached to the minutes.]**

**Permission to Prepare & Post Notices/Newdale Acres Extension Into SCUSSD**

**John Ashman, Director of Utility Planning and Design Review presented a request to prepare and post notices for Newdale Acres Extension Annexation into the Sussex County Unified Sanitary Sewer District. The Engineering Department received a request from the owners/developers of parcel 230-31.00-31.00 along Route 113 and adjacent to their existing project of Newdale Acres. The parcel was annexed into the Town of Ellendale; Sussex County provides the sanitary sewer for the Town. The parcel is located in the Tier 2 Area for sewer service. The project will be responsible for System Connection Charges of $6,600 per EDU based on current rates.**

**M 065 23 Approve Prepare & Post Notices/ Newdale Acres**

**A Motion made by Mrs. Green, seconded by Mr. Schaeffer, be it moved by the Sussex County Council that the Sussex County Engineering Department is authorized to prepare and post notices for the Newdale Acres Expansion of the Sussex County Unified Sanitary Sewer District to include parcel 230-31.00-31.00 as presented.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea;**

**Mr. Hudson, Yea; Mr. Rieley, Yea;**
**Mr. Vincent, Yea**

**EMS Public Safety Building/CO No. 21**

**Hans Medlarz, County Engineer presented Change Order No. 21 for EMS Public Safety Building – Project C19-04 for Council's consideration. Mr. Medlarz reviewed the items that were included in the Change Order.**

**M 066 23 Approve CO No. 21/EMS Public Safety Building**

**A Motion was made by Mr. Hudson, seconded by Mr. Schaeffer, be it moved based on the recommendation of the Sussex County Engineering Department, that Change Order No. 21, for Contract C19-04, Sussex County Public Safety Building be approved, for an increase of $40,127.15.**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea;**
**Mr. Hudson, Yea; Mr. Rieley, Yea;**
**Mr. Vincent, Yea**

**Public Hearing/ CDBG Program**

**A Public Hearing was held for the 2023 Community Development Block Grant application, to be submitted to the Delaware State Housing Authority. The Community Development Block Grant (CDBG) is a federal grant from the Department of HUD to the Delaware State Housing Authority (DSHA). Kent and Sussex Counties compete for the funding by making application to DSHA.**

**Brandy Nauman, Director of Sussex County Community Development & Housing, reported that the guidelines dictate the use of the funding. The funding is used mostly for owner-occupied housing rehabilitation. Rehabilitations include roofing, doors, windows, electrical, plumbing upgrades and energy upgrades. In order to qualify, a home must be owner-occupied, primary residence of the owner, low to moderate income household (80% of AMI or below), the home must be insured or insurable, County taxes and utilities must be current. Mrs. Nauman explained that a lien is placed on every property that receives assistance regardless of the age of the beneficiary. For anything less than $15,000, a five-year, zero percent pre-rated lien is placed on the property, for anything $15,000 to $40,000 of funding, a ten-year zero interest pro-rated lien is placed on the property.**

**Mrs. Nauman reviewed the current income guidelines for program eligibility. Mrs. Nauman reviewed the funding that has been spent and noted that County Council provided an additional $250,000 to assist with emergency repairs.**

**Mr. Mike Jones, Rehabilitation Program Coordinator shared what has been completed to date in the current fiscal year. In addition, he discussed contractors as well as the delays and price increases that they are experiencing. Mr. Jones shared pictures of some projects that have been completed.**

**Public Hearing/ CDBG Program (continued)**

**Mrs. Nauman reviewed what was being completed with the federal dollars that are being received. She noted that individuals with disabilities, those over 65 and low-income households are prioritized.**

**Mrs. Nauman stated that Sussex County's application will consist of projects in the County in Rural communities and in municipalities. She reported that staff has met with all the municipalities who have asked for the County's assistance to make application to the DSHA, and that the Department has held Public Hearings in all of the municipalities listed and the projects presented represent their requests.**

**Mrs. Nauman reported that the total program activity cost is $1.7M; the state has allowed the County to seek $250,000 in administration which would have to be matched. Therefore, the total program cost would be $2.3M.**

**There were no public comments.**

**The Public Hearing and public record were closed.**

**M 067 23 Adopt Resolution R 006 23/ Affirmatively Furthering Fair Housing**

**A Motion was made by Mr. Rieley, seconded by Mr. Hudson, to Adopt Resolution No. R 006 23 entitled "AFFIRMATIVELY FURTHERING FAIR HOUSING".**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 068 23 Adopt Resolution R 007 23/ Authorization to Submit Applications**

**A Motion was made by Mr. Hudson, seconded by Mr. Schaeffer to Adopt Resolution No. R 007 23 entitled "AUTHORIZATION TO SUBMIT APPLICATIONS".**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Master Plan Ordinance Discussion**

**Jamie Whitehouse, Planning and Zoning Director presented a Proposed Ordinance entitled "AN ORDINANCE TO DELETE CHAPTER 115, ARTICLE XVII VACATION RETIREMENT – RESIDENTIAL PARK DISTRICT SECTIONS 115-132 THROUGH 115-140 IN ITS ENTIRETY AND TO INSERT ARTICLE XVII MASTER PLAN ZONE, SECTIONS 115-132 THROUGH 115-140 IN ITS PLACE".**

**Vince Robertson, Assistant County Attorney discussed the updates that have been completed to the Ordinance since the last presentation. He noted**

**Master Plan Ordinance Discussion (continued)**

**that one of the requirements of a MPZ is that 20% of all multi-family dwellings shall be set aside as SCR units governed by Chapter 72. Mr. Robertson advised that the Ordinance would need to go through PLUS.**

**Mr. Schaeffer questioned line 447 which states "the plan shall include a Master Transportation Plan approved by DelDOT". He asked if that would give DelDOT the authority to shut this down without their approval. Mr. Robertson replied that the intention was to avoid DelDOT shutting it down. He added that the language can be changed if desired.**

**Introduction of Proposed Ordinance/ MPZ**

**Mr. Hudson introduced a Proposed Ordinance entitled "AN ORDINANCE TO DELETE CHAPTER 115, ARTICLE XVII VACATION RETIREMENT – RESIDENTIAL PARK DISTRICT SECTIONS 115-132 THROUGH 115-140 IN ITS ENTIRETY AND TO INSERT ARTICLE XVII MASTER PLAN ZONE, SECTIONS 115-132 THROUGH 115-140 IN ITS PLACE".**

**Solar Farm CU Ordinance Discussion**

**Jamie Whitehouse, Planning and Zoning Director presented a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXIV, SECTION 115-172 AND ARTICLE XXV, SECTION 115-194.5 TO ADD PROVISIONS FOR SPECIAL REQUIREMENTS FOR SOLAR FARM CONDITIONAL USES".**

**Mr. Robertson reported that recently, there has been many solar farm applications come through the process. It has been discussed to codify the conditions that have been imposing on the solar farm applications. He added that there is a standard set of conditions.**

**Introduction of Proposed Ordinance/ Solar Farms CU**

**Mr. Schaeffer introduced a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXIV, SECTION 115-172 AND ARTICLE XXV, SECTION 115-194.5 TO ADD PROVISIONS FOR SPECIAL REQUIREMENTS FOR SOLAR FARM CONDITIONAL USES".**

**Demostrat-ion/Docum-ent System**

**Jamie Whitehouse, Planning and Zoning Director provided a demonstration of the new document management software.**

**Introduction of Proposed Ordinances**

**Mr. Vincent introduced a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A GR GENERAL RESIDENTIAL DISTRICT FOR A SOLAR FARM ON A 17.45 ACRE PORTION, MORE OR LESS, OF A CERTAIN PARCEL OF LAND LYING AND BEING IN LITTLE CREEK HUNDRED, SUSSEX COUNTY, CONTAINING 29.45 ACRES, MORE OR LESS" filed on behalf of Consolidated Edison Development, Inc.**

**Mr. Hudson introduced a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR A SOLAR FARM TO**

**BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN DAGSBORO HUNDRED, SUSSEX COUNTY, CONTAINING 28.81 ACRES, MORE OR LESS" filed on behalf of Dagsboro Thorogoods Solar 1, LLC**

**Mr. Rieley introduced a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR A SOLAR FARM TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN INDIAN RIVER HUNDRED, SUSSEX COUNTY, CONTAINING 15.97 ACRES, MORE OR LESS" filed on behalf of Lewes Saddle Ridge Solar 1, LLC**

**The Proposed Ordinance will be advertised for Public Hearings.**

**Council Member Comments**

**Mrs. Green commented that in the last week, the issue and topic of Ethics and Code of Conduct form as it relates to Council members has been discussed. She added that she has made the public statement that she choose not to sign the form. The reason for her not signing the form was because it came from the HR department. It is her position that it needs to come from the County Council; that it would either be an Ordinance or a vote that would come from the Council. Mrs. Green stated that she has no conflicts of interest, and she will answer to the constituents in her district. If it is brought back to Council for a vote, then, she will sign the form.**

**Mr. Vincent commented that the request for this document came from County Council, not Administration or HR. It was after a meeting was held a few years ago with the same presenter that presented last week. It was requested that they develop some kind of form which Council was in support of. Until now, all of Council have signed that document which is the same form that Mrs. Green signed last year. Mr. Vincent explained that this request came from the County Council to Administration and HR to develop the form which was all agreed to at that time.**

**Mr. Hudson commented about forested buffers; he believes that it is time to look further into this and get some teeth into it.**

**Mr. Rieley agreed with Mr. Hudson's comments. He added that he was outraged by what was shared this morning by Mrs. Hicks. If what was shared is not a violation of the Ordinance, then the Ordinance is not what he envisioned to be when it was past. He added that he would like to see the loopholes closed and get it done quickly.**

**Mr. Vincent commented that recently, a gentleman in the County was in a container of sand up to his shoulders. All of the emergency operations department, EOC, fire, EMS, County services and technical rescue team were on site. It was a six-hour operation to remove that gentleman who is now recovering.**

**M 069 23 Go Into Executive Session**

**At 11:01 a.m., a Motion was made by Mr. Hudson, seconded by Mrs. Green to recess the Regular Session, and go into Executive Session for the purpose of discussing matters relating to land acquisition.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Executive Session**

**At 11:06 a.m., an Executive Session of the Sussex County Council was held in the Basement Caucus Room to discuss matters relating to land acquisition. The Executive Session concluded at 11:42 a.m.**

**M 070 23 Reconvene**

**At 11:44 a.m., a Motion was made by Mr. Hudson, seconded by Mrs. Green, to come out of Executive Session and reconvene the Regular Session.**

**Motion Adopted:** **4 Yeas, 1 Absent**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Absent; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**E/S Action**

**There was no action on Executive Session matters.**

**M 071 23 Recess**

**A Motion was made by Mr. Hudson, seconded by Mr. Rieley to recess until 1:30 p.m. Public Hearings.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 072 23 Reconvene**

**At 1:30 p.m., a Motion was made by Mr. Schaeffer, seconded by Mr. Rieley to reconvene.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Rules**

**Mr. Moore read the rules and procedures for public hearings.**

**Public Hearing/ Ord. No. 22-08/CZ1959/**

**A Public Hearing was held on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE FUTURE LANDS USE MAP OF THE COMPREHENSIVE PLAN IN RELATION TO TAX PARCEL 135-11.00-65.00" (property is located on the north side of Lewes Georgetown Highway**

