

PLANNING & ZONING COMMISSION

ROBERT C. WHEATLEY, CHAIRMAN
KIM HOEY STEVENSON, VICE-CHAIRMAN
R. KELLER HOPKINS
J. BRUCE MEARS
HOLLY J. WINGATE



Sussex County

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

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date March 11th, 2021.

Application: CU 2251 Heimlich Solar Partners, LLC

Applicant: Heimlich Solar Partners, LLC (C/O Jeff Machiran)
251 Little Falls Drive
Wilmington, DE 19808

Owner: Tull Group, LLC
P.O. Box 418
Seaford, DE 19973

Site Location: Lying on the east side of Mile Stretch Rd. (S.C.R 590) approximately
0.49 mile southeast of Scott Store Rd. (Route 36), Greenwood

Current Zoning: General Residential (GR)

Proposed Use: Solar Farm

Comprehensive Land
Use Plan Reference: Developing Area

Councilmatic
District: Ms. Green

School District: Woodbridge School District

Fire District: Greenwood Fire District

Sewer: None

Water: None

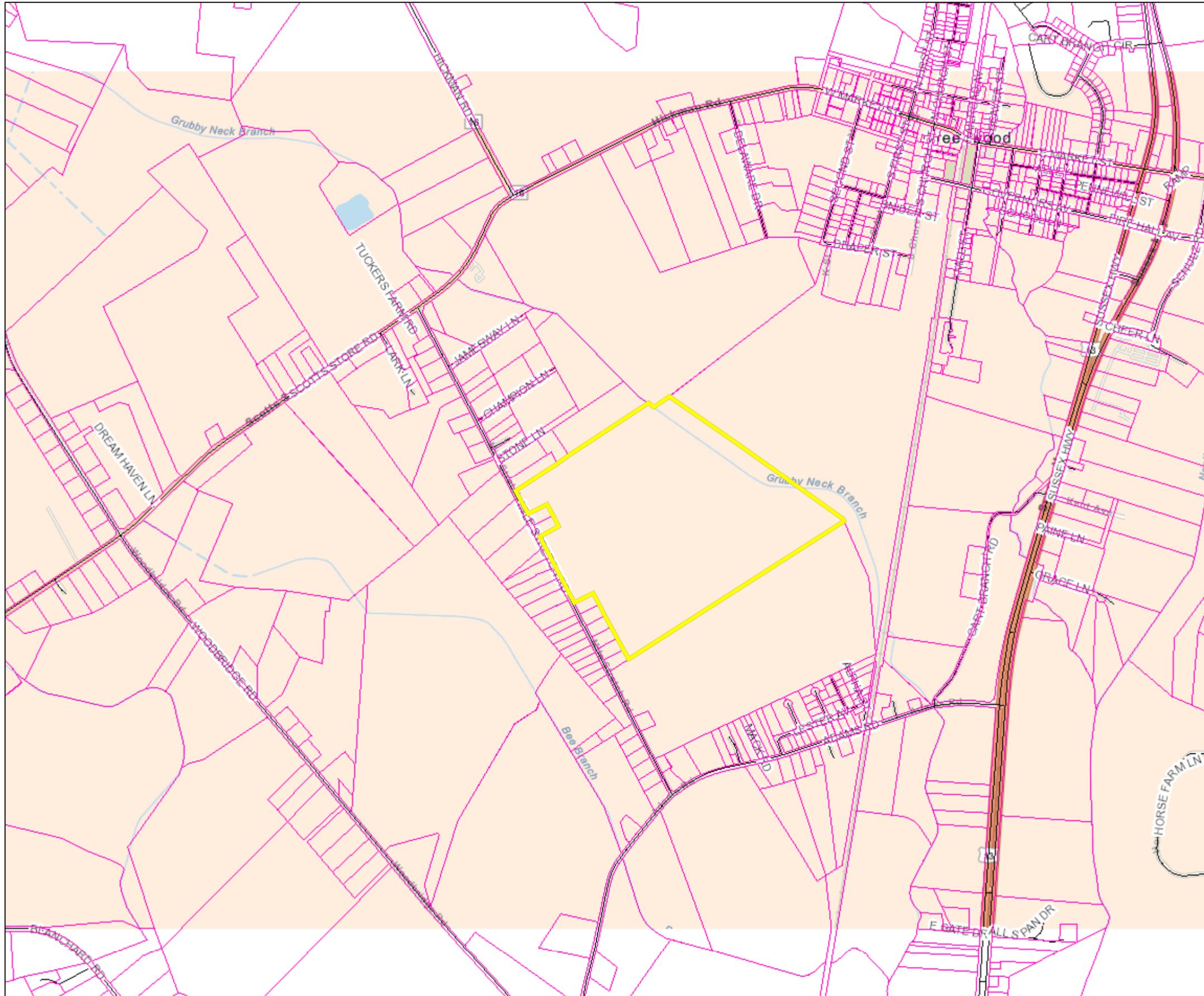
Site Area: 142.8 acres +/-

Tax Map ID.: 530-13.00-10.00





Sussex County



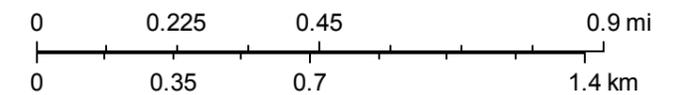
PIN:	530-13.00-10.00
Owner Name	TULL GROUP LLC
Book	2805
Mailing Address	PO BOX 418
City	SEAFORD
State	DE
Description	E/RT 590
Description 2	2490' N/RT 583
Description 3	N/A
Land Code	

- polygonLayer

Override 1
- polygonLayer

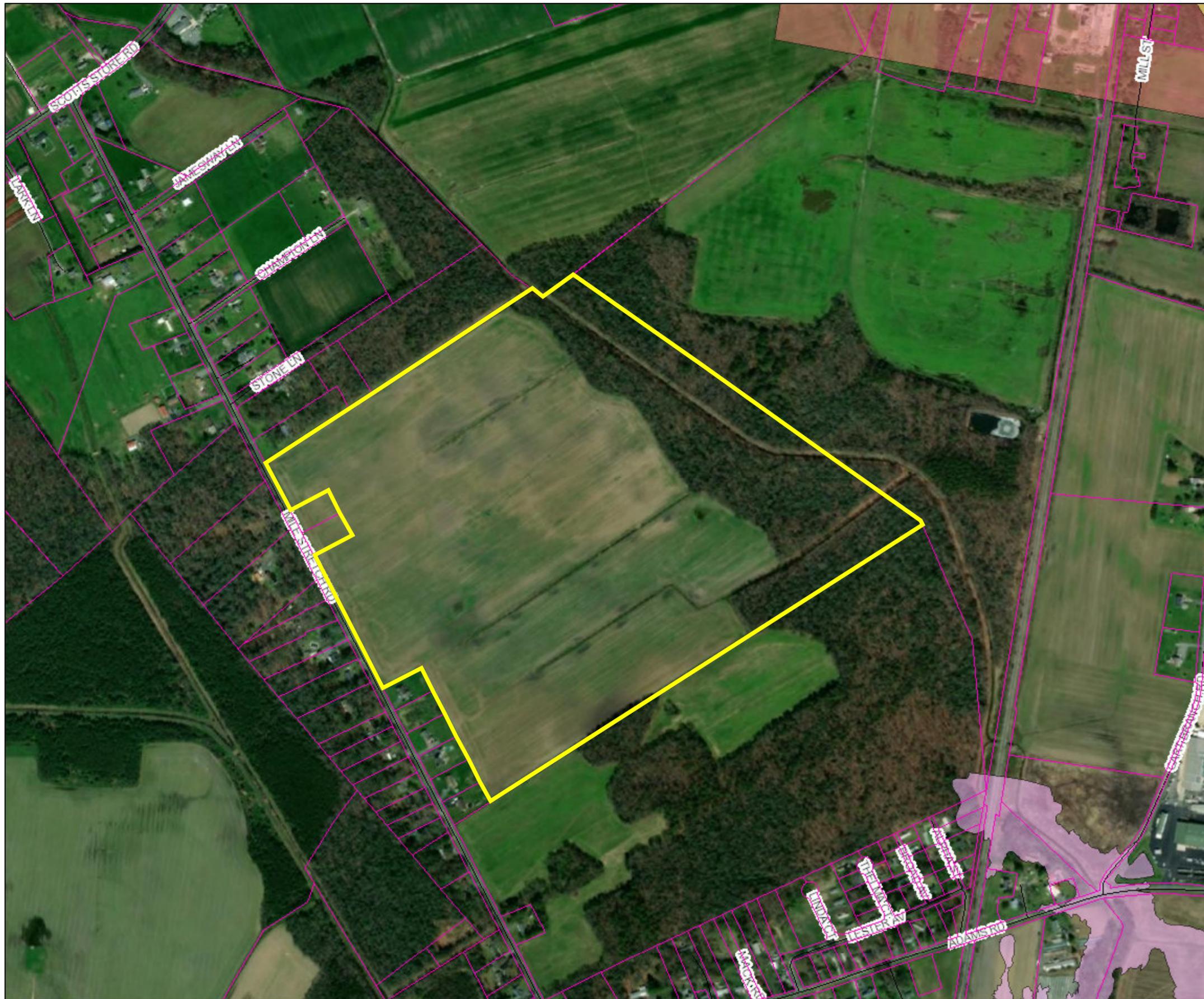
Override 1
- Tax Parcels
- Streets
- County Boundaries

1:18,056





Sussex County



PIN:	530-13.00-10.00
Owner Name	TULL GROUP LLC
Book	2805
Mailing Address	PO BOX 418
City	SEAFORD
State	DE
Description	E/RT 590
Description 2	2490' N/RT 583
Description 3	N/A
Land Code	

polygonLayer

Override 1

polygonLayer

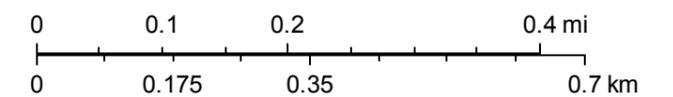
Override 1

- Tax Parcels
- Streets
- County Boundaries

Flood Zones 2018

- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- A
- AE
- AO
- OPEN WATER
- VE
- Municipal Boundaries

1:9,028



JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR OF PLANNING & ZONING
(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: Nick Torrance, Planner I
CC: Vince Robertson, Assistant County Attorney, and applicant
Date: March 4th, 2021
RE: Staff Analysis for CU 2251 Heimlich Solar Partners, LLC

This memo is to provide background and analysis for the Planning Commission to consider as a part of application CU 2251 Heimlich Solar Partners, LLC to be reviewed during the March 11th, 2021 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.

The request is for a Conditional Use for Tax Parcel 530-13.00-10.00 to allow for a Conditional Use of land in an Agricultural Residential (AR-1) Zoning District for a solar farm. The parcel is located on the east side of Mile Stretch Road. (S.C.R. 590) in Greenwood, Delaware. The size of the property is approximately 142.8 acres +/-.

The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework for 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 property has the land use designation of Developing Area.

The surrounding parcels to the southwest, west, and northwest are all designated on the Future Land Use Map as "Developing Area". The uses that the Developing Area land use designation recognizes are a range of housing types are appropriate in Developing Areas, including single family homes, townhouses, and multi-family units. In selected areas and at appropriate intersections, commercial uses should be allowed. A variety of office uses would be appropriate in many areas. Portions of the Developing Areas with good road access and few nearby homes should allow for business and industrial parks. Appropriate mixed-use development should also be allowed. In doing so, careful mixtures of homes with light commercial and institutional uses can be appropriate to provide for convenient services and to allow people to work close to home.

The property is zoned GR (General Residential Zoning District). The adjoining and surrounding properties located to the west, south, east, and northwest are all zoned GR (General Residential Zoning District). The property to the northeast is zoned AR-1 (Agricultural Residential Zoning District)

Since 2011, there have been no Conditional Use approvals within a 1-mile radius of the application site.



Based on the analysis of the land use, surrounding zoning and uses, the Conditional Use to allow for a public utility elevated storage tank, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

File #: CU2251
202014304

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

Adjacent 13831 Mile Stretch Road, Greenwood, DE 19950

Type of Conditional Use Requested:

Installation of approximately 4.5 MW AC solar photovoltaic electric generation facility

Tax Map #: 530-13.00-10.00

Size of Parcel(s): 142.8 acres

Current Zoning: GR

Proposed Zoning: GR

Size of Building: No building proposed

Land Use Classification: Low Density Area

Water Provider: None

Sewer Provider: None

Applicant Information

Applicant Name: Heimlich Solar Partners, LLC (EDF Renewables Distributed Solutions, Inc.)

