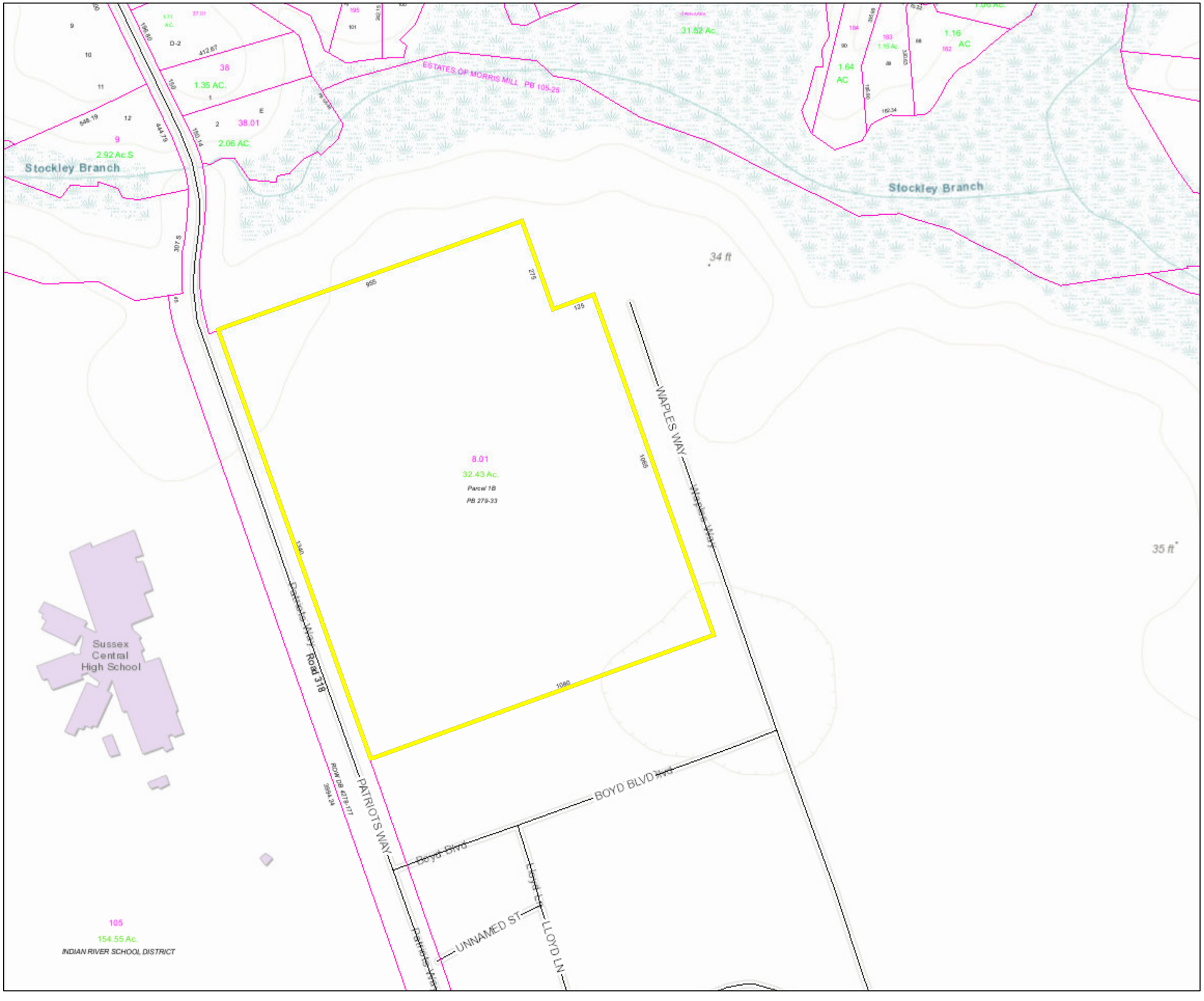
Sussex County
DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JANELLE CORNWELL, AICP
DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date February 13, 2020.