**CU2320** **[Rt. 9], approximately 620 feet northeast of Gravel Hill Road [Rt. 30]) (911 Address: N/A) (Tax Parcel: 135-11.00-65.00)**

**The Planning and Zoning Commission held a Public Hearing on the application on December 8, 2022. At the meeting of January 12, 2023, the Planning & Zoning Commission recommended denial of the application for the 7 reasons stated as outlined.**

**(See the minutes of the Planning & Zoning Commission dated December 8, 2022 and January 12, 2023.)**

**Mr. Jamie Whitehouse, Planning and Zoning Director, presented the application.**

**A Public Hearing was held on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS" (property located on the north side of Lewes Georgetown Highway [Rt. 9], approximately 620 feet northeast of Gravel Hill Road [Rt. 30]) (911 Address: N/A) (Tax Parcel: 135-11.00-65.00) filed on behalf of Charles E. Turner, Jr.**

**The Planning & Zoning Commission held a Public Hearing on the application on December 8, 2022. At the meeting of January 12, 2023, the Planning & Zoning Commission recommended denial of the application for the 5 reasons stated as outlined.**

**(See the minutes of the Planning & Zoning Commission dated December 8, 2022 and January 12, 2023.)**

**Mr. Jamie Whitehouse, Planning and Zoning Director, presented the application.**

**A Public Hearing was held on a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM DENSITY RESIDENTIAL DISTRICT FOR MULTI-FAMILY DWELLINGS (42 UNITS) TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS" (property located on the north side of Lewes Georgetown Highway [Rt. 9], approximately 620 feet northeast of Gravel Hill Road [Rt. 30]) (911 Address: N/A) (Tax Parcel: 135-11.00-65.00) filed on behalf of Charles E. Turner, Jr.**

**The Planning & Zoning Commission held a Public Hearing on the application on December 8, 2022. At the meeting of January 12, 2023, the**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**Planning & Zoning Commission recommended denial of the application for the 3 reasons stated as outlined.**

**(See the minutes of the Planning & Zoning Commission dated December 8, 2022 and January 12, 2023.)**

**Mr. Jamie Whitehouse, Planning and Zoning Director, presented the application.**

**The Council found that Ms. Mackenzie Peet, Esq. was present on behalf of the Applicant, Mr. Charles Turner; that Mr. Turner was also present; that in light of the Commission's recommendation for denial for all three applications, she intends to present each application in a consolidated but detailed manner; that in addition to reviewing the Commission's decision, that was inconsistent with the record made and included reasons and support of their decision that were inaccurate and misstated what the Sussex County Comprehensive Plan states; that a transcript was prepared of Commissioner Hoey-Stevenson's motion to recommend denial that was seconded by Commissioner Wingate; that the motion was recommended for denial by a vote of 4-0 by Commissioners Hoey-Stevenson, Wingate, Hopkins and Wheatley; that Commissioner Mears was absent; that a copy of the transcript, a copy of the decision and a noted and highlighted section of Section 4-16 of the Comprehensive Plan and Future Land Chapter that concerns the existing development area was submitted in the record; that the applicant has three requests; that the existing property is 9.72 acres and is the present location of Silver Oaks Trailer Park; that this area is adjacent to the open space within the Hawthorne Community; that to the rear of the property is a tax ditch prong; that on the other side of the property, is a property that is subject to a Conditional Use where the Burns Pet Store was previously located; that across the road are some residential homes and some property that was rezoned to B-1 (Neighborhood Business District) which is owned by Two Farms, Inc.; that the existing Silver Oaks Trailer Park was established on April 6, 1966 as confirmed by a notice that was included in the packet specifically as Exhibit B; that she clarified and explained the purpose of the notice; that the purpose of the notice was to inform the then Planning and Zoning Commission of the existing Silver Oak mobile park that had 38 mobile home lots approved; that 21 of the lots had been occupied as of 1970; that the Board of Adjustment had historically approved an expansion of the park by eight additional lots; that today there are eleven (11) mobile home lots on the site; that all existing mobile home owners leasing land have been notified of Mr. Turner's plan to develop the site; that the property is currently zoned AR-1 (Agricultural Residential District); that the properties adjacent to the subject property are also zoned AR-1; that along Route 9 there is a mixture of zoning districts mainly C-1, AR-1 and some B-1; that the Future Land Use Designation presently is Low-Density Area and is surrounded by properties designated as Commercial Area and Industrial Area; that the project is located in Investment Level IV; that the Cabinet Committee on State planning issues through the Office of State Planning Coordination developed the first**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**Delaware Strategies for State polices and Spending Maps in 1999 to be updated every five years; that the most recent update was completed in 2020; that the State Strategies were designed to help the committee guide State investment decisions and serve as a frame work for coordinating plans and actions of local government; that Chapter 4 of the Comprehensive Plan explains that State Strategies for State polices and spending map classifies four different investment level areas; that the four investment levels clarify the State's policies and priorities for the expenditure of State funds on infrastructure; that the Comprehensive Plan states that policy and the spending map are not parcel based and are not a land use plan; that with respect to the Future Land Use Map request the property is currently designated as a Low-Density Area; that the Low Density Area is considered to be a rural area; that as of 2018, all lands designated as Low Density Areas are also zoned AR-1; that AR-1, B-2, C-2, M, I-1 and new zoning districts are considered to be consistent in that designation and classification; that Section 4.4.3 of the plan details the permitted uses and visions in that area; that those uses include agricultural and residential uses as well as development that is largely confined to businesses addressing the needs of agricultural and residential uses; that Ordinance 22-08 seeks to amend the Future Land Use Map from Low Density to and Existing Development Area–a growth area; that Chapter 4 of the Comprehensive Plan explains that this area consists of primarily existing residential developments similar to this one presently under General Residential or Medium Residential zoning districts and some commercial uses; that these areas are scattered throughout the County and often times next to Low Density Areas; that the land use history of the property is relevant in that this property was permitted as a Mobile Home Park and approved for 38 lots; that this property has been an existing residential development since 1966; that it is the belief that the property should have been designated as an Existing Development Area because of its past and current use; that this area permits a full range of housing types including single-family homes, townhomes and multi-family units; that non-residential developments consists of uses found in the neighborhood business districts and commercial districts which is relevant considering the property is zoned C-1 and commercial right near the site; that the proposed use is consistent with the Existing Development Area; that as an existing mobile home development and a proposed multi-family development; that there are Existing Development Area in the vicinity of the subject property close to Route 9 and Route 5; that infrastructure is already in the area and central water and sewer are encouraged for the Existing Development Area; that sewer and water will be provided by Artesian; that a will serve letter from Artesian was submitted; that the applicable zoning districts in the Existing Development Area include MR and GR as well as some commercial areas and would be consistent with the Land Use change; that the application was presented to PLUS on December 21, 2022; that the Applicant responded and specifically the Applicant's engineer to each comment on January 23, 2023; that in that comment, the State noted specifically that rezonings and development applications have increased along Route 9; that they stated that the cumulative effects of continuing to review and approve rezonings**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**and land use development proposals outside of planned growth areas will have long term negative impacts on the State and County both physically and environmentally because infrastructure and services to support these developments are not planned for the areas; that this comment suggests that the state is making a more general comment about development in Investment Level 4 areas rather than a project specific comment; that the property is near commercial and residential developments and has access to existing infrastructure as stated; that the Applicant's second request is CZ1959 to rezone the property from AR-1 to MR to ultimately develop 42 multi-family units; that the MR district provides for medium density residential development in areas which are or are expected to become generally urban in character where sanitary sewer and public water may or may not be available at the time of construction; that AR-1 permits low-density multi-family through the pursuit of a Conditional Use application but the Applicant wishes to rezone to MR which permits the medium density residential to allow for the development of 42 multi-family units at a density of 4.36 units per acre; that the proposed rezoning is compatible with the surrounding land uses which includes a mix of residential, business, and commercial uses nearby; that there are other multi-family residential units nearby including Weston Willows Apartment Complex (287 units apartment complex on 27 acres), Azelea Woods single-family subdivision, Hawthorne subdivision, Windsor Reserve which was just recently approved for another 100 single family lots and Deerwood Subdivision; that Table II shows the bulk requirements for multi-family units must meet the same height, area and bulk requirements; that this is relevant considering the C-1 zoning district near the property; that there were three change of zone applications approved within a mile of this site; that CZ1838 from AR-1 to B-1 for the Two Farms property; that CZ1902 CR-1 to HI-1, that applicant noted on the record where Magee Plumbing, AP Croll Sons and Peninsula Paving; that the third use was CZ1944 that amended a AR-1 district to a C-2 district for the executive lawn property management to expand its landscaping business; that the Planning and Zoning Memorandum also concludes that the intended development could be considered consistent with surrounding land uses; that Table 4.5-2 Title Zoning Districts applicable to Future Land Use Categories confirms that the MR district is an applicable district in the Existing Development Area; that the final request is CU 2320 for a Conditional Use of land in a MR zoning district for the development of 42 multi-family units; that the purpose of Section 115-171 on Conditional Uses states that it provides for certain uses which cannot be well adjusted to their environment in particular locations with full protection offered to surrounding properties by rigid application of the district regulations; that these uses are generally of a public or semi-public character and are essential and desirable for the general convenience and welfare but because of the nature of the use, the importance of the relationship to the Comprehensive Plan and possible impact not only on neighboring properties but on a large section of the County require the exercise of planning judgment on location and site plan; that the proposed multi-family development will be accessed off of Route 9; that the proposed density for the development is 4.36 dwelling units per acre subject to a**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**rezoning and Future Land Use Map change; that there are eight (8) buildings proposed and each building contains between 3 to 6 units each; that there is also a community building and pool amenity is proposed; that 6.43 acres or 66.7% of the site to remain as open space subject to final site engineering; that adjacent developments that were developed as single-family homes would be required per code under the AR-1 district to meet 30% open space requirement in Cluster Subdivision; that there will be 92 parking spaces which exceed the 84 required spaces; that the non-tidal wetlands will remain undisturbed; that stormwater management will be in accordance with local and state regulations; that water and sewer will be served by Artesian; that the increase in traffic on area roadways will be analyzed, reviewed and approved by DelDOT; that preliminarily the response to the Service Level Evaluation Request state that the impact is considered to be negligible; that the developer will work with DelDOT to develop an entrance plan; that it is intended to eliminate one existing entrance and provide a continuation of the shared use path from the Hawthorne development; that the developer intends to work with DART to provide the requested shelter pad and bus pull off area; that section 115-31 of the Code concerning multi-family units confirms that these units may be permitted as conditional uses subject to the provisions in the Code; that the proposed use is in compliance with all Code requirements; that if the Future Land Use Amendment is adopted then the proposed use will be compliant and consistent with the Comprehensive Plan update; that on December 8, 2022, the Commissioners heard these applications for the first time; that at the December 8, 2022 meeting, there were three Commissioners present, Chairman Wheatley, Commissioners Hopkins and Mears; that Commissioners Hoey-Stevenson and Wingate were absent; that during that meeting, none of the Commissioners present asked any questions at the conclusion of the presentation to the applicant that would even remotely suggested a recommendation for denial was forthcoming; that there were no opposition and it was a complete and total surprise that there was a recommendation and a vote of 4-0 for denial; that the record suggests that the Commission considered that this property may have been missed as a property that should have been appropriately classified as an existing development area; that specifically during the discussion of the three applications, Commissioner Hopkins asked staff a question trying to figure out why this property as an existing development was not designated as GR to match what was there; that Chairman Wheatley said that he had the same question and specifically said "since the 60s, there has been an approval and for 38 units, you would have thought that someone may have noticed that but apparently we did not"; that in response, Commissioner Hopkins states "and we see this happen more in your neck of the woods, if you look at the zoning map, there are all of these oddball GR spots that don't seem to tie in with anything but then because they have been manufactured home parks or whatever, they have been there forever and they established them from day one as GR zoning, it's just, you know, interesting why this one never was"; that Commissioner Hopkins even went on to say that this property seems like an "outlier"; that Ms. Peet agrees that it is an outlier because the property should have been classified as an**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**existing development area for all of the reasons stated and should not have been designated as a low density area or zoned AR-1; that on January 12, 2023, Commissioner Hoey-Stevenson motioned to deny the Future Land Use Map Amendment which resulted in the other applications being recommended for denial as well; that Ms. Peet discussed Commissioner Hoey-Stevenson's motion; that in the motion, Commissioner Hoey-Stevenson stated "the existing development area is designated in the Comprehensive Plan for existing residential development under the current general residential and medium residential zoning districts as well as some commercial uses"; that is undisputed and agreed upon; that the Commissioner goes on to say "the plan further states that this particular classification is simply being used to identify these existing scattered zoning areas that have no direct relationship to their surrounding zoning and/or Future Land Use Map"; that the Comprehensive Plan states the existing development areas are scattered and are surrounded by low-density areas; that significantly, this description of existing development areas is consistent with the Silver Oaks trailer park use for reasons stated; that the Commissioner continued stating "the plan emphasizes that this area should only be used for existing GR or MR-zoned properties"; that this misquotes the plan; that the plan as written states that the existing development area consist primarily of existing residential development under current GR and MR zoning district as well as some commercial uses; that the existing development area is not only used for GR and MR zoned properties as directly quoted in the plan, the existing development area primarily includes existing residential developments under current GR and MR zoning districts as well as commercial uses; that the reasons in support of the motion continued to rely on this misquoted section of the plan; that in fact, the Commissioner goes on to say that the Comprehensive Plan also reiterates the Existing Development Area is limited to existing GR and MR land by providing that, there is no intention to expand this land use classification; that it may be true that there is no intention to expand this land use classification, but, there is nothing against expanding this classification especially when it appears that this property should have been classified as an existing development area based on its use historically since 1966; that the Commissioner added "There is no dispute that the property is currently developed as a small, manufactured home park that has been in existence for decades, however, it is situated upon land that is zoned AR-1 and it was never rezoned to GR"; that the property could not be rezoned to GR without a Future Land Use Map amendment like the one being presented and a rezoning request; that the Commissioner emphasized that the existing mobile home park is a legally non-conforming use as a reason in support of her motion; that even if that it is true, that does not mean that the property could not be designated as a existing development area as requested; that there is a property in a local municipality that does not have a certified Comprehensive Plan for a related use; that the property is the Rehoboth Art League in the municipality of Henlopen Acres; that the community has its first Comprehensive Plan in 2004; that it performed its first Comprehensive Plan review in 2012; that the primary reason that plan was not certified concerned the art league's non-conforming use; that the**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**issue is that the art league wanted to be rezoned to a cultural district from an existing residential district; that the town wanted the art league to remain as a residential use; that in 2014, Ms. Constance Holland, the then Director of State Planning confirmed that she could not send the current plan to the Governor with the art league remaining as a residentially zoned district; that Ms. Holland recommended that the art league property be rezoned because of its current use; that this is an example of the State Planning Office looking at property and not certifying a Comprehensive Plan because of a municipality's decision to maintain a property zoning district that was inconsistent with the current zoning district in light of the properties past legally non-conforming use; that the State's position on the art league had everything to do with the current and future intended use of the art league; that because Henlopen Acres decided to keep the property as a legally non-conforming use zoned residentially and not zoned to a use consistent with its current and intended future use, its plan in part was not certified; that similarly, Mr. Turner's property operates as a legally non-conforming use in a AR-1 zoning district and a low density Future Land Use classification; that the Art League property was intended to not be rezoned, it is being argued here that it seems that the property has been overlooked when designating the property as a AR-1 district and low density area; that there is nothing in the record to the contrary to suggest that there was any actual intent to leave the property zoned AR-1 and to classify the property as low density; that it is her position that Mr. Turner's property should have been designated to a classification and zoned in a manner consistent with its past and current use that is operated on the site since 1966; that she reminded the Council that on the record, Commissioner Hopkins and Chairman Wheatley suggested that this may have been missed; that there is no substantial evidence on the record contrary to support the Commission's reasons for denying the Future Land Use Map Amendment, associated rezoning and conditional use request; that it is the applicant's position that the paper and spoken record overwhelming suggests that the property should have been classified as an existing development area; that the requested Future Land Use Amendment would correct what appears to be based on the record an oversight; that in looking at the Future Land Use Map Amendment request, the applicant encourages this Council to review all of the materials presented today and take its time in reviewing those materials and considered the intended use (a 42 unit multi-family unit); that it is only four more units than the approved thirty-eight units for a legally non-conforming use that has been there for nearly 60 years; that it is proposed adjacent to and in the immediate vicinity of other single family and multi family units as well as other commercial uses with almost 67% of the site designated as open space and with access to public water and sewer on Route 9 that would be consistent with the Comprehensive Plan's direction for possible development of the Route 9 corridor as a business corridor with a mix of residential and commercial uses; that in addition to contributing to the plans goal of reducing access points from the number of entrances from two to one; that this intended development will compliment Route 9 growth and offer another option for housing for present and future residents who may desire to not purchase a**