Applicant Address: c/o Jeff Machiran 251 Little Falls Drive

City: Wilmington

State: DE

Zip Code: 19808

Phone #: (443) 220-5001

E-mail: jeff.machiran@edf-re.com

Owner Information

Owner Name: Tull Group, LLC

Owner Address: P.O. Box 418

City: Seaford

State: DE

Zip Code: 19973

Phone #: (302) 524-9290

E-mail: _____

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Chad Kayser, Senior Project Manager, TRC Companies

Agent/Attorney/Engineer Address: 600 Willowbrook Lane, St 618

City: West Chester

State: PA

Zip Code: 19382

Phone #: (610) 952-2828

E-mail: ckayser@trccompanies.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.

DeIDOT 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.

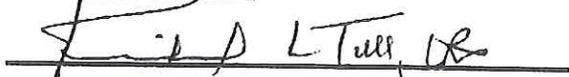
I also certify that I or an agent on my behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future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

Signature of Applicant/Agent/Attorney



Date: 10/7/2020

Signature of Owner



Date: 10/7/20

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: _____



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

JENNIFER COHAN
SECRETARY

September 9, 2020

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 **Heimlich Solar Partners, LLC** conditional use application, which we received on August 11, 2020. This application is for a 142.79-acre parcel (Tax Parcel: 530-13.00-10.00). The subject land is located on the east side of Mile Stretch Road (Sussex Road 590), approximately 2,500 feet south of the intersection of Scotts Store Road (Sussex Road 32) and Mile Stretch Road. The subject land is currently zoned as AR-1 (Agricultural Residential) and the applicant is seeking a conditional use approval to develop a 4.7MW AC solar photovoltaic project.

Per the 2019 Delaware Vehicle Volume Summary, the annual average daily traffic volume along the segment of Mile Stretch Road where the subject land is located is 979 vehicles per day.

Based on our review, 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.

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.



Mr. Jamie Whitehouse
Page 2 of 2
September 9, 2020

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. Claudy Joinville, at (302) 760-2124, if you have questions concerning this correspondence.

Sincerely,

Troy Brestel for

T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:cjm

cc: Constance C. Holland, Coordinator, Cabinet Committee on State Planning Issues
Heimlich Solar Partners, LLC, Applicant
Todd Sammons, Assistant Director, Development Coordination
Gemez Norwood, South District Public Works Manager, Maintenance & Operations
Susanne K. Laws, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Manager, Development Coordination
Kevin Hickman, Subdivision Manager, Development Coordination
Brian Yates, Subdivision Manager, Development Coordination
John Andrescavage, Subdivision Manager, Development Coordination
James Argo, South District Project Reviewer, Maintenance & Operations
Troy Brestel, Project Engineer, Development Coordination
Claudy Joinville, Project Engineer, Development Coordination

**SUSSEX COUNTY ENGINEERING DEPARTMENT
UTILITY PLANNING & DESIGN REVIEW DIVISION
C/U & C/Z COMMENTS**

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **2/26/2021**

APPLICATION: **CU 2251 Heimlich Solar Partners, LLC**

APPLICANT: **Heimlich Solar Partners, LLC**

FILE NO: **WS-4.06**

TAX MAP &
PARCEL(S): **530-13.00-10.00**

LOCATION: **On the east side of Mile Stretch Road (SCR 590),
approximately 0.49 mile southeast of Scott Store Road (Rt. 36).**

NO. OF UNITS: **Solar Farm**

GROSS
ACREAGE: **142.8**

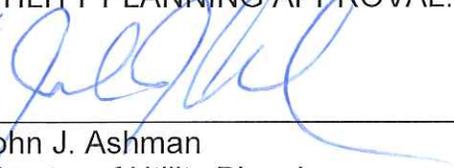
SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **2**

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? **Tier 2**
- (3). Is wastewater capacity available for the project? **N/A** 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 \$6,360.00** per EDU. Please contact **N/A** at **302-855-7719** for additional information on charges.

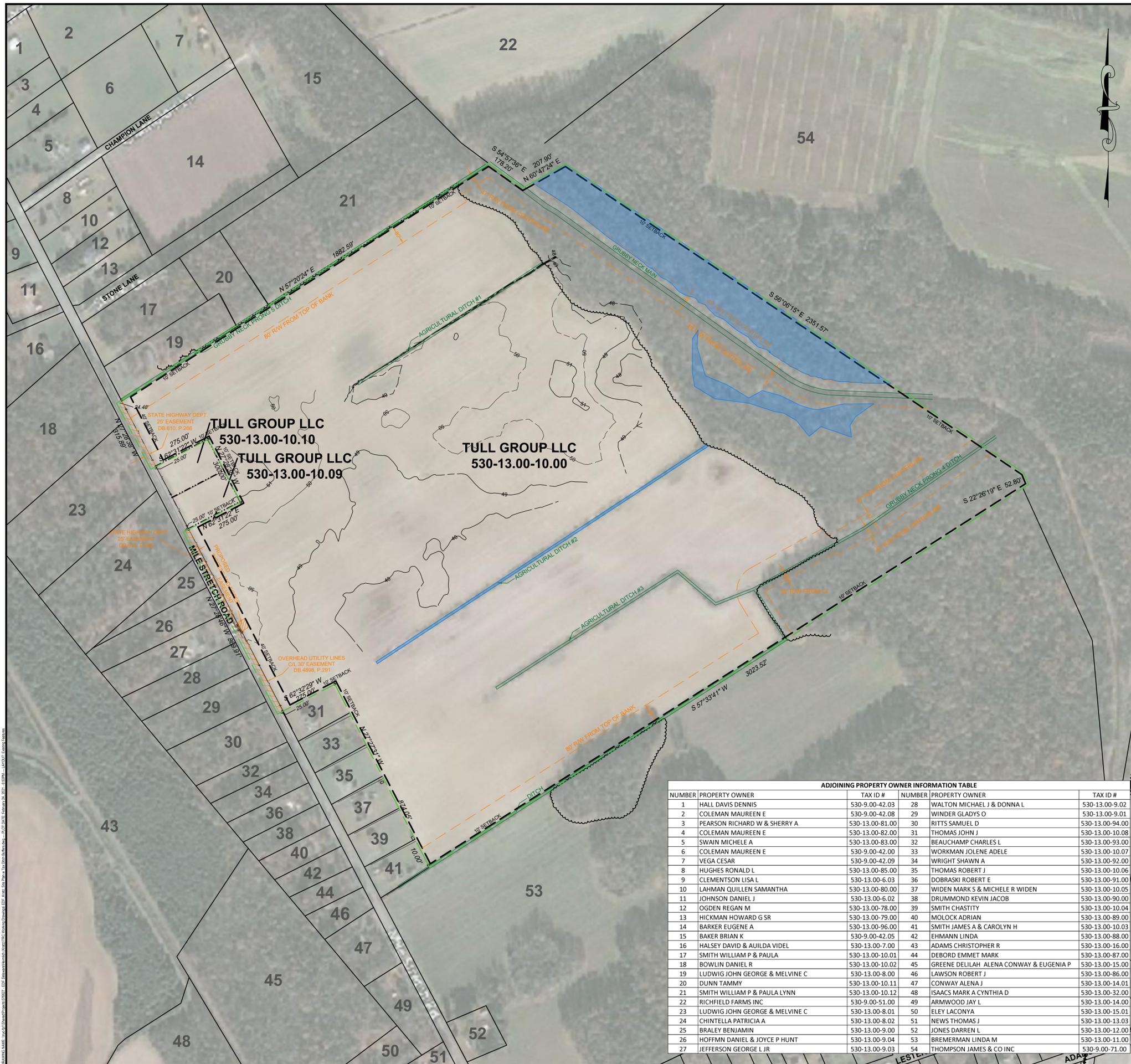
- (6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **No**
- Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.
- (7). Is project adjacent to the Unified Sewer District? **No**
- (8). Comments: **The proposed Conditional Use is not in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer service at this time.**
- (9). Is a Sewer System Concept Evaluation required? **No**
- (10). Is a Use of Existing Infrastructure Agreement Required? **No**

UTILITY PLANNING APPROVAL:

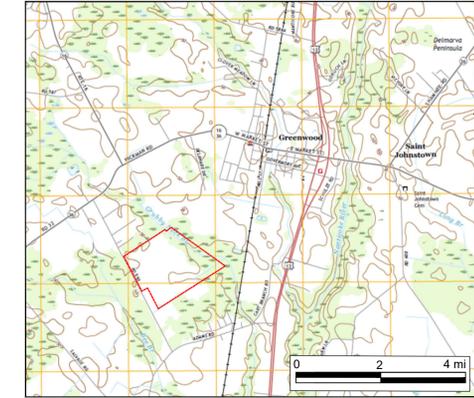


John J. Ashman
Director of Utility Planning

Xc: Hans M. Medlarz, P.E.
Lisa Walls
No Permit Tech Assigned



SITE LOCATION



LEGEND

SYMBOL	DESCRIPTION
	EXISTING PROPERTY LINE
	TRC DELINEATED WETLANDS
	EXISTING ADJUTTER PROPERTY LINE
	TAX DITCH RIGHT-OF-WAY LIMIT

NOTES

1. THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-E). ELEVATIONS ARE BASED ON NAVD88 (US SURVEY FEET).
2. TOPOGRAPHY, PROPERTY BOUNDARIES, PARCEL IDENTIFICATION, EXISTING BUILDINGS, AND SETBACKS TAKEN FROM SURVEY LAST REVISED 01/26/2021 BY GREENMAN-PEDERSEN, INC. DE PROFESSIONAL LAND SURVEYOR NO. S6-0000787.
3. ADJOINING PROPERTY OWNER INFORMATION SHOWN ARE FROM SUSSEX COUNTY GIS PORTAL. ([HTTPS://MAPS.SUSSEXCOUNTYNY.GOV/PZAPPLICATIONS/MAP.HTML](https://maps.sussexcountyny.gov/pzapplications/map.html))
4. SITE IS NOT LOCATED IN A 100-YEAR OR 500-YEAR FLOOD PLAIN (REFERENCE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0115K).
5. EXISTING UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIG SAFELY NEW YORK (811) SHALL BE NOTIFIED A MINIMUM OF 72-HOURS PRIOR TO COMMENCING ANY EXCAVATION.
6. THIS IS A PRELIMINARY DESIGN PLAN PROVIDED FOR PERMITTING ONLY. FINAL DESIGN SHALL BE MODIFIED TO SUPPORT CONSTRUCTION, MATCH FINAL ELECTRICAL INTERCONNECTION STUDIES, EQUIPMENT PURCHASED, AND POSSIBLE PERMIT CONSTRAINTS REVEALED DURING PROJECT'S REVIEW.