Application:	(CU 2211) Indian River School District
Applicant:	Indian River School District C/O Joseph Booth 31 West Hosier Street Selbyville, DE 19975
Owner:	Indian River School District 31 West Hosier Street Selbyville, DE 19975
Site Location:	Located on the west side of Patriots Way (S.C.R. 318) approximately 0.74 miles south of Zoar Road (S.C.R. 48).
Current Zoning:	Agricultural Residential (AR-1)
Proposed Use:	Special Needs School
Comprehensive Land Use Plan Reference:	Low Density Area
Councilmatic District:	Mr. Wilson
School District:	Indian River School District
Fire District:	Millsboro Fire District
Sewer:	Town of Georgetown
Water:	Private, On-Site
Site Area:	32.43 acres +/-
Tax Map ID.:	133-7.00-8.01

Sussex County



PIN:	133-7.00-8.01
Owner Name	INDIAN RIVER SCHOOL DISTRICT
Book	5076
Mailing Address	31 W HOSIER ST
City	SELBYVILLE
State	DE
Description	188000
Description 2	RT 318
Description 3	RT 86
Land Code	

polygonLayer

Override 1

polygonLayer

Override 1

Tax Parcels

Streets

County Boundaries

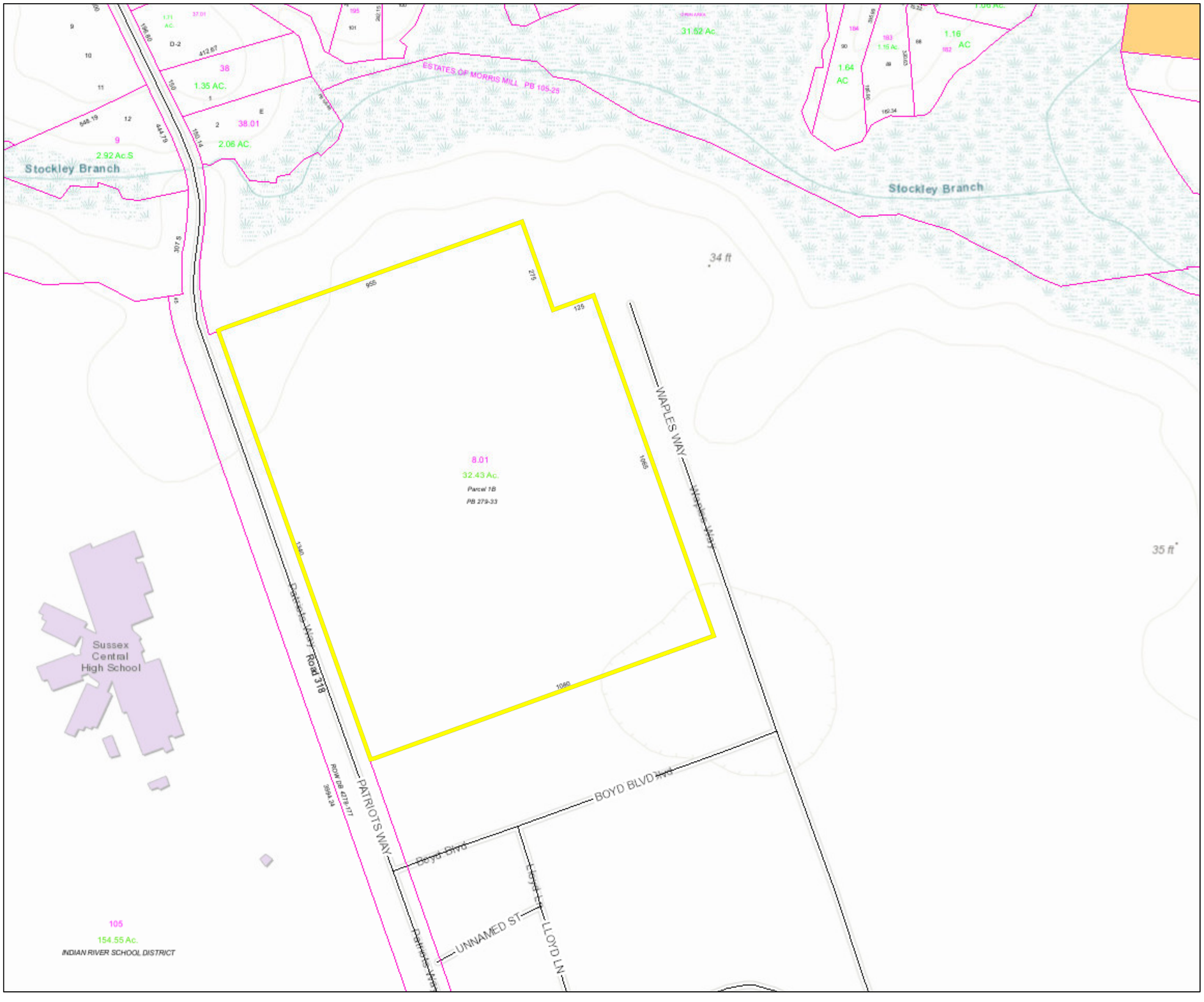
1:4,514

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km

January 16, 2020

Sussex County



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Override 1

polygonLayer

Override 1

Tax Parcels

Streets

1:4,514

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km

January 16, 2020


Mailing List Exhibit Map
Planning Commission
CU 2211 Indian River School District
133-7.00-8.01
Indian River School District C/O Joseph Booth
31 West Hosier Street
Selbyville, DE 19975
On the west side of Patriots Way (S.C.R. 318), 0.73 miles south of Zoar Road (S.C.R.
133-7.00-15.07
133-7.00-184.00
133-7.00-183.00
133-7.00-8.00
133-7.00-8.01
133-7.00-8.00
133-11.00-105.00
PATRIOTS WAY 00318
N
W
E
S
0 0.02250.045 0.09 0.135 0.18
Miles
DelDOT Planning, Surdex Corp, 2017

JAMIE WHITEHOUSE, AICP
ACTING 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: Jennifer Norwood, Planner I
CC: Vince Robertson, Assistant County Attorney and applicant
Date: February 5, 2020
RE: Staff Analysis for CU 2211 Indian River School District

This memo is to provide background and analysis for the Planning Commission to consider as a part of application CU 2211 Indian River School District to be reviewed during the February 13, 2020 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 parcel 133-7.00-8.01 to allow for a special needs school. The size of the property is 32.43 ac. +/-. The property is zoned AR-1 (Agricultural Residential Zoning District) and located west of Patriot's Way approximately 0.73 mile south of Zoar Rd.