**Public Hearing/ Ord. No. 22-08/CZ1959/ CU2320 (continued)**

**single-family home or may not be able to afford the same; that the applicant requests that the Council approve the Future Land Use Amendment, the requested rezoning from AR-1 to MR and the proposed 42 unit multi-family unit development; that a discussion was held regarding an underground plume of a chemical called PCE (tetrachloroethylene); that it is Ms. Pete's understanding that the pollution originated at the campground years ago; that there are monitoring sites currently placed on Hawthrone; that it is on DNREC's radar.**

**Public comments were heard.**

**Ms. Susan Barra spoke in opposition of the application. Ms. Barra stated that there has been a lot of development on Route 9; that she questioned if neighbors are notified when development occurs; that Mr. Whitehouse explained that postcard notifications are sent out to all property owners within 200 feet of the parcel boundary; that notices are done in local newspapers and physical postings on done on the site itself; that it is also displayed on the County's website; that she has lived there a little over six years; that it can take 15 to 20 minutes to get in and out of her community; that the traffic from Route 30 to Route 9 backs up past Hawthrone.**

**Mr. Chris Stuchlik spoke in opposition of the application. Mr. Stucklik stated that he owns land near the proposed site; that he is speaking on behalf of other nearby land areas; that he has concerns with the site plan that sems to eliminate the wooded area on the western edge of 135-11.00-65.00; that he also has concerns with noise and outdoor/street lighting; that there is a concern for a significant negative impact on the prospective value of the parcels.**

**The Public Hearing and public record were closed.**

**M 073 23 Defer Action/ FLUM Ord. 22-08**

**A Motion was made by Mr. Rieley, seconded by Mr. Hudson to defer action on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE FUTURE LAND USE MAP OF THE COMPREHENSIVE PLAN IN RELATION TO TAX PARCEL 135-11.00-65.00"**

**Motion Adopted: 5 Yeas**

**Vote by Roll Call: Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 074 23 Defer Action/ CZ1959**

**A Motion was made by Mr. Rieley, seconded by Mr. Schaeffer to defer action on a Proposed Ordinance entitled "AN ORDINANCE TO AMEND THE COMPREHENSIVE ZONING MAP OF SUSSEX COUNTY FROM AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT TO A MR MEDIUM RESIDENTIAL DISTRICT FOR A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS"**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 075 23 Defer Action/ CU2320**

**A Motion was made by Mr. Rieley, seconded by Mr. Schaeffer to defer action on a Proposed Ordinance entitled "AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN A MR MEDIUM DENSITY RESIDENTIAL DISTRICT FOR MULTI-FAMILY DWELLINGS (42 UNITS) TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 9.72 ACRES, MORE OR LESS"**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**M 076 23 Adjourn**

**A Motion was made by Mr., Hudson seconded by Mr. Rieley to adjourn at 2:22 p.m.**

**Motion Adopted:** **5 Yeas**

**Vote by Roll Call:** **Mrs. Green, Yea; Mr. Schaeffer, Yea; Mr. Hudson, Yea; Mr. Rieley, Yea; Mr. Vincent, Yea**

**Respectfully submitted,**

**Tracy N. Torbert**
**Clerk of the Council**

***{An audio recording of this meeting is available on the County's website.}***

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
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(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

**Sussex County**
DELAWARE
sussexcountyde.gov

December 18, 2023

Charles E. Turner, Jr.
29762 Oliver Wolcott Drive
Millsboro, DE 19966

By e-mail to: cetelt@msn.com

RE: Notice of Decision Letter for Conditional Use (CU 2320) for a Multi-Family Residential to be located on the Northwest side of Lewes Georgetown Highway (Route 9) approximately 620 feet northeast of Gravel Hill Road (Route 30).
Tax Parcels: 135-11.00-65.00

Dear Mr. Turner,

At their meeting of Tuesday December 5, 2023, the Sussex County Council denied the Conditional Use application for Conditional Use No. 2320 Charles E. Turner, Jr.

Please feel free to contact the Planning and Zoning Department with any questions during business hours 8:30AM to 4:30PM, Monday through Friday, at (302)-855-7878.

Sincerely,

Ann Lepore

Ann Lepore
Planner I

CC: Ms. Mackenzie Peet, Esq.
Roger A. Gross, P.E.
Mr. Leslie Dick, Sussex County Chief Constable – Constable's Office
Ms. Susan Isaacs, Sussex County Engineering Project Coordinator — Engineering – Public Works
Mr. Andy Wright, Chief of Building Code – Sussex County Building Code
Mr. John Ashman, Director of Utility Planning  Design – Engineering
CU 2322 Charles E. Turner, Jr. File

# Exhibit D
# SCRP Code Requirements

## § 115-20. Permitted uses.

A. A building or land shall be used only for the following purposes:

(1) Detached single-family dwellings on individual lots. A manufactured home may be used as a detached single-family dwelling on an individual lot, provided that it conforms to the following restrictions: **[Amended 7-8-1997 by Ord. No. 1153; 5-18-1999 by Ord. No. 1308; 10-12-2010 by Ord. No. 2152; 10-8-2019 by Ord. No. 2682]**

(a) The lot is not within a major subdivision created prior to the effective date of this section.

(b) There is a minimum width along any exterior front, side or rear elevation of 24 linear feet, exclusive of any garage area or other attached accessory structures .

(c) It is permanently mounted on a solid foundation or pier foundation system and anchored and, in each case, in accordance with the manufacturer's installation instructions.

(d) All wheels, axles, transportation lights and removable towing apparatus, if any, shall be removed from the manufactured home when it is placed on the foundation in accordance with Subsection A(1)(c) above.

(e) All utilities shall be permanently connected in accordance with applicable Sussex County Code provisions.

(f) The siding of all manufactured homes shall be continuous so as to enclose any joining of two or more sections.