NUMBER	PROPERTY OWNER	TAX ID #	NUMBER	PROPERTY OWNER	TAX ID #
1	HALL DAVIS DENNIS	530-9.00-42.03	28	WALTON MICHAEL J & DONNA L	530-13.00-9.02
2	COLEMAN MAUREEN E	530-9.00-42.08	29	WINDER GLADYS O	530-13.00-9.01
3	PEARSON RICHARD W & SHERRY A	530-13.00-81.00	30	RITTS SAMUEL D	530-13.00-94.00
4	COLEMAN MAUREEN E	530-13.00-82.00	31	THOMAS JOHN J	530-13.00-10.08
5	SWAIN MICHELE A	530-13.00-83.00	32	BEAUCHAMP CHARLES L	530-13.00-93.00
6	COLEMAN MAUREEN E	530-9.00-42.00	33	WORKMAN JOLENE ADELE	530-13.00-10.07
7	VEGA CESAR	530-9.00-42.09	34	WRIGHT SHAWN A	530-13.00-92.00
8	HUGHES RONALD L	530-13.00-85.00	35	THOMAS ROBERT J	530-13.00-10.06
9	CLEMENTSON LISA L	530-13.00-6.03	36	DOBRASKI ROBERT E	530-13.00-91.00
10	LAHMAN QUILLLEN SAMANTHA	530-13.00-80.00	37	WIDEN MARK S & MICHELE R WIDEN	530-13.00-10.05
11	JOHNSON DANIEL J	530-13.00-6.02	38	DRUMMOND KEVIN JACOB	530-13.00-90.00
12	OGDEN REGAN M	530-13.00-78.00	39	SMITH CHASTITY	530-13.00-10.04
13	HICKMAN HOWARD G SR	530-13.00-79.00	40	MOLOCK ADRIAN	530-13.00-89.00
14	BARKER EUGENE A	530-13.00-96.00	41	SMITH JAMES A & CAROLYN H	530-13.00-10.03
15	BAKER BRIAN K	530-9.00-42.05	42	EHMANN LINDA	530-13.00-88.00
16	HALSEY DAVID & AUILDA VIDEL	530-13.00-7.00	43	ADAMS CHRISTOPHER R	530-13.00-16.00
17	SMITH WILLIAM P & PAULA	530-13.00-10.01	44	DEBORD EMMET MARK	530-13.00-87.00
18	BOWLIN DANIEL R	530-13.00-10.02	45	GREENE DELILAH ALENA CONWAY & EUGENIA P	530-13.00-15.00
19	LUDWIG JOHN GEORGE & MELVINE C	530-13.00-8.00	46	LAWSON ROBERT J	530-13.00-86.00
20	DUNN TAMMY	530-13.00-10.11	47	CONWAY ALENA J	530-13.00-14.01
21	SMITH WILLIAM P & PAULA LYNN	530-13.00-10.12	48	ISAACS MARK A CYNTHIA D	530-13.00-32.00
22	RICHFIELD FARMS INC	530-9.00-51.00	49	ARMWOOD JAY L	530-13.00-14.00
23	LUDWIG JOHN GEORGE & MELVINE C	530-13.00-8.01	50	ELEY LACONYA	530-13.00-15.01
24	CHINTELLA PATRICIA A	530-13.00-8.02	51	NEWS THOMAS J	530-13.00-13.03
25	BRALEY BENJAMIN	530-13.00-9.00	52	JONES DARREN L	530-13.00-12.00
26	HOFFMN DANIEL & JOYCE P HUNT	530-13.00-9.04	53	BREMERMAN LINDA M	530-13.00-11.00
27	JEFFERSON GEORGE L JR	530-13.00-9.03	54	THOMPSON JAMES & CO INC	530-9.00-71.00

SCALE: 1" = 200'

 SHEET SIZE: 24" BY 36"
 (DRAWING MAY BE PRINTED AT REDUCED SIZE)

1438 Broadway
 10th Floor
 New York, NY 10018
 Phone: 212.221.1782



TRC Project No: 376627.0000.0000



Revisions	
No.	Date
1	02/09/2021

Drawn by:
A. REXROAT
 Design by:
A. REXROAT
 Checked by:
S. MEERSMA

HEIMLICH SOLAR PARTNERS, LLC
EDF RENEWABLES DISTRIBUTED SOLUTIONS
HEIMLICH SOLAR PROJECT
 13831 MILE STRETCH ROAD
 GREENWOOD, DELAWARE 19950

Contract No:
376627
 Scale:
AS NOTED
 Date:
OCTOBER 2020
 Sheet:
EXISTING CONDITIONS
 Drawing No:
1



SYSTEM SUMMARY		
AZIMUTH (°)	180	
ARRAY TILT ANGLE (+/-°)	60	
PITCH (FT)	24.98	
GROUND COVERAGE RATIO (%)	28	
MODULES PER TRACKER / RACK	81	
MODULE WATTAGE (W)	400	445
QUANTITY OF MODULES	3969	9639
QUANTITY OF MODULES PER STRING	27	
RATED DC POWER (kWDC)	5876.96	
RATED AC POWER (kWAC)	4500	
AREA WITHIN FENCE (ACRES)	31.9	
LENGTH OF FENCE (FT)	4953.3	

SYMBOL	DESCRIPTION
	EXISTING PROPERTY LINE
	TRC DELINEATED WETLAND
	PROPOSED PROJECT FENCE
	PROPOSED GRAVE ACCESS DRIVEWAY
	PROPOSED UNDERGROUND CIRCUIT
	PROPOSED OVERHEAD LINE
	PROPOSED OVERHEAD POLES
	EXISTING MAJOR CONTOUR (FEET)
	EXISTING MINOR CONTOUR (FEET)
	TAX DITCH RIGHT-OF-WAY LIMIT

ZONING CONFORMANCE TABLE		
Zoning Code Description	Zoning Code Requirement	Proposed Project
Zoning Designation	General Residential	General Residential
Minimum Lot Area	10,000 square feet	1,403,670 square feet
Minimum Lot Width	150 feet	869 feet
Minimum Lot Depth	100 feet	1,883 feet
Maximum Building Height	42 feet	Not Applicable (Equipment height not more than 12 feet)
Front Yard Depth	40 feet	256 feet
Side Yard Depth	10 feet	377 feet
Rear Yard Depth	10 feet	552 feet

- NOTES**
- AREAS OUTSIDE FENCE TO REMAIN AS OPEN SPACE.
 - ADJOINING PROPERTY OWNER INFORMATION SHOWN ARE FROM SUSSEX COUNTY GIS PORTAL. (HTTPS://MAPS.SUSSEXCOUNTYDE.GOV/P2APPLICATIONS/MAP.HTML)
 - SITE IS NOT LOCATED IN A 100-YEAR OR 500-YEAR FLOOD PLAIN (REFERENCE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C015K).
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1430 Broadway
10th Floor
New York, NY 10018
Phone: 212.221.1782

TRC

TRC Project No: 376627.0000.0000

edf renewables



Revisions:	
No.	Date:
1	02/09/2021

Drawn by:
A. REXROAT

Design by:
A. REXROAT

Checked by:
S. MEERSMA

HEIMLICH SOLAR PARTNERS, LLC
EDF RENEWABLES DISTRIBUTED SOLUTIONS
HEIMLICH SOLAR PROJECT
13831 MILE STRETCH ROAD
GREENWOOD, DELAWARE 19950

Contract No:	376627
Scale:	AS NOTED
Date:	OCTOBER 2020
Sheet:	SITE PLAN
Drawing No:	2

SCALE: 1" = 200'

0 200' 400'

SHEET SIZE: 24" BY 36"
(DRAWING MAY BE PRINTED AT REDUCED SIZE)

SHEET 2



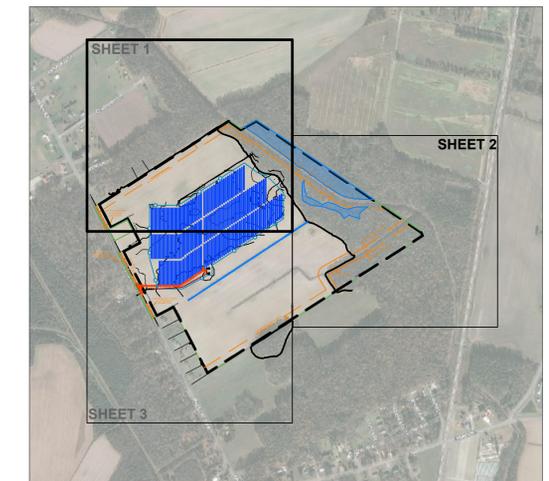
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RATED AC POWER (kWAC)	4500
AREA WITHIN FENCE (ACRES)	31.9
LENGTH OF FENCE (FT)	4953.3

LEGEND

SYMBOL	DESCRIPTION
--- (dashed green)	EXISTING PROPERTY LINE
■ (blue shaded)	TRC DELINEATED WETLAND
○ (blue circles)	PROPOSED PROJECT FENCE
■ (orange hatched)	PROPOSED GRAVE ACCESS DRIVEWAY
— (red)	PROPOSED UNDERGROUND CIRCUIT
— (red with 'OE')	PROPOSED OVERHEAD LINE
⊗ (circle with cross)	PROPOSED OVERHEAD POLES
— (grey)	EXISTING MAJOR CONTOUR (FEET)
— (light grey)	EXISTING MINOR CONTOUR (FEET)
--- (dashed orange)	TAX DITCH RIGHT-OF-WAY LIMIT

ZONING CONFORMANCE TABLE		
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- NOTES**
- AREAS OUTSIDE FENCE TO REMAIN AS OPEN SPACE.
 - ADJOINING PROPERTY OWNER INFORMATION SHOWN ARE FROM SUSSEX COUNTY GIS PORTAL. (HTTPS://MAPS.SUSSEXCOUNTYDE.GOV/P2APPLICATIONS/MAP.HTML)
 - SITE IS NOT LOCATED IN A 100-YEAR OR 500-YEAR FLOOD PLAIN (REFERENCE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 1005C0115K).
 - EXISTING UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIG SAFELY NEW YORK (81) SHALL BE NOTIFIED A MINIMUM OF 72-HOURS PRIOR TO COMMENCING ANY EXCAVATION.
 - TOPOGRAPHY, PROPERTY BOUNDARIES, PARCEL IDENTIFICATION, EXISTING BUILDINGS, AND SETBACKS TAKEN FROM SURVEY LAST REVISED 01/26/2021 BY GREENMAN-PEDERSEN, INC. DE PROFESSIONAL LAND SURVEYOR NO. S6-0000787.
 - THIS IS A PRELIMINARY DESIGN PLAN PROVIDED FOR PERMITTING ONLY. FINAL DESIGN SHALL BE MODIFIED TO SUPPORT CONSTRUCTION. MATCH FINAL ELECTRICAL INTERCONNECTION STUDIES, EQUIPMENT PURCHASED, AND POSSIBLE PERMIT CONSTRAINTS REVEALED DURING PROJECT'S REVIEW.



SCALE: 1" = 100'
 0 100' 200'
 SHEET SIZE: 24" BY 36"
 (DRAWING MAY BE PRINTED AT REDUCED SIZE)

1439 Broadway
 10th Floor
 New York, NY 10018
 Phone: 212.221.1822



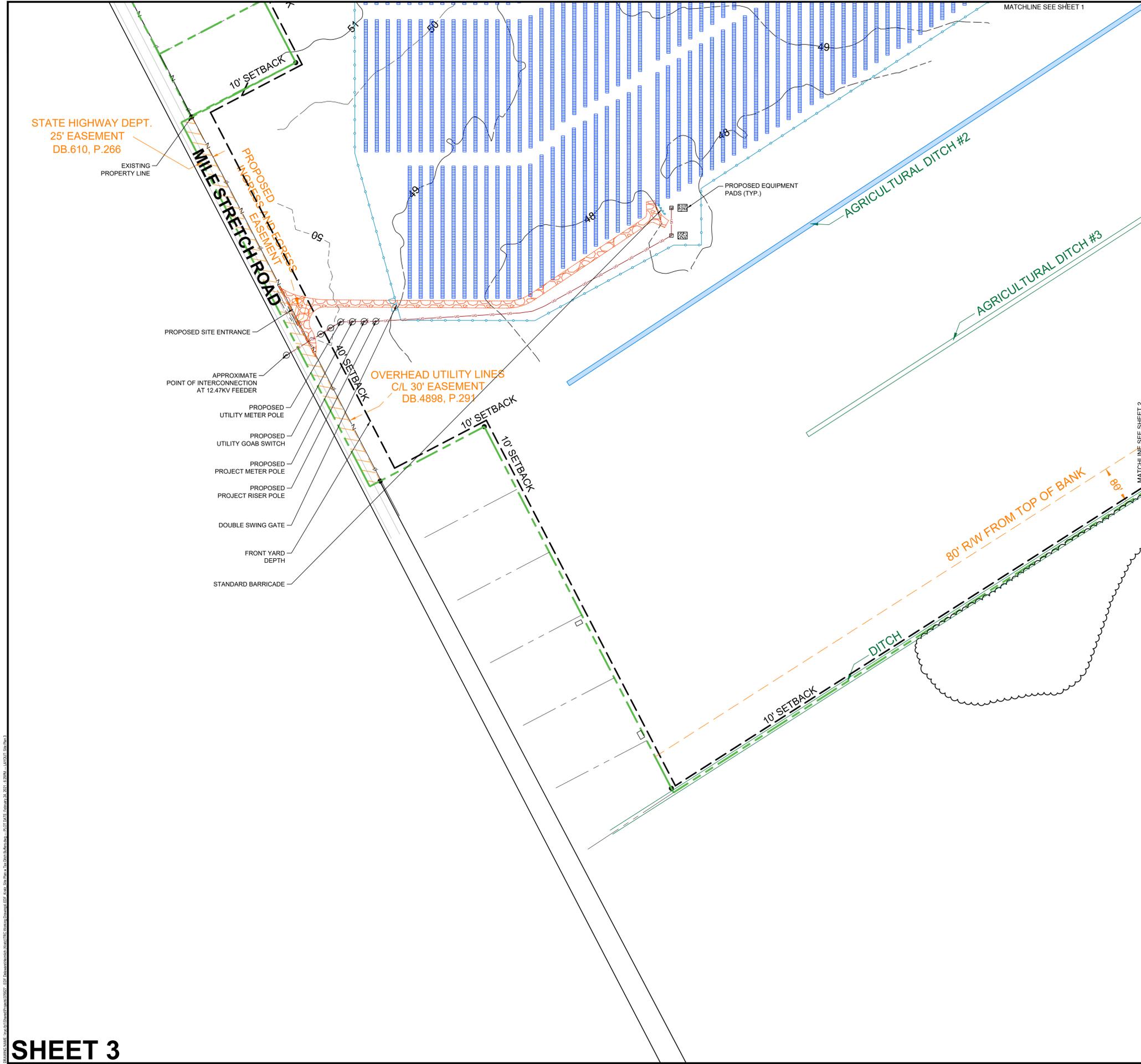
Revisions:

No.	Date
1	02/09/2021

Drawn by:
A. REXROAT
 Design by:
A. REXROAT
 Checked by:
S. MEERSMA

HEIMLICH SOLAR PARTNERS, LLC
EDF RENEWABLES DISTRIBUTED SOLUTIONS
 HEIMLICH SOLAR PROJECT
 13831 MILE STRETCH ROAD
 GREENWOOD, DELAWARE 19950

Contract No:
376627
 Scale:
AS NOTED
 Date:
OCTOBER 2020
 Sheet:
SITE PLAN - 2 OF 3
 Drawing No:
2



SYSTEM SUMMARY		
AZIMUTH (°)	180	
ARRAY TILT ANGLE (+/-°)	60	
PITCH (FT)	24.98	
GROUND COVERAGE RATIO (%)	28	
MODULES PER TRACKER / RACK	81	
MODULE WATTAGE (W)	400	445
QUANTITY OF MODULES	3969	9639
QUANTITY OF MODULES PER STRING	27	
RATED DC POWER (KWDC)	5876.96	
RATED AC POWER (KWAC)	4500	
AREA WITHIN FENCE (ACRES)	31.9	
LENGTH OF FENCE (FT)	4953.3	

SYMBOL	DESCRIPTION
	EXISTING PROPERTY LINE
	TRC DELINEATED WETLAND
	PROPOSED PROJECT FENCE
	PROPOSED GRAVE ACCESS DRIVEWAY
	PROPOSED UNDERGROUND CIRCUIT
	PROPOSED OVERHEAD LINE
	PROPOSED OVERHEAD POLES
	EXISTING MAJOR CONTOUR (FEET)
	EXISTING MINOR CONTOUR (FEET)
	TAX DITCH RIGHT-OF-WAY LIMIT

ZONING CONFORMANCE TABLE		
Zoning Code Description	Zoning Code Requirement	Proposed Project
General Residential	General Residential	General Residential
Minimum Lot Area	10,000 square feet	1,403,670 square feet
Minimum Lot Width	150 feet	869 feet
Minimum Lot Depth	100 feet	1,883 feet
Maximum Building Height	42 feet	Not Applicable (Equipment height not more than 12 feet)
Front Yard Depth	40 feet	256 feet
Side Yard Depth	10 feet	377 feet
Rear Yard Depth	10 feet	552 feet

- NOTES**
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SCALE: 1" = 100'

 SHEET SIZE: 24" BY 36"
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1438 Broadway
 10th Floor
 New York, NY 10018
 Phone: 212.221.1782

TRC

TRC Project No: 376627.0000.0000

edf renewables



Revisions:	
No.	Date:
1	02/09/2021

Drawn by:
A. REXROAT

Design by:
A. REXROAT

Checked by:
S. MEERSMA

HEIMLICH SOLAR PARTNERS, LLC
EDF RENEWABLES DISTRIBUTED SOLUTIONS
 HEIMLICH SOLAR PROJECT
 13831 MILE STRETCH ROAD
 GREENWOOD, DELAWARE 19950

Contract No:
376627

Scale:
AS NOTED

Date:
OCTOBER 2020

Sheet:
SITE PLAN - 3 OF 3

Drawing No:
2

SHEET 3



600 Willowbrook Lane
Suite 618
West Chester, PA 19382

T 610.834.0490
TRCcompanies.com

October 13, 2020

Christin Scott, Planner
Sussex County Planning & Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947

Dear Ms. Scott,

On behalf of Heimlich Solar Partners, LLC (Heimlich), TRC Environmental Corp. (TRC) is pleased to present the enclosed application for a Conditional Use Permit for the installation of a solar generating facility. Heimlich proposes to construct and operate a 4.5 MWac photovoltaic generating facility on an approximately 143-acre property on Mile Stretch Road, Greenwood, Sussex County, DE.

The application package includes the following materials:

- Signed Application form
- Site plans
- Mailing List Application
- DelDOT Level
- Project Narrative providing supplemental information
- Deed (included as Appendix B to Project Narrative)
- \$500 application fee (To be sent under separate cover)

If you have any questions regarding the application, please feel free to contact me at ckayser@trccompanies.com or (610) 952-2828.

Sincerely,

A handwritten signature in black ink that reads "Chad Kayser".

Chad Kayser, Senior Project Manager
TRC

Enc. CUP Application Package

**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

Type of Conditional Use Requested:

Tax Map #: _____ **Size of Parcel(s):** _____
Current Zoning: _____ **Proposed Zoning:** _____ **Size of Building:** _____

Land Use Classification:

Water Provider: _____ **Sewer Provider:** _____

Applicant Information

Applicant Name: _____
Applicant Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ E-mail: _____

Owner Information

Owner Name: _____
Owner Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ E-mail: _____

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: _____
Agent/Attorney/Engineer Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ E-mail: _____



Check List for Sussex County Planning & Zoning Applications

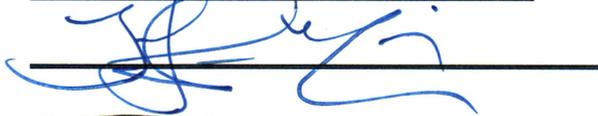
The following shall be submitted with the application

- 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.**
- DeIDOT 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 my 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: 10/7/2020

Signature of Owner



Date: 10/7/20

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: _____

Mailing List Application Form

For Applications Requiring a Public Hearing in Sussex County

Please fill out this form and return it with your application. As a part of your application, a Public Hearing is required. The property owners within 200' of the site of the application will be notified. Staff will notify the property owners.

Application Information:

Site Address:

Parcel #:

Site Address:

Parcel #:

Applicant Name:

Owner Name:

Type of Application:

Conditional Use:

Change of Zone:

Subdivision:

Board of Adjustment:

Date Submitted:

For office use only:

Date of Public Hearing: _____

File #: _____

Date list created: _____ List created by: _____

Date letters mailed: _____ Letters sent by: _____



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

JENNIFER COHAN
SECRETARY

September 9, 2020

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 **Heimlich Solar Partners, LLC** conditional use application, which we received on August 11, 2020. This application is for a 142.79-acre parcel (Tax Parcel: 530-13.00-10.00). The subject land is located on the east side of Mile Stretch Road (Sussex Road 590), approximately 2,500 feet south of the intersection of Scotts Store Road (Sussex Road 32) and Mile Stretch Road. The subject land is currently zoned as AR-1 (Agricultural Residential) and the applicant is seeking a conditional use approval to develop a 4.7MW AC solar photovoltaic project.

Per the 2019 Delaware Vehicle Volume Summary, the annual average daily traffic volume along the segment of Mile Stretch Road where the subject land is located is 979 vehicles per day.

Based on our review, 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.

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.



Mr. Jamie Whitehouse
Page 2 of 2
September 9, 2020

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. Claudy Joinville, at (302) 760-2124, if you have questions concerning this correspondence.

Sincerely,

Trey Bustel for

T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:cjm

cc: Constance C. Holland, Coordinator, Cabinet Committee on State Planning Issues
Heimlich Solar Partners, LLC, Applicant
Todd Sammons, Assistant Director, Development Coordination
Gemez Norwood, South District Public Works Manager, Maintenance & Operations
Susanne K. Laws, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Manager, Development Coordination
Kevin Hickman, Subdivision Manager, Development Coordination
Brian Yates, Subdivision Manager, Development Coordination
John Andrescavage, Subdivision Manager, Development Coordination
James Argo, South District Project Reviewer, Maintenance & Operations
Troy Brestel, Project Engineer, Development Coordination
Claudy Joinville, Project Engineer, Development Coordination



Conditional Use Plan Supplemental Information

October 2020

Heimlich Solar Project

13831 Mile Stretch Road
Greenwood, DE 19950

Prepared For:

Heimlich Solar Partners, LLC
EDF Renewables Distributed Solutions
9175 Guilford Road, Ste 202
Columbia, MD 21046

Prepared By:

TRC Environmental Corp.
600 Willowbrook Lane, Suite 618
West Chester, PA 19382



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APPENDICES

Appendix A Figures

- Figure 1 – Site Location Map - USGS
- Figure 2 – Site Location Map – Aerial Imagery
- Figure 3 – Mapped Wetlands and Flood Plains
- Figure 4 – Delineated Wetlands and Watercourses
- Figure 5 – Soils Map

Appendix B Property Deed

Appendix C Environmental Review Documents

- USFWS IPaC Resource List
- DE Division of Fish and Wildlife Environmental Review Response Letter
- DE SHPO CHRIS Mapping



1.0 Introduction

Heimlich Solar Partners, LLC (Heimlich), a subsidiary of EDF Renewables Distributed Solutions, Inc., propose to construct and operate an approximately 4.5 Megawatt AC (MWac) solar generating facility (the Project) on a property adjacent to Mile Stretch Road (Tax/Parcel ID: 530-13.00-10.00) in Greenwood, Sussex County, Delaware (Project site).

This document presents additional information for the Sussex County Planning & Zoning Commission to consider as it deliberates issuing a Conditional Use Permit for the Project under Section 115-22 of Zoning Ordinance for Sussex County (zoning ordinance).

Section 2.0 describes the proposed solar generating facility and Section 3.0 describes the existing site conditions.

1.1 About the Applicant

EDF Renewables is a leading developer and constructor of solar, battery energy storage, and electric vehicle charging solutions in North America. Our company has over 30 years of experience in the development of distributed solar projects for utility companies, electric cooperatives, and large energy users throughout the US. EDF Renewables has developed or constructed over 950 MW of distributed generation projects ranging in size from a 0.6 MW rooftop project constructed at ESPN's headquarters in Connecticut to a 29 MW Delta Solar Project developed and constructed for the Lansing Board of Water & Light in Michigan.

Heimlich Solar is being developed in partnership with Delaware Electric Cooperative (DEC) and Old Dominion Electric Cooperative (ODEC). It is one of a dozen distributed solar energy projects under development across ODEC's service territory in Delaware, Maryland, and Virginia designed to provide clean, renewable energy utilized locally by member-owned electric cooperatives. The Heimlich Solar facility has been specifically sized to supplement the energy consumption of homes and businesses in Richmond County that are serviced by the DEC distribution network. Siting power generation in communities where electricity is consumed, reduces the need for costly transmission system upgrades throughout the region.

1.2 Benefits of Solar Power Generation

Solar generating facilities such as the Project provide the following benefits to the community:

- Generates clean, renewable electricity without using water, creating emissions or producing waste products;
- Places little to no demand on County infrastructure and services including roads, water, sewer, fire, emergency medical services or schools;
- Diversifies the region's electricity generation mix, which reduces the reliance on natural gas and other fuels that are subject to high price volatility;
- Reduces the need for long-term transmission system upgrades by siting power generation in communities where electricity is consumed;
- Creates jobs during construction of the project with indirect economic benefits in the form of local contracting opportunities, equipment sales and rentals, material purchases, and spending on hotels, restaurants and other local goods and services;
- Low visual profile and quiet operations preserve the rural, open-space character of the area; and

- Land may be returned to previous agricultural use at end of the project's life.