(g) It complies with all pertinent provisions of the Housing Code of Sussex County and the Fire and Health Codes of the State of Delaware.

(h) All multisectional manufactured homes, initially placed pursuant to the provisions of this section, shall be not more than 10 years old. All replacement multisectional manufactured homes shall not be of an older model than the manufactured home being replaced and shall conform to this section. Any other manufactured home which, at the effective date of this section, does not conform to the requirements of this section, may be replaced with a manufactured home which is not of an older or smaller model than the manufactured home being replaced. A single section manufactured home may be replaced by a single section manufactured home; a single section manufactured home may be replaced by a multisectional manufactured home; a multisectional manufactured home may be replaced by a multisectional manufactured home; a multisectional manufactured home shall not be replaced by a single section manufactured home.

(i) In addition to the requirements herein, a manufactured home shall comply in all respects with the design and technical requirements of § 115-187.

(2) On a property of less than five acres, any farm, truck garden, orchard or nursery uses.

(3) Temporary removable stands for not over six months' use per year, for seasonal sales of

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products raised on the premises and products raised on other lands in Sussex County owned or leased by the owner of the premises on which the stand is located, and no business office or store is to be permanently maintained on the premises, except as provided in § 115-22 regarding stores or shops for sale of farm products, farm supplies, groceries, beverages, drugs, food and similar stores and shops. **[Amended 11-30-2004 by Ord. No. 1729]**

(4) Churches, rectories, parish houses, convents and monasteries, temples and synagogues.

(5) Golf courses, not lighted for night play and not including miniature golf courses, putting greens, driving ranges and similar activities operated as a business, but including a building for a golf pro shop, locker room and snack bar as an accessory use to a permitted golf course, provided that no such building is located closer than 100 feet to adjoining property lines. Practice greens and tees may accompany a standard nine-hole or eighteen-hole golf course occupying at least 75 acres.

(6) Public parks, public and private forests, wildlife reservations and similar conservation projects.

(7) Recreational uses such as tennis courts, swimming pools and other similar activities operated exclusively for the use of private membership and not for commercial purposes, provided that no such use, structure or accessory use is located closer than 50 feet to any adjoining property line, unless such property line fronts a public street or waterway with rights-of-way not less than 25 feet, in which instance the required setback need not exceed 25 feet, and provided further that all such facilities must be located on a site having a minimum of two acres.

(8) Stable structures or feed lots, private, or keeping and feeding of horses, ponies, cattle, sheep, goats, hogs or poultry for personal enjoyment and not as a business, provided that any building for keeping of animals shall be located at least 50 feet from any lot lines and 100 feet from any dwelling not on the premises.

(9) Greenhouses, commercial, provided that the lot area shall be five acres or more.

(10) Swimming pools, game courts, picnic grounds, boat basins, lakes or similar activities in a development or subdivision when such facilities are situated on a separate lot or parcel within said development or subdivision for use of the residents and their guests and not commercially operated, may be on less than two acres. Such facilities will be subject to a site plan review, and setbacks will be determined by the Commission.

(11) Transmission lines and their supporting elements.

(12) Open space as defined in § 115-4. **[Added 12-16-2008 by Ord. No. 2022[1]]**

(13) Special events. **[Added 9-18-2018 by Ord. No. 2599]**

(a) Special events held outdoors or within a temporary structure for a purpose different from the permitted use and usual occupancy of a premises or site that are

1. **Editor's Note: This ordinance also provided that it shall apply to applications filed after 1-1-2009.**

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administratively approved by the Director or his or her designee, when the event: will not impair the purpose and intent of the Zoning Ordinance; is not so recurring in nature as to constitute a permanent use not otherwise permitted in the district; and will not significantly affect the surrounding properties. Events that are consistent with the permitted use and usual occupancy of a site or that occur on land owned by the United States of America, the State of Delaware, Sussex County, municipalities and educational institutions are permitted. "Special events" include circuses, carnivals, midways, promotional and tent sales events, fairs, festivals, concerts, rodeos, shows, races/walks or any other event or mass gathering.

(b) No more than three special events shall be approved for the same property or premises during a calendar year. Each special event shall be counted as one calendar day, not including reasonable set up and removal time when the event is not otherwise underway.

(c) In determining whether to administratively approve a special event, the Director or his or her designee shall consider the following:

1. The estimated number of attendees;

2. The size of the parcel where the special event is to be located;

3. The parking requirements of the special event;

4. Roads and traffic patterns providing access to the special event;

5. Prior events conducted by the applicant;

6. Noise, light, odor, and dust generated by the special event;

7. Proposed hours of operation and number of consecutive days; and

8. Such other considerations that may be applicable to the requested event.

(d) The Director or his or her designee may impose conditions upon an administrative approval.

(e) All special events, regardless of size, location, use or duration, shall be subject to the requirements of the Sussex County Special Event and Public Safety Services Policies and Procedures. Failure to abide by the Sussex County Special Event and Public Safety Services Policies and Procedures may result in the termination of the special event's administrative approval.

(f) Special events that do not meet these requirements or which are not administratively approved shall require a conditional use.

(14) Use of a manufactured home as a single-family dwelling to meet an emergency or hardship situation that is administratively approved by the Director or his or her designee and subject to the following: **[Added 10-22-2019 by Ord. No. 2684]**

(a) The applicant must provide an affidavit from a doctor confirming the existence of

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the emergency or hardship situation.

(b) There shall be a fee of □50 to request the administrative approval which shall be credited towards a Board of Adjustment application fee should consideration by the Board become necessary.

(c) The applicant shall submit a survey signed and sealed by a surveyor licensed in the State of Delaware to the Director showing the location of the proposed manufactured home.

(d) The Director shall give written notice to adjacent property owners of the requested manufactured home and accept written statements within 10 working days from the date of mailing. If any objection is received, the Director shall refer the application to the Board of Adjustment for a special use exception.

(e) The Director shall consider factors, including whether the manufactured home will have a substantially adverse effect on neighboring properties.

(f) Within 30 working days after the request is submitted, the Director or his or her designee may approve the manufactured home or advise the applicant that an application must be submitted to the Board of Adjustment for a special use exception.

(g) Such an approval shall not exceed two years. The Director may grant an extension for an emergency or hardship situation upon receipt of a subsequent affidavit from a doctor stating that the emergency or hardship situation still exists. Such an extension may be granted annually as long as the emergency or hardship still exists.

(15) Garage/studio apartment with at least one parking space for the exclusive use of the tenant included on the premises that is administratively approved by the Director or his or her designee, and subject to the following: **[Added 10-22-2019 by Ord. No. 2684]**

(a) There shall be a fee of □50 to request the administrative approval which shall be credited towards a Board of Adjustment application fee should consideration by the Board become necessary.

(b) The applicant shall submit a survey signed and sealed by a surveyor licensed in the State of Delaware to the Director showing the location of the garage/studio apartment.

(c) The Director shall give written notice to adjacent property owners of the requested garage/studio apartment and accept written statements within 10 working days from the date of mailing. If any objection is received, the Director shall refer the application to the Board of Adjustment for a special use exception.

(d) The Director shall consider factors including whether the garage/studio apartment will have a substantially adverse effect on neighboring properties.

(e) Within 30 working days after the request is submitted, the Director or his or her designee may approve the garage/studio apartment or advise the applicant that an

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application must be submitted to the Board of Adjustment for a special use exception.

(16) Use of a manufactured-home-type structure for any business, commercial or industrial use that is administratively approved by the Director or his or her designee, and subject to the following: **[Added 10-22-2019 by Ord. No. 2684]**

(a) There shall be a fee of □50 to request the administrative approval which shall be credited towards a Board of Adjustment application fee should consideration by the Board become necessary.

(b) The applicant shall submit a survey signed and sealed by a surveyor licensed in the State of Delaware to the Director showing the location of the manufactured-home-type structure.

(c) The Director shall give written notice to adjacent property owners of the requested manufactured-home-type structure and accept written statements within 10 working days from the date of mailing. If any objection is received, the Director shall refer the application to the Board of Adjustment for a special use exception.

(d) The Director shall consider factors including whether the manufactured-home-type structure will have a substantially adverse effect on neighboring properties.

(e) Within 30 working days after the request is submitted, the Director or his or her designee may approve the manufactured-home-type structure or advise the applicant that an application must be submitted to the Board of Adjustment for a special use exception.

(17) A Sussex County Rental Program, or SCRP, townhouse or multifamily development governed by, and subject to, Chapter 72, where at least 25% of all dwelling units are SCRP Units pursuant to Chapter 72. The SCRP development must satisfy the following criteria: **[Added 10-18-2022 by Ord. No. 2889]**

(a) The site must be located within a Town Center, a Developing Area, Commercial Area or the Coastal Area as described within the Land Use Element and as shown on the Future Land Use Plan of the adopted Sussex County Comprehensive Plan.

(b) The site shall be located within 2,640 feet of a principal arterial road, minor arterial road or major collector road as classified by the Delaware Department of Transportation. In addition, an Applicant should make every effort to coordinate with DART for transit access to and from the site.

(c) The site must be served by a central sewer system and a central water system.

(d) The total maximum number of dwelling units (including both SCRP Units and non-SCRP Units) that may be permitted shall be determined by dividing the gross area by 3,630 square feet. "Gross area" shall exclude any area designated as a tidal tributary stream or tidal wetlands by § 115-193.

(e) There shall be a one-hundred-foot-wide setback around the entire site, which shall incorporate the forested and/or landscaped buffer strip identified in § 99-5. This

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setback may include walking and biking trails.

(f) The height of any townhouse or multifamily buildings shall not exceed 52 feet or four stories, whichever is greater; provided, however, that if the height does not exceed 42 feet, then the setback described in this subsection shall be reduced from 100 feet to 50 feet.

(g) There shall be sidewalks on at least one side of all streets, roadways and parking areas, with interconnectivity to adjacent walkway systems wherever possible.

(h) There must be interconnectivity with any adjacent property that is zoned C-1, CR-1, C-2, C-3, C-4, C-5, B-1, B-2 or B-3.

(i) There shall be open space that exceeds 50% of the gross area of the entire site.

(j) Sussex County shall commence a comprehensive review of the provisions of this SCRP program as set forth herein on or before January 1, 2028.

B. On a farm of five acres or more, a building or land may be used for the following additional purposes:

(1) Agriculture, including horticultural, hydroponic, chemical or general farming, truck gardens, cultivating of field crops, orchards, groves or nurseries for growing or propagation of plants, trees and shrubs, forest use (tree farming), including use of heavy cultivating machinery, spray planes or irrigating machinery, dairy farming, keeping or raising for sale of large or small animals, reptiles, fish, birds or poultry and including structures for processing and sale of products raised on the premises, provided that: **[Amended 11-26-1991 by Ord. No. 806; 6-15-1993 by Ord. No. 894]**

(a) Any commercial grain drier shall be located at least 300 feet from any boundary of the premises on which such use is located, and any noncommercial drier shall be located at least 100 feet from any boundary.

(b) Any feed lot or structure used for the commercial feeding and housing of cattle, sheep and hogs or structure for storage of animal manure or animal waste composting shall be located at least 100 feet from all boundary lines of the premises on which such use is located and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. **[Amended 2-1-1994 by Ord. No. 953]**

(c) Structures for commercial poultry raising, structures for storage of poultry manure and structures for poultry product composting shall be located at least 50 feet from all boundary lines and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. **[Amended 2-1-1994 by Ord. No. 953]**

(d) Commercial slaughtering and processing of large animals such as horses, cows, pigs, sheep or goats shall not be conducted on the premises.