2.0 Project Description

Heimlich proposes to construct an approximately 4.5 MWac solar generating facility at the Project site as described in Section 3.0. The following sections provide a brief overview of the major components and potential impacts of the Project.

2.1 Solar Array

The primary component of the solar generating facility is the array of solar panels. Approximately 15,700 photovoltaic panels attached to tracking mounts will be arranged in lines as shown in the site plans accompanying the CUP application.

To the extent practicable, electrical connections within the array will be underground.

2.2 Access Road

A gravel access road, approximately 200 feet in length will allow access to the site. The access road connects to Mile Stretch as shown in the site plans. It should be noted that DelDot completed a Service Level Evaluation and issued a response stating that a Traffic Impact Study (TIS) would not be required.

2.3 Equipment Skids and Interconnection line

The electrical equipment necessary to transform the DC produced by the solar panels into AC and to step up the voltage for interconnection to the local grid will be installed on skids at the end of the access drive.

The interconnection line from the electrical equipment to the interconnection point runs roughly parallel to the access road. The interconnection line is underground for about half of its length prior to transitioning to pole-mounted, aboveground conductor. The approximate point of interconnection is on the opposite side of Mile Stretch Road from the Project site and is depicted on the site plans.

The Project may incorporate a battery energy storage system (BESS) to store electricity generated by the photovoltaic modules and dispatch the energy to the local distribution system during times of higher demand.

2.4 Fence Line

A perimeter fence line, approximately 5,550 feet long will surround the Project site to limit unauthorized access. The Project use fixed knot agricultural fencing. A single gate will allow access to the Project site. The gate will be locked by a KnoxBox, or similar system, so that emergency responders will have access to the Project site. Approximately 35.4 acres will be enclosed by the perimeter fence.

2.5 Wetland Impacts

The Project has been designed so that no project components will be installed within a wetland or a wetland buffer zone.

2.6 Tree Clearing

The project scope calls for no tree clearing to occur onsite. This will help support visual buffering outside of the fence line.

2.7 Traffic

During operations, the Project will be monitored remotely so there will be no daily vehicle trips to the Project site by staff. The operator anticipates no more than 1-2 vehicle trips monthly for regular maintenance activities.

2.8 Zoning

The Project has been designed to comply with all zoning setbacks for the GR zoning district.

2.9 Decommissioning

The expected life of the Project is approximately 25 to 35 years. In general, within 12 months of the end of the Project's operational life, the applicant will remove all solar panels, cabling, electrical equipment, fencing, and any other associated equipment, facilities and structures to a depth of at least 36 inches. The majority of the equipment will be composed of recyclable materials including steel, aluminum, copper, and glass. These materials will be recycled to the extent possible to minimize waste streams. Select roads, driveways, fences and other property improvements including landscaping may remain for future use by the landowner. The lease agreement with the land owner ensures the removal of the power generating equipment at the end of the Project life. If an entity purchase the Project or the parcel an agreement will be signed with county officials that ensures proper decommissioning and removal of the equipment.

3.0 Site Description

3.1 General Description

The Project site comprises a single, 142.8-acre parcel adjacent to 13831 Mile Stretch (Tax/Parcel ID 530-13.00-10.00) in Greenwood, Sussex County, Delaware (**see Appendix A, Figure 1**). The parcel is currently owned by Tull Group, LLC (**see Appendix B**) and consists primarily of open land in active agricultural use and forested land.

The Project site is in the General Residential (GR) zoning district. Surrounding land uses include agricultural and low-density residential areas.



Photo 1: Central Portion of Project Site Facing NE



Photo 2: Southern Portion of Project site Facing SE

3.2 Aquatic Resources

3.2.1 Hydrology

The Project is located within Delaware's defined Nanticoke watershed (DNR 8-digit scale watershed 02080109), the Upper Nanticoke watershed (DNR 10-digit scale watershed 0208010901), and the Upper Nanticoke sub-watershed (DNR 12-digit watershed 020801090101).

The Project Site is located within the USGS-defined Western Lower Delmarva in the Nanticoke sub-basin (Hydrologic Unit Code [HUC] 02080109) and the Headwaters Nanticoke River sub-watershed (HUC 020801090402) of the Upper Nanticoke River watershed (HUC 0208010904).

3.2.2 Mapped Wetlands

USFWS NWI maps illustrate wetland habitats and vegetation communities using interpretation of aerial photography. The data on these maps provide general boundaries of potential wetlands and require ground surveys to accurately define the boundaries of wetlands present, if any, and determine their proper classification.

Review of the NWI mapping during the preliminary desktop analysis indicated one (1) large contiguous NWI wetland with five (5) components and two (2) riverine habitats located within the Project Site. This wetland is in the northeastern portion and southeastern portion of the Study Area. The wetland appears to follow the tree line and extends outside the boundary of the Study Area. (see Appendix A, Figure 3).

3.2.3 Delineated Wetlands and Watercourses

Wetland scientists from TRC completed a wetland and watercourse delineation of the Project site on May 26, 2020. Three (3) wetlands, one (1) perennial stream, and three (3) agricultural ditches were delineated during the field survey. The locations of the delineated wetlands and watercourses are depicted on **Figure 4 in Appendix A**.

These site features are further described below.

Wetland W-1

Wetland W-1 is a 0.39-acre palustrine emergent (PEM) wetland located within Agricultural Ditch #2 across the agricultural field, running southwest to northeast. This wetland ends at the forested tree line, where it continues as Agricultural Ditch #2. W-1 is located to the south of Agricultural Ditch #1. Hydrology originates from stormwater surface flow and a shallow water table. Primary indicators of wetland hydrology included high water table (A2), saturation (A3), algal mat or crust (B4), and oxidized rhizospheres on living roots (C3). Dominant vegetation includes shallow sedge (*Carex lurida*), common rush (*Juncus effusus*), and willow oak (*Quercus phellos*). Soils have a clay loam texture. Hydric soil indicator included depleted matrix (F3). Soils mapped by the NRCS in the vicinity of wetland W-1 consisted of Fallsington sandy loams, 0 to 2 percent slopes (FacA).

Wetland W-2

Wetland W-2 is a 6.64-acre palustrine forested (PFO) wetland located to the northeast of S-1 (Grubby Neck Branch) in a forested area, along the eastern Project Site boundary. W-2 runs adjacent and parallel to S-1, where it continues east and south off the property boundary. Hydrology originates from the hillside slope to the northeast as well as the close proximity to a perennial stream (Grubby Neck Branch) to the west. Primary indicators of wetland hydrology include aquatic fauna (B13). Secondary indicators of wetland hydrology include sparsely vegetated concave surface (B8), drainage patterns (B10), geomorphic position (D2), and FAC-Neutral Test (D5). Dominant vegetation includes red maple (*Acer rubrum*), American holly (*Ilex opaca*), and blackgum (*Nyssa sylvatica*). Soils have a sandy loam and sand texture. Hydric soil indicator included depleted matrix (F3). Soils mapped by the NRCS in the vicinity of wetland W-2 consisted of Fallsington sandy loams, 0 to 2 percent slopes (FacA).

Wetland W-3

Wetland W-3 is a 1.45-acre palustrine forested (PFO) wetland located northeast of W-1, south of W-2 and south of S-1. Agricultural Ditch #2 intersects W-3 inside a forested area adjacent to S-1. W-3 is located along the eastern Project Site boundary. Hydrology originates from a shallow water table and close proximity to S-1. Primary indicators of wetland hydrology include high water table (A2), saturation (A3), and oxidized rhizospheres on living roots (C3). Dominant vegetation includes Japanese stiltgrass (*Microstegium vimineum*) and red maple (*Acer rubrum*). Soils have a loam and sandy loam texture. The hydric soil indicator included sandy redox (S5). Soils mapped by the NRCS in the vicinity of W-3 consisted of Fallsington sandy loams, 0 to 2 percent slopes (FacA).

Table 1: Delineated Wetlands

Wetland Field Designation	Cover Type and Classification			Delineated Size (ac.)	Potential Jurisdictional Statutes	Buffer Requirements	Watershed (HUC 8)
	PEM	PSS	PFO				
W-1	X	-	-	0.39	USACE / DNREC	0-ft.	02080109
W-2	-	-	X	6.64	USACE / DNREC	0-ft.	02080109
W-3	-	-	X	1.45	USACE / DNREC	0-ft.	02080109

Watercourse S-1

Waterbody S-1 is a perennial stream with low flow that is approximately 9 feet wide with bank heights varying from 4-feet to 6-feet high. S-1 water flow ranges from 6 inches to 2 feet deep. The substrate is silty mucky with wetland vegetation such as reed canary grass and originates from northern corner of the project parcel and flows to the southeast exiting the project Study Area to the east. S-1 continues outside of the SA and flows south through a forested area eventually connecting with the Nanticoke River downstream. Waterbody S-1 corresponds to NWI-mapped riverine habitat, R2UBH. This stream originates near Scotts Store Road to the northwest.

Agricultural Ditches #1, 2 & 3

Agricultural ditches #1, 2 and 3 are all manmade ditches designed to drain water into and away from the surrounding agricultural farming plots. Agricultural ditch #1 is the northern most ditch and runs southwest to northeast with a surface connection to S-1. Agricultural ditch #1 is approximately 1,188-feet in length. Agricultural ditch #1 was predominately dry with periodic sections of saturation along the length of the ditch. Agricultural ditch #2 is located in the center of the SA and runs southwest to northeast bisecting W-3 and drains into S-1. Agricultural ditch #2 is approximately 2,337-feet in length. Wetland, W-1 is situated within the southwestern half of Agricultural ditch #2. Agricultural ditch #3 is located in the southern portion of the SA and runs southwest to northeast with a connection to S-1 north of the SA boundary. The majority of the ditch was inundated with water. Agricultural ditch #3 is approximately 2,733-feet in length. Along the midpoint of Agricultural ditch #3 a lateral ditch connects with the main Agricultural ditch #3 from the east boundary of the SA.



Photo 1: Example of Agr. Ditch. North Portion of Project Site Facing East

Table 2: Delineated Waterbodies

Watercourse ID	Watercourse Classification	Linear feet within Project Site	Watershed (8-HUC)	Top of Bank Width (ft.)	Potential Jurisdictional Statutes	Latitude	Longitude	Sussex County Buffer
S - 1	Perennial	1,970	02080109	9	USACE/DNREC	38.797163°	- 75.602708°	50-ft.
Ag Ditch #1	-	1,188	02080109	9	USACE/DNREC	38.796879°	- 75.605978°	0-ft.
Ag Ditch #2	-	2,337	02080109	9	USACE/DNREC	38.794725°	- 75.603586°	0-ft.
Ag Ditch #3	-	2,733	02080109	10	USACE/DNREC	38.793932°	- 75.602641°	0-ft.
Total Linear Feet within Project Site		8,228						

3.3 Hydric Soils

Based on a review of the USDA NRCS Web Soil Survey, 63.8 percent of the soils have at least one hydric soil component (**Appendix A, Figure 5**).

Table 3: Hydric Soils

Map Symbol	Map Unit Name	Percent in Project Area
FacA	Fallsington sandy loam, 0 to 2 percent slopes	48.6
MmA	Mullica mucky sandy loam, 0 to 2 percent slopes	0.7
WdcA	Woodstown sandy loam, 0 to 2 percent slopes	11.6
WddA	Woodstown sandy loam, 0 to 2 percent slopes	2.9

3.3.1 Floodplains

Based on a review of FEMA’s National Flood Hazard Layer (NFHL) the entirety of the Study Area is located in Flood Insurance Rate Map (FIRM) Community Panel 10005C0115K (effective 03/16/2015) and is outside of the 100/500-year floodplain. The Project site is located within an Area of Minimal Flood Hazard, Zone X (**Appendix A, Figure 3**).

3.4 Endangered Resources

3.4.1 Federally Listed Threatened and Endangered Species

The USFWS did not list any threatened and endangered species within the Study Area.

3.4.2 State-Listed Threatened and Endangered Species

TRC sent a request for consultation with regard to threatened and endangered species within the Study Area on March 25, 2020 via email to the DE Division of Fish and Wildlife and received a response to the request on April 20, 2020 (**Appendix C**). The DE Division of Fish and Wildlife indicated that there are currently no records of state-rare or federally listed plants, animals or natural communities within the Study Area. Therefore, the Study Area does not lie within a State Natural Heritage Site or a Delaware National Estuarine Research Reserve. Additionally, the DE Division of Fish and Wildlife has indicated that there are presently no concerns regarding fisheries within the Study Area. It should be noted that the DE Division of Fish and Wildlife is assuming no waterways will be impacted based on the limited description of the Project undertaken provided during consultation. Therefore, additional consultation may be required should impacts to waterways be deemed necessary for Project construction or operation. If the proposed Project is delayed for more than one year past the date of the review response letter, the DE Division of Fish and Wildlife should be contacted again to receive current and updated information for the Study Area.

3.4.3 Migratory Birds and Eagles

According to the USFWS IPaC website, the bald eagle (*Haliaeetus leucocephalus*) was identified to potentially occur in the Study Area (**Appendix C**). Potential habitat for eagles will be identified through field investigations and agency consultation in order to maintain compliance with the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act. The Study Area contains a variety of habitats and therefore may support the species; however bald eagles typically breed and winter in forested areas adjacent to large bodies of open water (Cornell University, 2020). The USFWS identified breeding time frame for bald eagles is October 15 to August 31. While the Study Area does contain portions of deciduous forest, it is not located in the vicinity of a large body of open water.

3.5 Sensitive Habitat Assessment

No sensitive habitat was identified within the designated Study Area based on the desktop analysis. The USFWS IPaC has not identified any wildlife refuge land or fish hatcheries within the Study Area and there are no natural lands within the Study Area based on the Delaware Environmental Navigator.

3.6 Airports

A review of online resources shows no airports within the immediate vicinity of the Study Area. A small privately-owned rural airport, the Sugar Hill Airport, is located approximately 1.6 miles to the southeast. This small airport was identified on Google Earth Transportation Layers and publicly available data on AirNav.com. A review of online aerial imagery does not show any hard-paved surfaces, large buildings or other structures normally associated with a developed airfield. The

airfield in question is in an open agricultural field with an earthen runway with a couple of buildings that may operate as hangars.

3.7 Farmland Classification

Areas of prime farmland, farmland of statewide importance, and not prime farmland were also identified based on the USDA NCRS web soil survey. Within the Study Area, approximately 0.7 percent of soils are classified as prime farmland if drained, 50.8 percent of soils are classified as prime farmland, and 48.6 percent of soils are classified as farmland of statewide importance (**Appendix A, Figure 3**). Based on the Delaware Department of Agriculture interactive mapper, there are not Agricultural Preservation Districts or Agricultural Conservations Easements identified within the Study Area.

Table 4: Farmland Classification within the Study Area

Map Symbol	Map Unit Name	Farmland Classification	Percent in Study Area
FacA	Fallsington sandy loam, 0 to 2 percent slopes	Farmland of statewide importance	48.6
HbA	Hambrook sandy loam, 0 to 2 percent slopes	All areas are prime farmland	36.3
MmA	Mullica mucky sandy loam, 0 to 2 percent slopes	Prime farmland if drained	0.7
WdcA	Woodstown sandy loam, 0 to 2 percent slopes	All areas are prime farmland	11.6
WddA	Woodstown sandy loam, 0 to 2 percent slopes	All areas are prime farmland	2.9

3.8 Cultural Resources

3.8.1 Archeological, Historical, and Cultural

Research utilizing the DE SHPO web-based CHRIS helped identify cultural resources within a one-mile radius of the Study Area. One (1) archaeological site has been previously recorded within a one-mile radius of the Study Area, located approximately 0.98 miles northeast of the Study Area; however, no archaeological sites have been identified within the Study Area. A NRHP determination is not available for this site. One (1) archaeological survey has been conducted within a one-mile radius of the Study Area, which includes a small portion of the northeastern boundary of the Study Area (**Appendix C**).

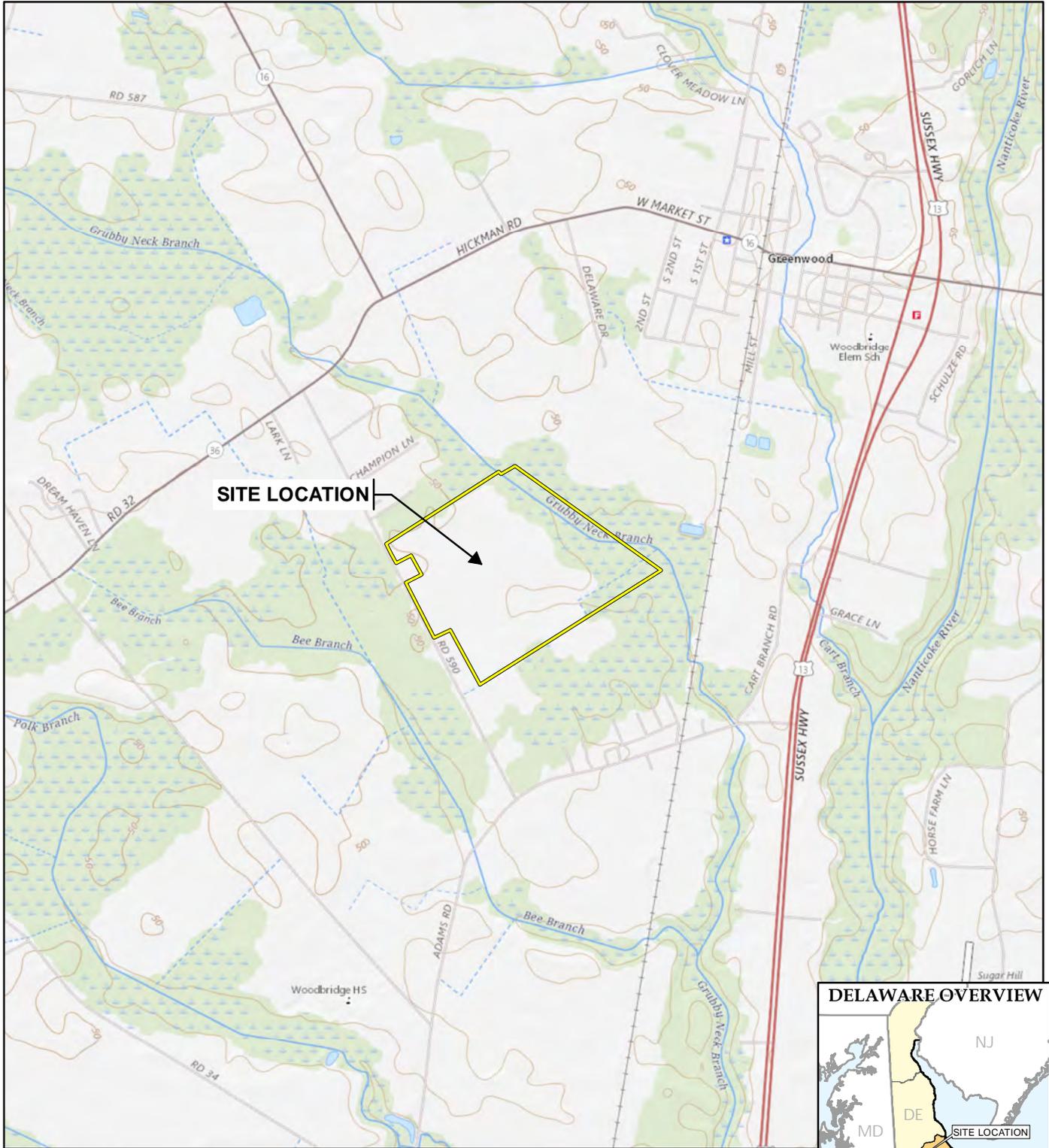
No previously identified architectural resources are located within the Study Area; however, at least 50 architectural resources are located within a one-mile radius of the Study Area, primarily clustered around the Town of Greenwood. The closest previously identified architectural resource to the Project area is 0.25 miles away (**Appendix C**). According to modern aerials, no structures or resources are extant within the boundaries of the Study Area.

Historic map research indicates that the parcel is sensitive for historic resources. Historic maps dating to 1950 indicate the presence of two (2) roads bisecting the parcel and two (2) structures located within the center of the parcel along the roads. Neither structure is noted on the 1955

historic map and no extant structures are noted within the Study Area. The Study Area has been most recently been used for agricultural purposes.

Appendix A: Figures

- Figure 1 – Site Location Map - USGS**
- Figure 2 – Site Location Map – Aerial Imagery**
- Figure 3 – Mapped Wetlands and Flood Plains**
- Figure 4 – Delineated Wetlands and Watercourses**
- Figure 5 – Soils Map**



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



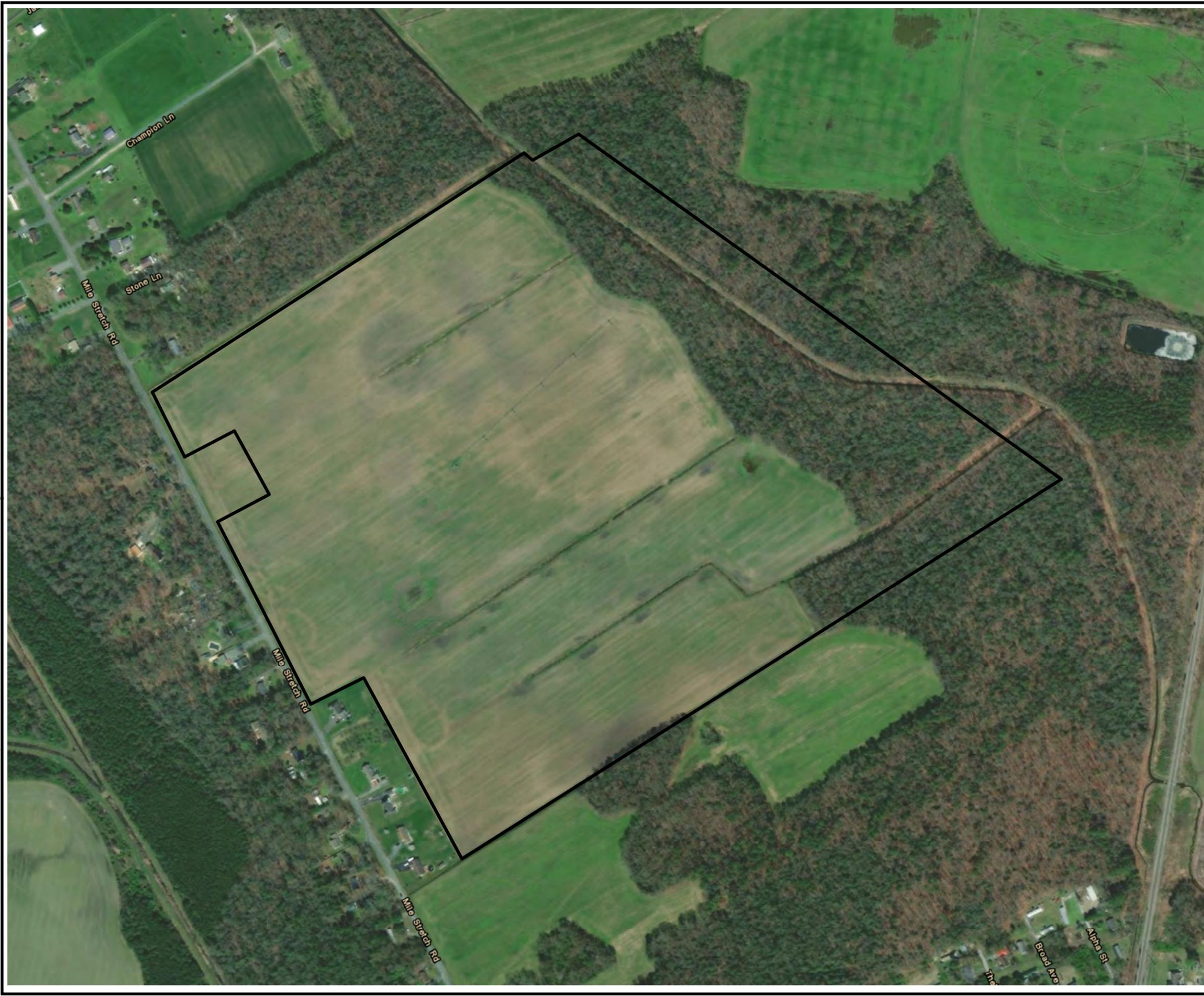

610 Willowbrook Ln
Suite 618
West Chester, PA 19382
Phone: 610.834.0490

TRC - GIS

PROJECT:	EDF RENEWABLES DISTRIBUTED SOLUTIONS HEIMLICH SOLAR PARTNERS, LLC MILE STRETCH RD., SUSSEX COUNTY, DELAWARE
TITLE:	SITE LOCATION MAP