(e) Structures for commercial aquaculture, fish and frog farming, structures for storage of fish or frog waste and structures for fish or frog product composting shall be

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located at least 50 feet from all boundary lines and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. Farm ponds utilized for aquaculture, fish or frog farming shall be located at least 50 feet from all boundary lines and shall be 200 feet from any UR, MR, HR, UB or B-1 District boundary and 200 feet from any dwelling not on the premises. **[Amended 2-2-1999 by Ord. No. 1287]**

(2) Dog kennels, commercial, provided that any open pens, runs, cages or kennels shall be located at least 200 feet from any lot lines.

(3) Grain storage structures.

(4) Hospitals or clinics for large or small animals, provided that all buildings, structures, pens or open kennels shall be located at least 200 feet from any lot lines.

(5) Stables, public, provided that any building for keeping of animals shall be located at least 200 feet from any lot lines.

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ARTICLE II
**Affordably Priced Rental Units**
**[Added 12-9-2008 by Ord. No. 2016]**

### § 72-16. Intent. [Amended 11-1-2016 by Ord. No. 2474]

This chapter seeks to better protect the health, safety and welfare of Sussex County's residents and workforce by stimulating the provision of affordable rental housing for residents with low and moderate incomes and is hereafter known as the "Sussex County Rental Program" or "SCRP" or "program."

### § 72-17. Governmental findings. [Amended 11-1-2016 by Ord. No. 2474]

The Sussex County Council hereby finds that a shortage exists within the County for housing for residents with low and moderate incomes. Specifically, the Council finds that:

A. It is well known that Sussex County rents have inflated far beyond the ability of an average wage earner to pay. It is also known that federal rental assistance programs, such as the state-administered Public Housing and Section 8 Housing Choice Voucher Programs, are unable to completely satisfy the need for affordable rental housing.

B. Council finds that new development is not adequately addressing the rental housing needs of the County's low- and moderate-income residents and workforce. Without influencing this trend, local employers will have a difficult time maintaining an ample workforce.

C. Without an adequate supply of affordable rental housing in close proximity to employment and Town Centers, the County's workforce must commute a great distance for work. Not only do long commutes have a negative effect on the environment and transportation, but commuting also comes with high fuel expenses.

D. Given the proper incentives, the private sector possesses the necessary resources and expertise to provide the type of affordable rental housing needed in Sussex County.

### § 72-18. Declaration of public policy. [Amended 11-1-2016 by Ord. No. 2474]

The Sussex County Council hereby declares it to be the public policy of the County to:

A. Encourage the creation of a full range of housing choices, conveniently located in suitable living environments, for all incomes, ages and family sizes.

B. Encourage the production of affordable rental units to meet the existing and anticipated future employment needs in the County.

C. Assure that affordable rental units are dispersed throughout the County consistent with the Comprehensive Plan.

D. Encourage developments in Growth Areas as defined within the County's most current comprehensive plan and Areas of Opportunity as defined by the Delaware State Housing Authority to include affordable rental units on public water and sewer systems. **[Amended 10-18-2022 by Ord. No. 2889]**

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E. Provide incentives for developers to construct affordable rental units through tools such as the density incentive and expedited review (defined below).

## § 72-19. Definitions.

The following words and phrases have the following meanings:

APPLICANT — Any person, firm, partnership, association, joint venture, corporation, or other entity or combination of entities owning or controlling via contract qualifying land (defined below) and any transferee or successor in interest of all or part of the qualifying land pursuing the development of affordable rental housing under the SCRP that:**[Amended 11-1-2016 by Ord. No. 2474]**

A. Submits to the County for approval or extension of approval a plan of housing development for any type of site plan review, subdivision plan or development approval (hereinafter, a "site plan") that provides for the development of affordable rental units on qualifying land in one or more subdivisions, parts of subdivisions, resubdivisions, multifamily townhouse developments or phases of development under the terms and conditions as set forth in this article. **[Amended 10-18-2022 by Ord. No. 2889]**

B. With respect to land in zones not subject to subdivision approval or site plan review, applies for building permits for the construction of affordable rental units on qualifying land under the terms and conditions as set forth in this article.

AREA MEDIAN INCOME — The midpoint family income for Sussex County, calculated each year by the U.S. Department of Housing and Urban Development (HUD), adjusted for household size.**[Amended 11-1-2016 by Ord. No. 2474]**

AT ONE LOCATION — All land of the Applicant if:**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. The property lines are contiguous; or

B. The property lines are separated only by a public or private right-of-way at any point; or

C. The property lines are separated only by other land of the Applicant and not subject to this section at the time of the submission of an application or development plan by the Applicant.[1]

DATE OF LEASE — The date of the initial lease agreement signing of an approved Eligible Tenant for a SCRP Unit.**[Amended 10-18-2022 by Ord. No. 2889]**

DENSITY INCENTIVE — The density permitted by § 72-21 and as a permitted use for SCRP projects in Chapter 115.**[Amended 10-18-2022 by Ord. No. 2889]**

DEPARTMENT — The Sussex County Department of Community Development and Housing or its successors.

DEPARTMENT-DESIGNATED ENTITY (DDE) — Any agency, authority or political subdivision of the State of Delaware or any other public housing development agency or nonprofit

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1. **Editor's Note: The definition of "certificate of eligibility," as amended 11-1-2016 by Ord. No. 2474, and the definition of "control period," both of which immediately followed this definition, were repealed 10-18-2022 by Ord. No. 2889.**

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housing corporation, land trust or similar entity designated by the Department and approved by the County Administrator.

DIRECTOR — The head of the Department of Community Development and Housing or head of a DDE, as applicable.

DWELLING — Any building, structure, or portion thereof which is occupied as, or designed or intended for occupancy as, a residence; and any vacant land which is offered for sale or lease for the construction or location thereon of any such building, structure, or portion thereof. "Dwelling" shall not include hotels, motels, motor lodges, boarding and lodging houses, tourist houses, or similar structures.**[Amended 11-1-2016 by Ord. No. 2474]**

ELIGIBLE INCOME — The levels of income designated by the County Administrator which prohibit or severely limit the financial ability of persons to rent a dwelling unit in Sussex County. Eligible Income is low to moderate income, defined as 30% to 80% of the area median income for Sussex County adjusted for household size as defined by the U.S. Department of Housing and Urban Development (HUD). Income includes gross salary, wages, dividends, interest and all other sources recognized by HUD from the Eligible Tenant and all other adults (age 18 and older) who will occupy the SCRP Unit. Income will be verified by a copy of the filed income tax returns from the previous year and any other personal and financial information requested by the Landlord in order to accurately verify the potential tenant's qualifications and income, which may include, but is not limited to, a credit history report and a criminal background report on the proposed adult tenants, so long as these are requirements for all leases in the housing development.**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

ELIGIBLE TENANT — Person(s):**[Amended 11-1-2016by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. Whose household income is within the Eligible Income.

EXPEDITED REVIEW — A project entering the SCRP will receive priority in the County's planning and zoning process, with the Director of Planning and Zoning and the County Administrator to determine the Applicant's placement in the list of pending applications. The expedited review is provided to the Applicant to assist the Applicant in managing, to the extent possible, the risk of changes to cost, interest rates, schedule and other factors that the Applicant is taking on by virtue of participation in the SCRP. If an Applicant at any time during processing elects to withdraw from the SCRP, any approvals granted for the development through the date of withdrawal will be vacated and the Applicant will have to resubmit the project through the normal County process. A project receiving expedited review does not exempt the project from the County's planning and zoning process, nor guarantee approval through that process.**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

FORECLOSURE EVENT — A foreclosure, deed-in-lieu of foreclosure or other court-ordered sale of the rental unit or of the subdivision or development in which the unit is located, subject to rental restrictions continuing in force after foreclosure sale of disposition.

LANDLORD — The owner of the property that contains SCRP Units or an entity designated by the owner to manage and lease dwelling units.[2]**[Amended 10-18-2022 by Ord. No. 2889]**

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**2. Editor's Note: The former definition of "minimum standards of eligibility," which immediately followed, was repealed 11-1-2016 by Ord. No. 2474.**

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QUALIFYING LAND — All land that:**[Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. Is owned by or under contract to the Applicant; and

B. Allows the SCRP Units as a Permitted Use pursuant to Chapter 115.

SUSSEX COUNTY RENTAL PROGRAM UNIT (SCRP UNIT) — A dwelling which is:**[Amended 11-1-2016 by Ord. No. 2474]**

A. Offered for lease to Eligible Tenants through or pursuant to the provisions of this article and any regulations promulgated thereunder by the Department and approved by the County Administrator; or **[Amended 10-18-2022 by Ord. No. 2889]**

B. Leased under another government program designated by the County Administrator designed to assist in the construction or occupancy of affordable rental housing.

**§ 72-20. Minimum standards of eligibility for tenants. [Amended 11-1-2016 by Ord. No. 2474]**

A. There shall be a preference given to tenants who have worked or resided in Sussex County for at least one year preceding the application to the SCRP. In addition, Eligible Tenants must: **[Amended 10-18-2022 by Ord. No. 2889]**

(1) Have proof of citizenship.

(2) Be of Eligible Income, as defined in § 72-19 above, and be able to pay the first month's rent and any required security deposit.

(3) Comply with the criminal history and credit requirements for tenants of all leases within the proposed housing development.

(4) (Reserved)

(5) Occupy the SCRP Unit as the tenant's principal residence during the lease period. Each Eligible Tenant must certify before taking occupancy that the tenant will occupy the SCRP Unit as the tenant's principal residence. Any tenant who violates occupancy requirements will be subject to eviction procedures.

B. Where necessary or advisable to achieve the objectives of this chapter or to comply with state or federal housing laws, the Department may propose changes to these standards for approval by the County, including changes to eligibility requirements for tenants as recommended by the Department.

**§ 72-21. Density and expedited review incentives. [Amended 10-18-2022 by Ord. No. 2889]**

A. Density incentive. See Permitted Uses in Chapter 115.

B. Expedited review. A project entering the SCRP through execution of an SCRP Agreement will receive expedited review, as defined in § 72-19 above, through the County's Planning and Zoning process.

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C. Incentives will only be granted to projects submitted for new development that meet all requirements of this program.

**§ 72-22. Minimum standards of eligibility for SCRP developments. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. All parcels in the proposed project must be on qualifying land, as defined in § 72-19.

B. All units contributed as SCRP Units will remain at the affordable rental rates specified herein. SCRP Units shall never be leased as market-rate units, regardless of vacancy, except in accordance with § 72-23N(1).

C. (Reserved)

D. SCRP Units must be fully integrated into the communities of which they are a part and shall not be substantially different in external appearance from market-rate units. SCRP Units shall be equipped with the same basic appliances as the market rate units, such as an oven, refrigerator, dishwasher, and washer and dryer.

**§ 72-23. SCRP Agreements. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

To participate in the SCRP and secure any incentives provided for herein, an Applicant must execute an SCRP Agreement prepared by the Department and the County Attorney. Each agreement must include, at a minimum, the following information and/or evidence the following agreements and any others deemed necessary by the Department and the County Attorney to properly implement the chapter:

A. The specific number of SCRP Units to be constructed in the project. If a final site plan has not been approved when the SCRP Agreement is executed, an amendment to the SCRP Agreement will be made to incorporate the approved final site plan.

B. A description of how the SCRP Units will be marketed and delivered. The SCRP Units must be constructed and delivered in equal proportion to non-SCRP Units within the development.

(1) Applicants shall affirmatively market the SCRP Units to diverse populations, and meet with the surrounding residents early in the development approval process.

C. Any economic risk created by changes, whether within or outside of the Applicant's control, in development and construction costs, interest rates, processing and construction schedules, permitting and any other factor impacting the Applicant's costs and development obligations are borne solely by the Applicant.

D. Building permits, performance bonds and letters of credit. No building permits shall be issued in any subdivision or housing development where SCRP Units are included until the Applicant executes a valid SCRP Agreement which applies to the entire subdivision.

E. Be signed by the Applicant and all other parties having an interest in the property whose signatures are required for the effective and binding execution of contracts conveying real property. SCRP Agreements must be executed in a manner that will enable them to be

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recorded in the land records of the County.

F. Partnerships, associations, corporations and other entities may not evade the requirements of the SCRP Agreement through voluntary dissolution, bankruptcy, or the sale or transfer of qualifying land.

G. The SCRP Agreement may only be assigned with the prior written approval of the Department and only if the proposed assignee demonstrates the financial ability to fulfill all of the Applicant's obligations under the SCRP Agreement.

H. Landlords are responsible for marketing, leasing, and determining tenant eligibility for the SCRP Units. A landlord shall not be permitted to refuse to rent a unit to an Eligible Tenant. The reasons for a refusal to rent to an Eligible Tenant shall be documented and included in the Annual Audit and Certification required by § 72-28.

I. If the Applicant is not also the builder, the relationship between the Applicant and the builder shall be fully disclosed to the Department's satisfaction, as soon as the relationship is established.

J. SCRP Units must be fully integrated into the communities of which they are a part (not separated geographically from the market rate units and not grouped together) and shall not be substantially different in external appearance from non-SCRP Units. When the SCRP Units are a part of a phased development, a proportionate number or percentage of said Units will be placed within each phase and/or constructed within each housing type appearing in the development. The planning and design of individual SCRP Units must be consistent with the planning and design of non-SCRP Units (i.e., market-rate units) within a single project.

(1) The ratio of SCRP Units by type must reflect the ratio by type of market rate units, to the extent feasible. For instance, if a development has 200 two-bedroom dwelling units and 100 one-bedroom dwelling units, the ratio of two-bedroom to one-bedroom SCRP Units should also be 2:1.

K. The SCRP Agreement shall be recorded in the Office of the Recorder of Deeds confirming that:

(1) The covenants contained within it will bind the Applicant, any assignee, mortgagee, or buyer and all other parties that receive title to the property. In the event the mortgagee acquires the property through a foreclosure or acceptance of deed-in-lieu of foreclosure, the SCRP Agreement covenants will continue in effect. The covenants must be senior to all instruments securing financing.

(2) In any deed or instrument conveying title by the Applicant, the property shall remain subject to all of the terms and conditions contained in the SCRP Agreements by the Applicant required under the chapter. The source of the SCRP Agreements and any deed restrictions related thereto must be included in the public land records so that they are readily identifiable in a routine title search.

L. Where the Applicant is a DDE, agreements will be negotiated between the Department and the DDE so as to be consistent with the mission, strategies, business plans and operating procedures of the DDE and may, with Council approval, deviate from the requirements of

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this chapter.

M. The SCRP Agreement requires that the Landlord ensure that the SCRP Units are occupied only by tenants whose annual income levels do not exceed the eligible income limit, and shall prohibit tenants from subletting or subleasing the Units.

(1) In addition, the Landlord must supply the information listed below in a format acceptable to the Director on an annual basis:

(a) The number of SCRP Units, by bedroom count, that are leased to Eligible Tenants and those that are vacant, and the monthly rent charged for each SCRP Unit;

(b) For each SCRP Unit, the tenant's name, household size, and total household income as of the date of the lease, and the effective date of the lease;

(c) A statement that, to the best of the Landlord's information and knowledge, tenants who are leasing the SCRP Units meet the eligibility criteria.

(2) The Department shall audit the report and may require such additional information monthly needed to evaluate and accept the annual report.

N. The tenant must vacate the SCRP Unit if the tenant's household income exceeds 80% of the area median income by 20% at the time of lease renewal. The Applicant must take the necessary action to have the tenant vacate the SCRP Unit within six months of receiving information that the tenant's household income exceeds the Eligible Income limit.

(1) Notwithstanding the provisions of § 72-23N above, if the Applicant immediately designates an additional comparable unit as an affordable dwelling unit to be leased under the controlled rental price and requirements of the SCRP program, the tenant of such SCRP Unit referenced in § 72-23N above may continue to lease such Unit at the market value rent.

O. The Landlord shall comply with the Annual Audit and Certification Requirements of § 72-28.

**§ 72-24. SCRP Units. [Amended 11-1-2016 by Ord. No. 2474]**

A. Rent.

(1) Rent shall be established and updated annually by the Department based upon 25% of household income for 50% of the area median income adjusted for household size and unit size and shall not include trash services, parking, water and sewer utilities and any other charges to be paid by the tenant.

(2) The Eligible Tenant must provide to the Landlord income tax returns (and proof of payment of any taxes owed) from the previous year for all members of the household who were required to file such returns. If an Eligible Tenant was not required to file tax returns or if the Landlord believes that information from the previous tax returns is insufficient to determine income, the Landlord is authorized to request such information as it deems necessary to confirm the income levels of the proposed tenants. **[Amended 10-18-2022 by Ord. No. 2889]**

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B. Unit and household size. Households must be placed in units according to the following distribution:

| Unit Size (number of bedrooms) | Household Size |
|---|---|
| Efficiency | 1 |
| 1 | 1 to 2 |
| 1 plus Den | 2 to 4 |
| 2 | 2 to 4 |
| 2 plus Den | 2 to 4 |
| 3 | 4 to 6 |
| 4 | 5 to 8 |

**§ 72-25. Leasing of SCRP Units. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]**

A. Leases to Eligible Tenants.

(1) Every SCRP Unit constructed under this program must be offered to all Eligible Tenants for lease as the Eligible Tenant's principal residence. Notification to the public of SCRP Unit availability will be made by the Landlord and is recommended to be made by advertising on DelawareHousingSearch.org and similar sites. The Department may, but is not obligated to, provide notice of SCRP Unit availability through the Department's website.

(2) The Landlord will determine SCRP tenant eligibility under § 72-20.

(3) Annually, the Department will provide updated income guidelines and rental rates to the Landlord for use in leasing the SCRP Units.

(4) Lease agreements shall contain the same terms and conditions as the lease agreements with market-rate renters with the exception of the rental rates and other terms and conditions as required under this article.

(5) All lease agreements of SCRP Units shall cover a period of one year.

(6) An Eligible Tenant already occupying a SCRP Unit shall have a first-option to renew the lease agreement each year, as long as the tenant maintains good standing with the Landlord and continues to qualify as an Eligible Tenant.

B. Tenants of SCRP Units shall provide an executed affidavit on an annual basis certifying their continuing occupancy of the unit as their principal residence. Tenants shall provide such affidavit to the Landlord by the date that may be specified in their lease or that may otherwise be specified by the Landlord.

C. In the event the tenant of an SCRP Unit fails to provide his or her Landlord with an executed affidavit as provided for in the preceding subsection within 30 days of written request for

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such affidavit, then the lease shall automatically terminate, become null and void and the occupant shall vacate the Unit within 30 days of written notice from the Landlord.

### § 72-26. Foreclosure or default. [Amended 10-18-2022 by Ord. No. 2889]

A. The Landlord must provide the Department with a copy of any mortgage default notification immediately upon receipt and a written explanation of how the default will be remedied.

B. If a foreclosure event occurs, the covenants endure through the transfer of property.

### § 72-27. Implementation. [Amended 11-1-2016 by Ord. No. 2474]

Improvements to concepts, processes and rules and regulations of the SCRP program will be incorporated into future amendments of this article. Council views this article as a living document that will be modified as needed to respond to economic, housing, development, land use and other trends in the County and to best practices in affordable rental programs.

### § 72-28. Annual Audit and Certification. [Added 10-18-2022 by Ord. No. 2889[3]]

The Landlord shall contract with an independent Delaware Certified Public Accountant that has no other relationship with the Landlord/Developer/Owner/Manager to audit the Landlord's Compliance with this Chapter 72, the conditions of approval for the project, the terms of the SCRP Agreement, the rental of the SCRP Units and the status of the Eligible Tenants (and their Eligible Income) within the project. In this engagement, the Delaware Certified Public Accountant will perform this obligation in accordance with attestation standards established by the American Institute of Certified Public Accountants. This annual audit and report shall certify that the project remains in compliance with i) all of the Chapter 72 requirements and the terms of the SCRP Agreement; ii) the status of each of the SCRP Units (whether leased or vacant); iii) certification that each of the Eligible Tenants renting an SCRP Unit within the project is an Eligible Tenant as of the date of the annual audit and report; iv) the status and duration of any vacancy of any SCRP Unit; v) the marketing efforts to re-let any vacant SCRP Unit to an Eligible Tenant; vi) the status of any list of Eligible Tenants waiting for an SCRP Unit to come available; and vii) such other information as the Delaware Certified Public Accountant and/or the Community Development and Housing Office may deem appropriate and necessary. This annual audit and report shall be submitted to both the Office of Planning and Zoning and the Community Development and Housing Office no later than March 1 of each year.

### § 72-29. Government regulations; enforcement. [Amended 11-1-2016 by Ord. No. 2474; 10-18-2022 by Ord. No. 2889]

A. The Department will maintain a list of all SCRP Units constructed and leased under this program, and the Council hereby authorizes the County Administrator to promulgate and adopt regulations and approve the various agreements/documents necessary to administer this program. Therefore, Sussex County shall commence a comprehensive review of this SCRP Program on or before January 1, 2028.

B. The Director may, with Council approval, waive or modify the provisions of the program if

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3. **Editor's Note: This ordinance also renumbered former § 72-28 as § 72-29.**

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the Director finds the program in conflict with state or federal housing laws.

C. This program applies to all agents, successors, and assigns of an Applicant. A building permit shall not be issued and a preliminary plan of subdivision, development plan, or site plan shall not be approved for a development that will contain affordable rental units to be submitted to this program unless it meets the requirements of this program. The County Administrator may deny, suspend, or revoke any building or occupancy permit upon finding a violation of this program. Any prior approval of a preliminary or final plan of subdivision, development plan or site plan may be suspended or revoked upon the failure to meet any requirement of this chapter. An occupancy permit shall not be issued for any building to any Applicant, or a successor, or assign of any Applicant, for any construction that does not comply with this program. The County Administrator may also withhold or call in performance bond funds, letters of credit, and certificates of compliance or occupancy from the Applicant for any violation of this program.

D. In the event that the Landlord rents any of the SCRP Units at non-SCRP Unit rates (i.e., market rental rates) so that the proportionate share of SCRP Units versus non-SCRP Units as originally approved is not maintained, the Landlord of the project shall be required to pay to Sussex County the monthly market rent collected from any such SCRP Unit that is rented at a non-SCRP Unit Rate. Any such funds collected by Sussex County shall be used for housing purposes and administered by the Sussex County Office of Community Development and Housing.