DRAWN BY:	D. SWEENEY
CHECKED BY:	A. HESSLER
APPROVED BY:	C. KAYSER
DATE:	MARCH 2020
PROJ. NO.:	376627.2000
FILE:	Heimlich_Fig_1_Loc_8x11P.mxd

FIGURE 1

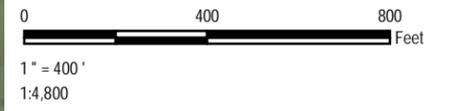


LEGEND

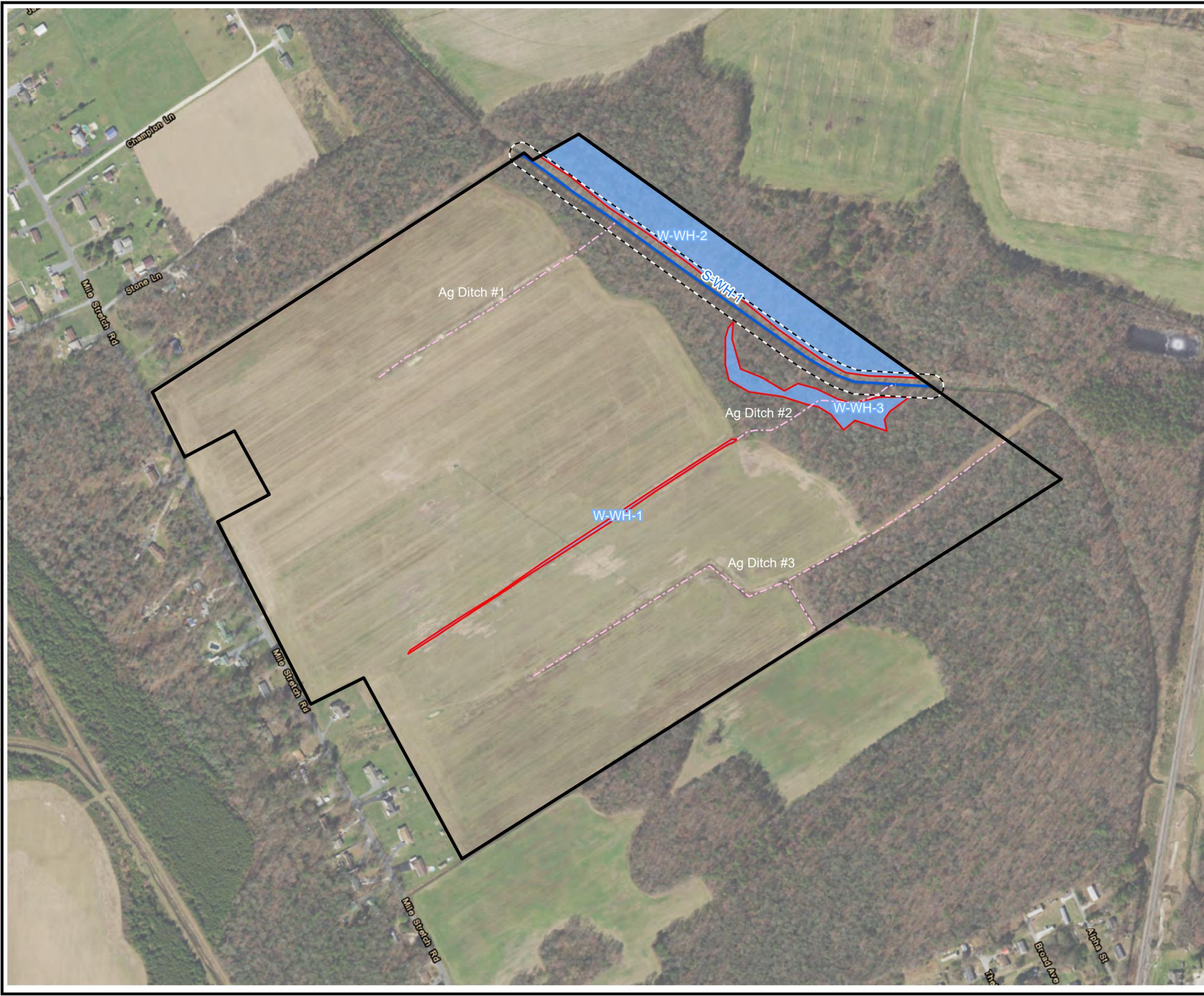
 STUDY AREA

NOTES

- 1. BASE MAP IMAGERY FROM ESRI WORLD IMAGERY SERVICE MARCH 2020



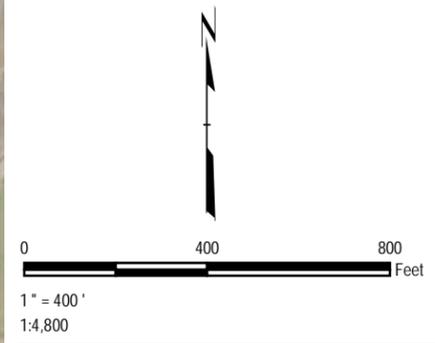
PROJECT:		EDF RENEWABLES DISTRIBUTED SOLUTIONS HEIMLICH SOLAR PARTNERS, LLC MILE STRETCH RD., SUSSEX COUNTY, DELAWARE	
TITLE:		AERIAL SITE LOCATION MAP	
DRAWN BY:	D.SWEENEY	PROJ. NO.:	376627.2000
CHECKED BY:	A. SLAYTON	FIGURE 2	
APPROVED BY:	C. KAYSER		
DATE:	OCTOBER 2020		
		610 Willowbrook Ln Suite 618 West Chester, PA 19382 Phone: 610.834.0490	
FILE NO.:		Heimlich_Fig_2_Site_Plan_8x11P_20201008.mxd	



LEGEND

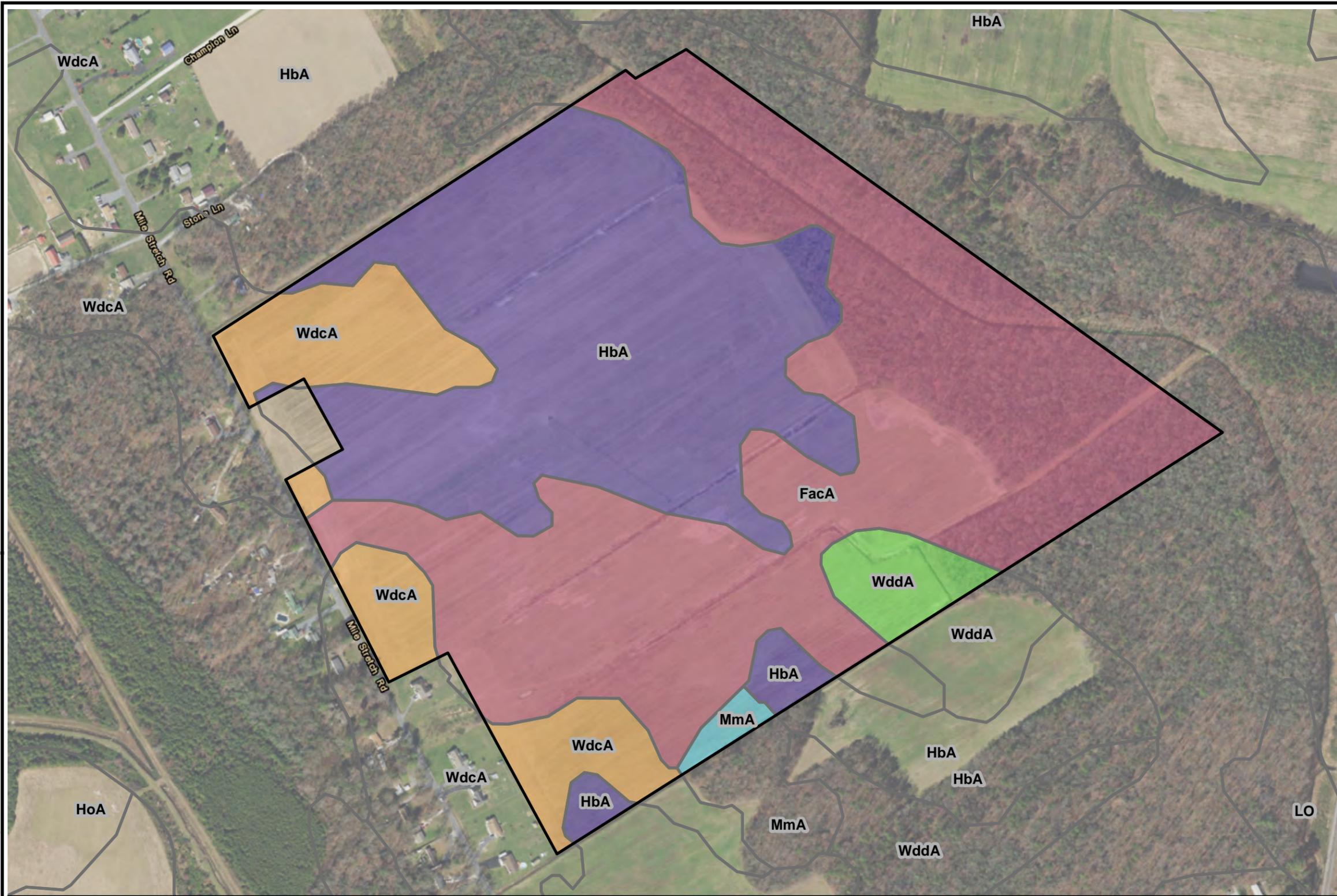
- STUDY AREA
- PERENNIAL STREAM
- AGRICULTURAL DITCH
- DELINEATED WETLAND BOUNDARY
- DELINEATED WETLAND
- 50FT VEGETATED BUFFER ZONE

- NOTES**
1. BASE MAP IMAGERY FROM ESRI WORLD IMAGERY SERVICE MARCH 2017
 2. FIELD DELINEATIONS CONDUCTED ON 5/26/2020



PROJECT:		EDF RENEWABLES DISTRIBUTED SOLUTIONS HEIMLICH SOLAR PARTNERS, LLC MILE STRETCH RD., SUSSEX COUNTY, DELAWARE	
TITLE:			
DELINEATED WETLANDS AND STREAMS			
DRAWN BY:	D. SWEENEY	PROJ. NO.:	376627.2000
CHECKED BY:	S. GREENBERG	FIGURE 4	
APPROVED BY:	C. KAYSER		
DATE:	JUNE 2020		
		610 Willowbrook Ln Suite 618 West Chester, PA 19382 Phone: 610.834.0490	
FILE NO.:		Heimlich_Fig_4_Delineation_8x11P.mxd	

TRC - GIS
 Coordinate System: NAD 1983 2011 StatePlane Delaware FIPS 0700 F1 US (Foot US)
 Map Rotation: 0
 Plot Date: 3/24/2020 13:54:26 PM by DSWEENEY -- LAYOUT: ANS1B(11"x17")
 Path: S:\PROJECTS\EDF_Renewables\Heimlich\Heimlich_Fig_3_Soils_8x11P.mxd



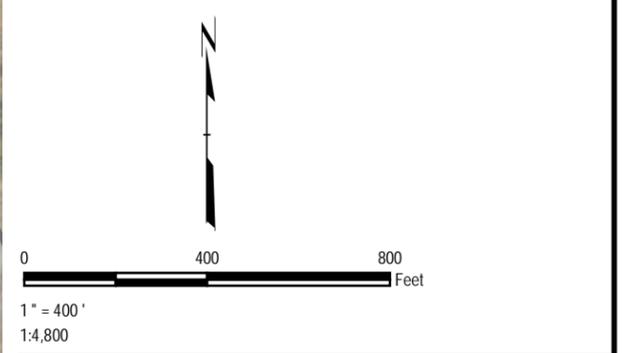
LEGEND

STUDY AREA

HEIMLICH SOILS

- FacA - FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, MID-ATLANTIC COASTAL PLAIN
- HbA - HAMBROOK SANDY LOAM, 0 TO 2 PERCENT SLOPES
- MmA - MULLICA MUCKY SANDY LOAM, 0 TO 2 PERCENT SLOPES
- WdcA - WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, MID-ATLANTIC COASTAL PLAIN
- WddA - WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA

- NOTES**
1. BASE MAP IMAGERY FROM ESRI WORLD IMAGERY SERVICE MARCH 2017
 2. SOILS DATA ACQUIRED FROM USDA/NRCS SSURGO SOILS DATABASE.



Map Unit Symbol	Map Unit Name	Drainage Class	Hydric Rating %	% Of Study Area	Farmland Classification
FacA	Fallsington sandy loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	Poorly drained	78	48.62	Farmland of statewide importance
HbA	Hambrook sandy loam, 0 to 2 percent slopes	Well drained	0	36.29	All areas are prime farmland
MmA	Mullica mucky sandy loam, 0 to 2 percent slopes	Very poorly drained	100	0.73	Prime farmland if drained
WdcA	Woodstown sandy loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	Moderately well drained	6	11.53	All areas are prime farmland
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	Moderately well drained	6	2.84	All areas are prime farmland

PROJECT: **EDF RENEWABLES DISTRIBUTED SOLUTIONS
HEIMLICH SOLAR PARTNERS, LLC
MILE STRETCH RD., SUSSEX COUNTY, DELAWARE**

TITLE: **NRCS SOILS MAP**

DRAWN BY: D. SWEENEY PROJ. NO.: 376627.2000

CHECKED BY: A. HESSLER

APPROVED BY: C. KAYSER

DATE: MARCH 2020

FIGURE 5

TRC 610 Willowbrook Ln Suite 618
West Chester, PA 19382
Phone: 610.834.0490

FILE NO.: Heimlich_Fig_3_Soils_8x11P.mxd

Appendix B: Property Deed

09581

02805 079

RETURN TO:
Tull Group, LLC
P.O. Box 418
Seaford, DE 19973

PARCEL ID NO.: 5-30 13.00 10.00
PREPARED BY:
Smith O'Donnell Procino & Berl, LLP
P.O. Box 588
Georgetown, DE 19947
File No. 1-21373/DEC

THIS DEED, made this 17th day of February, 2003,

- BETWEEN -

JOYCE C. WALLS, a/k/a JOYCE MAE COLEMAN of 303 Christopher Drive, Seaford, DE 19973, and SHIRLEY C. MASON a/k/a SHIRLEY ANN COLEMAN, of 252 Summers Creek Drive, Merritt Island, Florida 32952, parties of the first part,

- AND -

TULL GROUP, LLC, of P.O. Box 418, Seaford, DE 19973, party of the second part.

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of THREE HUNDRED FIFTY THOUSAND FIVE HUNDRED AND 00/100 DOLLARS (\$350,500.00), 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, lying and being in North West Fork Hundred, Sussex County, Delaware, adjoining lands now or formerly of Laura Houseman, C.B. Young, Thomas Curry and William Draper, more particularly described as follows, to wit:

BEGINNING in the middle of the public road leading from Bridgeville to Greenwood and in line of Houseman's lands and runs North 54-1/2 degrees East 1 perch to a stake; thence North 59-1/2 degrees East 40 perches to a stake; thence East 20-5/10 perches; thence North 44 degrees East 30 perches, North 70-1/2 degrees East 19-8/10 perches; thence South 25-3/4 degrees East 13-1/10 perches; thence South 54-3/4 degrees East 10-8/10 perches; thence North 61 degrees East 12-6/10 perches; thence South 48-3/4 degrees East 142-2/10 perches to a sweet gum by a ditch; thence South 16-1/2 degrees East 3-2/10 perches; thence South 63-1/2 degrees West 200 perches to the middle of the aforesaid public road; thence with the middle of said Road, North 2 degrees West 164 perches to the place of beginning, containing 158 acres of land, be the same more or less.

Consideration: 3350500.00 Exempt Code: A

County	State	Total
5257.50	5257.50	10515.00
counter	Date: 02/24/2003	

8/1

BEING the same lands conveyed unto Shirley Ann Coleman and Joyce Mae Coleman by deed of Ross E. Coleman, Jr. and Betty Mae Coleman dated August 8, 1962 and of record in the Office of the Recorder of Deeds, in and for Sussex County, Delaware in Deed Book 551, Page 239.

EXCEPTING AND RESERVING THEREFROM 8.4 acres of land conveyed unto Ross E. Coleman, Jr. by deed of Joyce Mae Nasby, Shirley Ann Mason and William O. Mason dated October 7, 1979 and of record in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 975, Page 327.

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 party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, Sealed and Delivered in the presence of:

(SEAL)
Joyce C. Walls

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on February 17, 2003, personally came before me, the subscriber, Joyce C. Walls, party of the first part to this Indenture, known to me 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.

George B. Smith
Notary Public, State Of Delaware
Commission Expires March 2, 2003

Notary Public
Printed Name: _____
My Commission Expires: 3/2/2003

8K 02805 2081

IN WITNESS WHEREOF, the party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, Sealed and Delivered in the presence of:

Shirley C. Mason (SEAL)
SHIRLEY C. MASON

STATE OF FLORIDA, COUNTY OF BREVARD : to-wit

BE IT REMEMBERED, that on February 14th, 2003, personally came before me, the subscriber, Shirley C. Mason, party of the first part to this Indenture, known to me 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.

Dawn Hagan
Notary Public
Printed Name: Dawn Hagan
My Commission Expires: 10-22-2006



RECEIVED

03 FEB 24 PM 2:35

SUSSEX COUNTY
DOC. SURCHARGE PAID

Received

FEB 25 2003

ASSESSMENT DIVISION
OF SUSSEX CTY

Appendix C: Environmental Review Documents

USFWS IPaC Resource List

DE Division of Fish and Wildlife Environmental Review Response Letter

DE SHPO CHRIS Mapping

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Sussex County, Delaware



Local office

Chesapeake Bay Ecological Services Field Office

☎ (410) 573-4599

📅 (410) 266-9127

177 Admiral Cochrane Drive
Annapolis, MD 21401-7307

<http://www.fws.gov/chesapeakebay/>

<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [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.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public

have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
------	--

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Oct 15 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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 AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal

zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



STATE OF DELAWARE
**DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

RICHARDSON & ROBBINS BUILDING
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

OFFICE OF THE
SECRETARY

PHONE
(302) 739-9000

20 April 2020

Alyssa Hessler
TRC Companies, Inc.
1090 Union Road, Suite 280
West Seneca, NY 14224

Re: TRC 2020 Heimlich Solar Project; Tax Parcel # 530-13.00-10.00

Dear Ms. Hessler,

Thank you for contacting the Species Conservation and Research Program (SCRIP) about information on rare, threatened and endangered species, unique natural communities, and other significant natural resources as they relate to the above referenced project.

State Natural Heritage Site

A review of our database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities at this project site. As a result, at present, this project does not lie within a State Natural Heritage Site, nor does it lie within a Delaware National Estuarine Research Reserve which are two criteria used to identify "Designated Critical Resource Waters" in the Army Corps of Engineers (ACOE) Nationwide Permit General Condition No. 22. A copy of this letter shall be included in any permit application or pre-construction notification submitted to the Army Corps of Engineers for activities on this property.

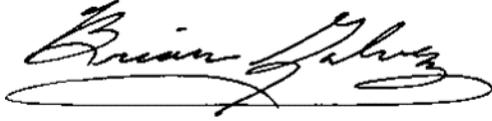
Fisheries

After reviewing the project description, it does not appear that any waterways will be impacted; therefore, there are no fisheries concerns at present.

We are continually updating our records on Delaware's rare, threatened and endangered species, unique natural communities and other significant natural resources. If the start of the project is delayed more than a year past the date of this letter, please contact us again for the latest information.

Please feel free to contact me with any questions or if you require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Galvez", with a large, sweeping flourish underneath.

Brian Galvez
Environmental Review Coordinator
Phone: (302) 735-8665
6180 Hay Point Landing Road
Smyrna, DE 19977

(See Invoice on next page)

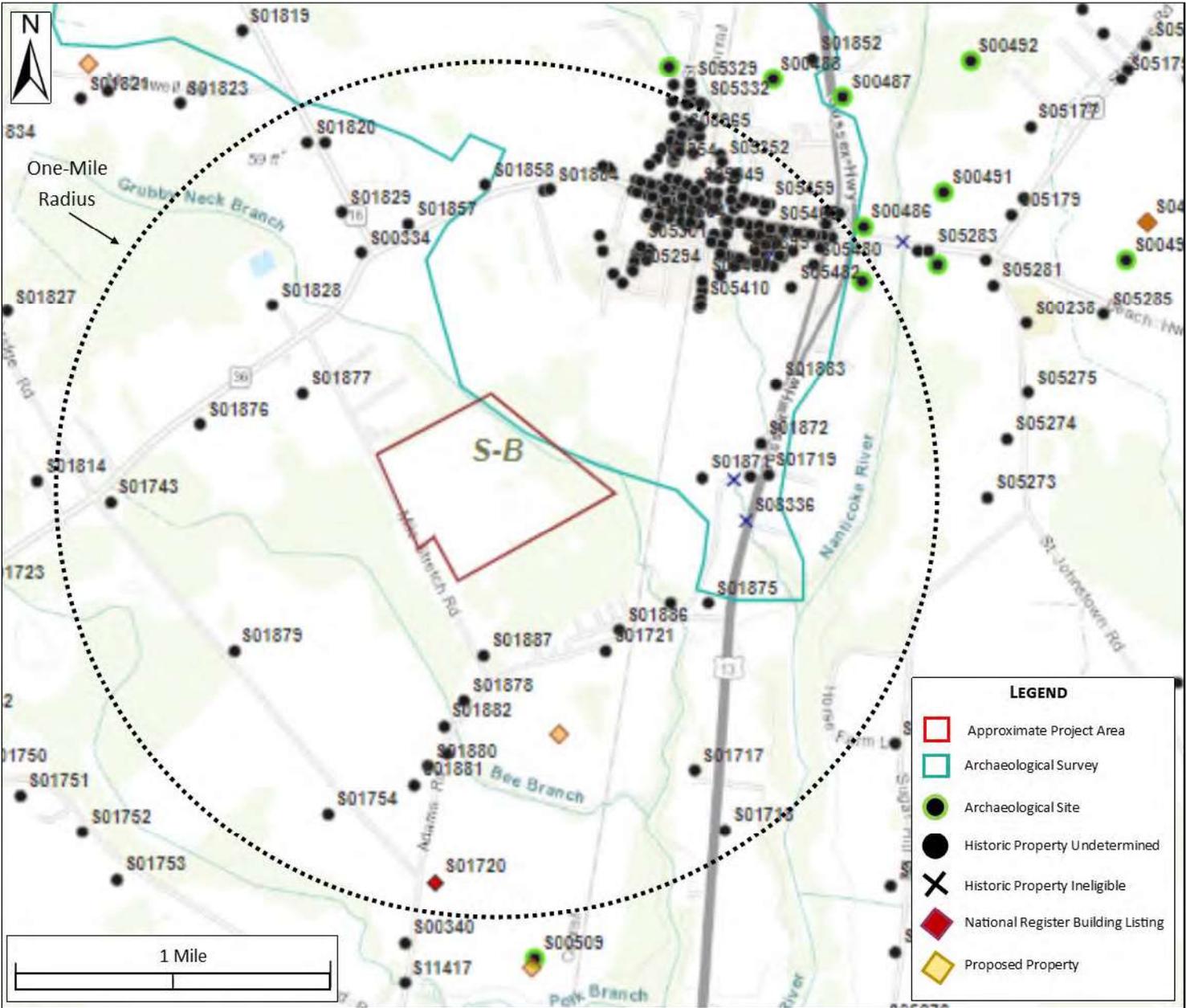
INVOICE - PAYMENT DUE

It is our policy to charge a fee for this environmental review service. This letter constitutes an invoice for \$35.00 (\$35.00/hour for a minimum of one hour). Please make your check payable to "Delaware Division of Fish and Wildlife" and submit to:

DE Division of Fish and Wildlife
89 Kings Hwy.
Dover, DE 19901
ATTN: Brandi Henderson

**In order for us to properly process your payment, you must reference
"TRC 2020 Heimlich Solar Project" on your check.**

cc: Brandi Henderson, Fish and Wildlife Accounting Specialist; Code to 72900



One-Mile
Radius

S-B

LEGEND

- Approximate Project Area
- Archaeological Survey
- Archaeological Site
- Historic Property Undetermined
- X Historic Property Ineligible
- ◆ National Register Building Listing
- ◆ Proposed Property

1 Mile