E. The Director is authorized to pursue any available remedy, legal or equitable in nature, to enforce the requirements of this program or to prevent or abate a violation of this program.

F. The Director may take legal action to stop or cancel any lease of an SCRP Unit if any party does not comply with all requirements of this program. The Director may recover any funds improperly obtained from the rental of a SCRP Unit in violation of this chapter.

G. In the event of litigation to enforce the terms and conditions of this chapter or any agreement or obligation under the SCRP program, the Department shall be entitled to an award of legal costs and fees to be collected from the party who is determined to be in violation of such agreements and obligations.

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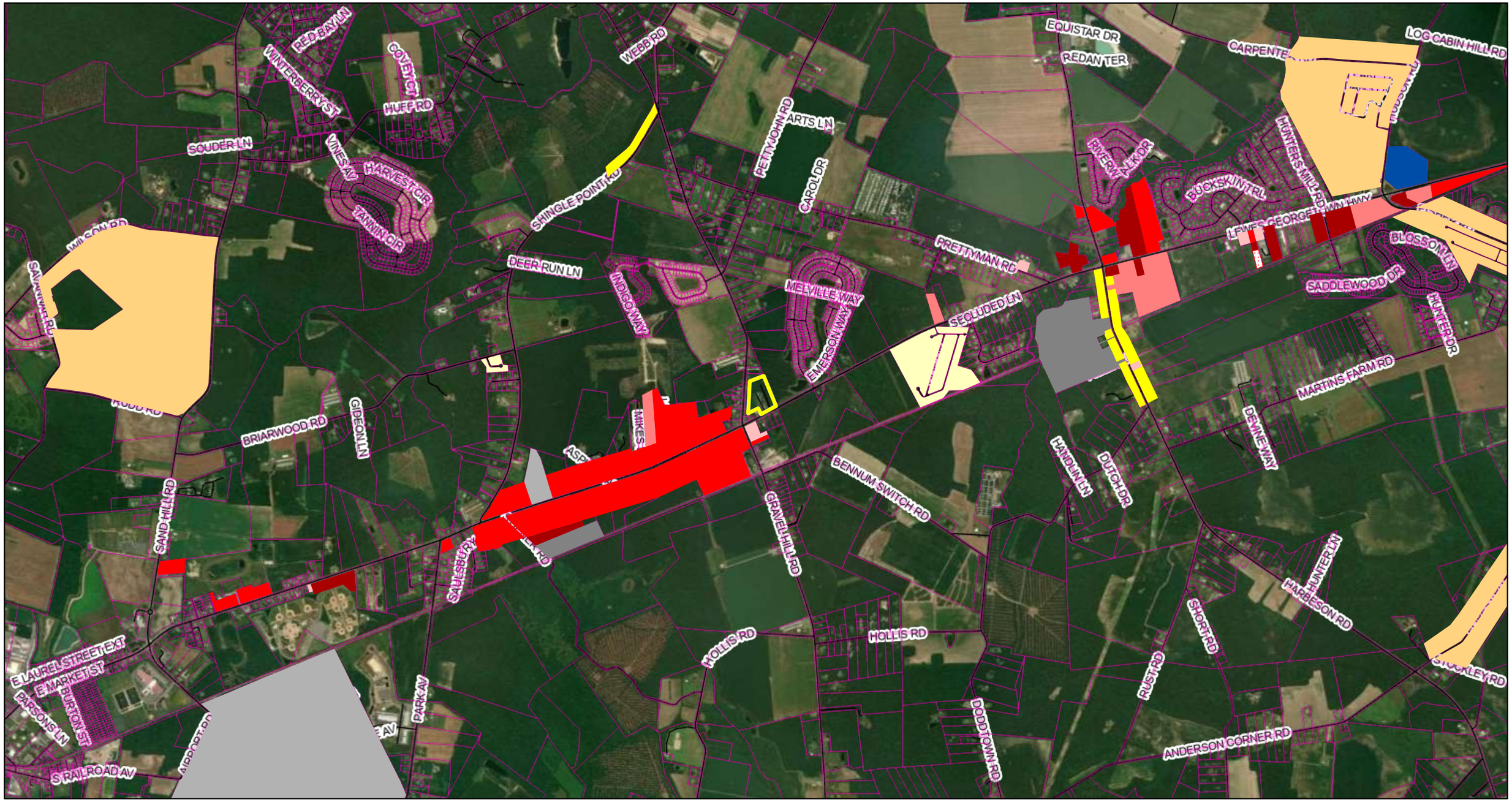
# Exhibit E
# Zoning District Map

# Sussex County




August 11, 2024

1:36,112

polygonLayer
- Override 1
- Override 2

Zoning
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- Commercial Residential - CR-1
- Institutional - I-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- B-1: Neighborhood Business
- B-2: Business Community District
- Tax Parcels
- Streets
- County Boundaries
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations
- 9.6m Resolution Metadata

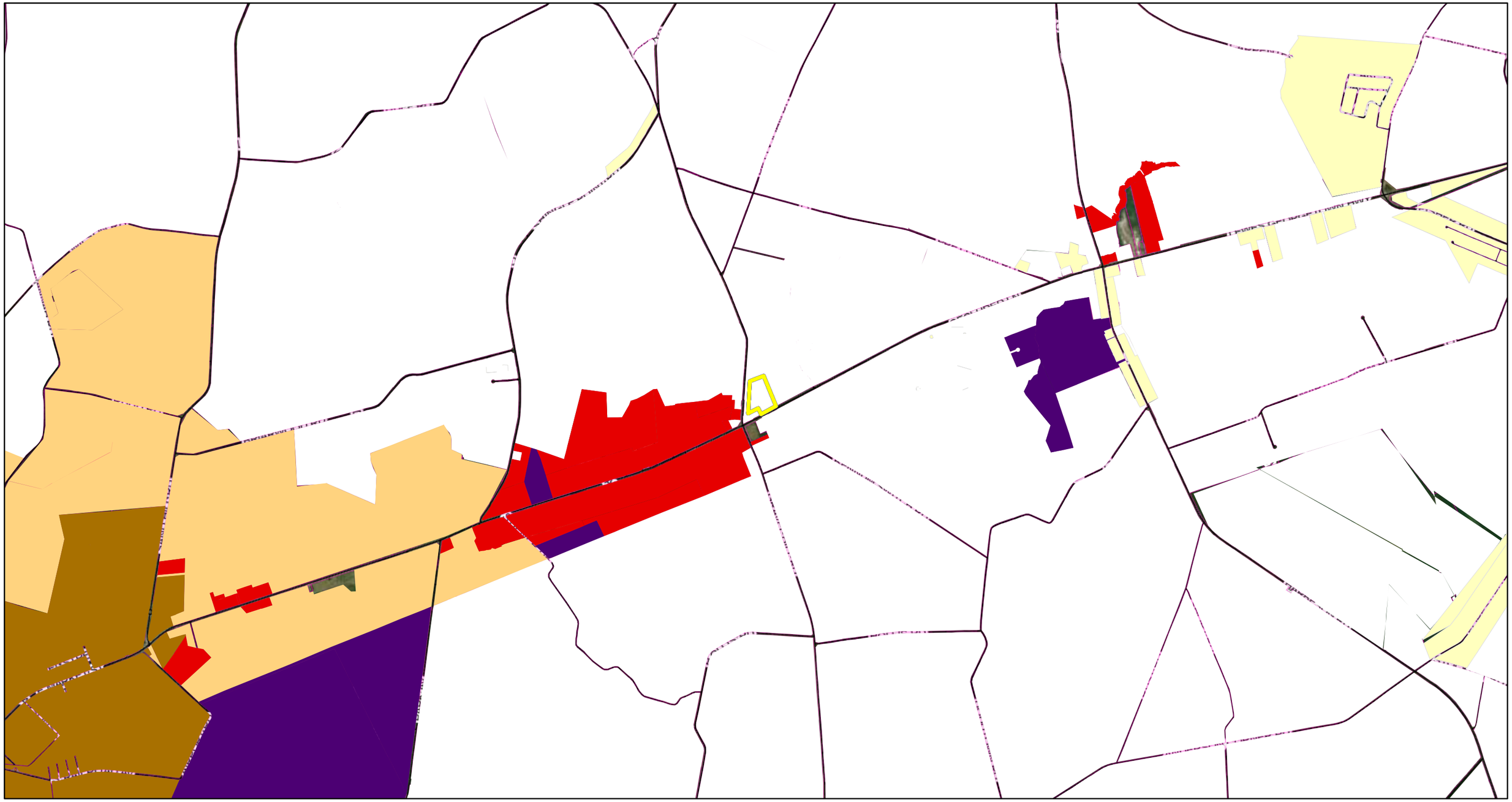
0 0.35 0.7 1.4 mi

0 0.5 1 2 km

Sussex County Government, Maxar

# Exhibit F
# Future Land Use Map

# Sussex County



August 11, 2024

polygonLayer

Override 1

Override 2

2019 Future Land Use

Low Density

Commercial

Developing Area

Existing Development Area

Industrial

Municipalities

Town Center

Tax Parcels

Streets

County Boundaries

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

9.6m Resolution Metadata

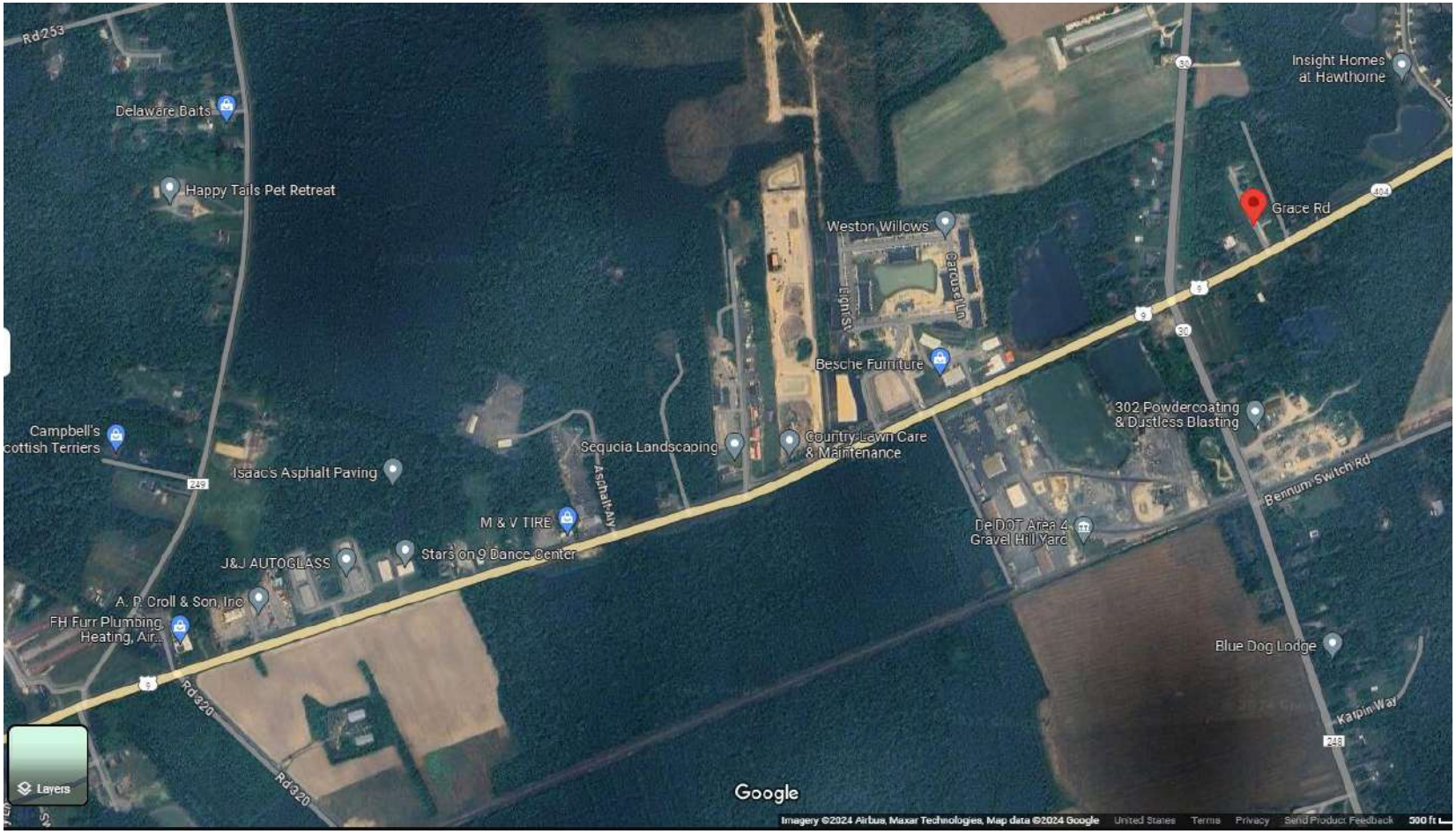
1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

Sussex County Government, Maxar

# Exhibit G
# Surrounding Uses Aerial Image


Rd 253
Delaware Baits
Happy Tails Pet Retreat
Insight Homes at Hawthorne
Grace Rd
Weston Willows
Carcuse Ln
Light St
Besche Furniture
302 Powdercoating & Dustless Blasting
Campbell's cottish Terriers
Isaac's Asphalt Paving
Sequoia Landscaping
Country Lawn Care & Maintenance
Asphalt Aly
Bennum Switch Rd
M & V TIRE
De DOT Area 4 Gravel Hill Yard
J&J AUTOGLASS
Stars on 9 Dance Center
A. P. Croll & Son, Inc
FH Furr Plumbing, Heating, Air...
Blue Dog Lodge
Rd 320
Karpin Way
Layers
Google
Imagery ©2024 Airbus, Maxar Technologies, Map data ©2024 Google
United States
Terms
Privacy
Send Product Feedback
500 ft

52796708.1

# Exhibit A

# Property Information Sheet & Deed

52796739.1

PARID: 135-11.00-65.00
J AND C INVESTMENT PROPERTIES LLC

## Property Information

| | |
|---|---|
| Property Location: | |
| Unit: | |
| City: | |
| State: | |
| Zip: | |
| Class: | EXM-Exempt |
| Use Code (LUC): | MX-MISCELLANEOUS |
| Town | 00-None |
| Tax District: | 135 – GEORGETOWN |
| School District: | 1 - INDIAN RIVER |
| Fire District: | 77-Georgetown |
| Deeded Acres: | .0000 |
| Frontage: | 0 |
| Depth: | .000 |
| Irr Lot: | |
| Plot Book Page: | /PB |
| 100% Land Value: | |
| 100% Improvement Value | $0 |
| 100% Total Value | |

## Legal

| | |
|---|---|
| Legal Description | GIS TIEBACK<br>DUMMY ACCOUNT |

## Owners

| Owner | Co-owner | Address | City | State | Zip |
|---|---|---|---|---|---|
| J AND C INVESTMENT PROPERTIES LLC | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 |

## Sales

| Sale Date | Book/Page | Sale Price | Stamp Value | Parcels Sold | Grantee/Buyer |
|---|---|---|---|---|---|
| 06/25/2024 | 6124/221 | | | | J AND C INVESTMENT PROPERTIES LLC |
| 06/25/2024 | 6124/218 | | | | TURNER CHARLES E JR |

## Owner History

| Tax Year: | Owner: | Co-owner | Address: | City: | State: | Zip: | Deed Book/Page: |
|---|---|---|---|---|---|---|---|
| 2024 | J AND C INVESTMENT PROPERTIES LLC | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/221 |
| 2023 | J AND C INVESTMENT PROPERTIES LLC | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/221 |
| 2023 | TURNER CHARLES E JR | JEFFREY E TURNER | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/218 |
| 2023 | TURNER CHARLES E JR | EMILY L TURNER | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 6124/218 |
| 2023 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2022 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2021 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2020 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2019 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2019 | TURNER CHARLES E JR | | 29762 OLIVER WOLCOTT DR | MILLSBORO | DE | 19966 | 0/0 |
| 2019 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |
| 2018 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |
| 2017 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |
| 2017 | TURNER CHARLES E JR | | 34822 BOATHOUSE LN | LEWES | DE | 19958 | 0/0 |

## Land

| Line | Class | Land Use Code | Act Front | Depth | Calculated Acres | Ag |
|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1 | EXM | MX | 0 | 0 | .0000 |

## Land Summary

| | |
|---|---|
| Line | 1 |
| 100% Land Value | 0 |

## 100% Values

| 100% Land Value | 100% Improv Value | 100% Total Value |
|---|---|---|
| | $0 | |

## 50% Values

| 50% Land Value | 50% Improv Value | 50% Total Value |
|---|---|---|
| | $0 | |

Document# 2024000021618 BK: 6124 PG: 221
Recorder of Deeds, Alexandra Reed Baker On 6/25/2024 at 12:02:35 PM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY

Tax Number: 1-35 11.00 65.00 & 1-35 11.00 65.00-PARK
PREPARED BY & RETURN TO:
Tunnell & Raysor, P.A.
30 E. Pine Street
Georgetown, DE 19947
File No. DO4812A/ERM

NO TITLE SEARCH REQUESTED
NO TITLE SEARCH PERFORMED
NO TITLE GUARANTEE
DEED PREPARATION ONLY

**THIS DEED**, made this 17th day of June, 2024,

- BETWEEN -

**CHARLES E. TURNER, JR.** and **JEFFREY E. TURNER**, of 29762 Oliver Wolcott Drive, Millsboro, DE 19966, parties of the first part,

- AND -

**J AND C INVESTMENT PROPERTIES, LLC, a Delaware limited liability company**, of 29762 Oliver Wolcott Drive, Millsboro, DE 19966, party of the second part.

**WITNESSETH**: That the said parties of the first part, for and in consideration of the sum of **ONE DOLLAR ($1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

**ALL** that certain tract, piece or parcel of land situate in Georgetown Hundred, Sussex County, Delaware, by and on the State Highway leading from Georgetown to Lewes, adjoining land of now or formerly of Charles Bell, lands now or formerly of Gustay H. Koeppel, Frank Holson and Julian Townsend and more particularly described as follows, to wit:

**BEGINNING** at an iron stob on the North side of said road, corner for lands now or formerly of Charles Bell; thence North 11 degrees East 1008 feet to a pipe in the center of a ditch; thence with the same North 76 ½ degrees East 339 feet to Townsend's line;

TUNNELL RAYSOR, P.A.
Georgetown, Delaware

Document# 2024000021618 BK: 6124 PG: 222
Recorder of Deeds, Alexandra Reed Baker On 6/25/2024 at 12:02:35 PM Sussex County, DE
Doc Surcharge Paid

thence with the same 10 ½ feet to said road; thence with the same South 75 degrees West to the place of beginning, containing (10) acres, with all improvements thereon

**EXCEPTING** that portion of said tract, piece or parcel of land which was conveyed by deed dated the 28th day of June, 1956 to Ruth A. Harris and Floyd W. Harris and recorded in the Office of the Recorder of Deeds, in and for Sussex County, on the 29th day of June, 1956 in Deed Record Vol. 462, Page 104; and;

**EXCEPTING** that part of said tract, piece or parcel of land which was conveyed by deed dated the 14th day of September, 1954 to Samuel H. Burns and Melvina B. Burns, his wife, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, on the 14th day of September, 1954 in Deed Record Vol. 437, Page 398.

AND BEING MORE PARTICULARLY DESCRIBED BY A MORE RECENT LEGAL DESCRIPTION PREPARED BY COAST SURVEY, INC., LAND SURVEYING AND PLANNING, AS FOLLOWS TO-WIT:

**BEGINNING** at a concrete monument found on the northerly right-of-way line of Route #9 (60' wide) a corner for this parcel and lands now or formerly of "Townsend, Inc." and being located 935' ± easterly from the right-of-way of Route #30; thence with Route #9, S 70 degrees, 05 minutes, 16 seconds W, 402.13' to an iron pipe set, a corner for this parcel and lands now or formerly of Edna E. Burns; thence leaving Route #9 and with said Burs, N 19 degrees, 21 minutes, 31 seconds W, 178.81' to a concrete monument found; thence turning and with said Burns lands now or formerly of Betty Harris, S 70 degrees, 38 minutes, 29 seconds W, 277.58' (passing over a concrete monument found at 214.28') to an iron pipe set, a corner for this parcel, said Harris and along the line of Lot #2 of the "Priscilla Jane Stuchilk" Subdivision; thence turning and with Lot #2, in part, and Lots #3 & #4 and lands now or formerly of Richard and Lynn Fitchett, N 11 degrees, 00 minutes, 00 seconds E, 793.94' (passing over iron pipes found at 143.97', 343.99' a concrete monument found at 543.74'and an iron pipe found at 778.19') to a point in a 15' wide ditch, a corner for this parcel, said Fitchett and along lands now or formerly of James Sylvestri; thence turning and with said ditch and said Sylvestri, N 77 degrees, 58 minutes 38 seconds E, 352.95' to a 3" galvanized pipe 3' tall with iron pin in center found, a corner for this parcel, said Sylvestri and along lands of said "Townsend's"; thence turning and with said "Townsend's" and with another 15' wide ditch, in part, S 14 degrees, 23 minutes, 52 seconds E, 818.11' to the point and place of beginning containing 9.7216 acres.

**SUBJECT** to Tax Ditch maintenance easements along said ditches.

**BEING** the same lands conveyed to Charles E. Turner, Jr. and Jeffrey E. Turner from Charles E. Turner, Jr., by Deed dated the 17th day of June, 2024, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on the 25th day of June, 2024, in Deed Book 6124, Page 218.

TUNNELL
RAYSOR, P.A.
Georgetown, Delaware

**Document# 2024000021618 BK: 6124 PG: 223**
**Recorder of Deeds, Alexandra Reed Baker On 6/25/2024 at 12:02:35 PM Sussex County, DE**
**Doc Surcharge Paid**

**SUBJECT** to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

**IN WITNESS WHEREOF**, the parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

Witness

(SEAL)
**Charles E. Turner, Jr.**

Witness

(SEAL)
**Jeffrey E. Turner**

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

**BE IT REMEMBERED**, that on June 17, 2024. personally came before me, the subscriber, Charles E. Turner, Jr. and Jeffrey E. Turner, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

GIVEN under my Hand and Seal of Office the day and year aforesaid.

Notary Public
My Commission Expires: N/A

MELANIE BURKE
ATTORNEY AT LAW WITH
POWER TO ACT AS NOTARY PUBLIC
PER 29 DEL. C. SEC 4323 (A) 3

TUNNELL
RAYSOR, P.A.
Georgetown, Delaware