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 Low-Density Area.

The surrounding parcels to the north, east, and south are all designated on the Future Land Use Map as "Low Density Area". The properties to the west have the land use designation of "Commercial Area", "Developing Area", and "Municipalities". The Low-Density Area land use designation recognizes are agricultural activities and homes. Business development should be largely confined to businesses addressing the needs of these two uses. Institutional and commercial uses may be appropriate depending on surrounding uses. The Developing Area land use designation recognizes a range of single-family homes, townhouses, and multi-family units. Careful mixtures of homes with light commercial and institutional uses can be appropriate to provide convenient services and to allow people to work close to home.

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

There was a Conditional Use 1408 for a public school on a parcel zoned AR-1 (Agricultural Residential District), which was approved on July 24, 2001 to the west of the application site.

Based on the analysis of the land use, surrounding zoning and uses, the Conditional Use to allow for

a special needs school could be considered consistent with the land use, area zoning and surrounding uses.

Staff notes the conceptual site plan shows a proposed 94,500 square foot building, however, the Service Level Evaluation Response received is based on a 157,000 square foot special needs school. The increase in square footage is due to the potential future building additions that are shown on the site plan. For the purpose of the Traffic Operational Analysis, the maximum square footage possible is being used.

File #: CU 2211
20191 3693

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

26351 Patriots Way Georgetown, Delaware 19947

Type of Conditional Use Requested:

The permittance of a Public Special Needs School in the AR-1 District.

Tax Map #: 133-7.00-8.01 **Size of Parcel(s):** 32.43± acres

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building:** 149,661± SF

Land Use Classification: Institutional

Water Provider: On site well **Sewer Provider:** Town of Georgetown

Applicant Information

Applicant Name: Indian River School District C/O Joseph Booth
Applicant Address: 31 West Hosier Street
City: Selbyville State: DE ZipCode: 19975
Phone #: (302) 436-1000 E-mail: joseph.booth@irsd.k12.de.us

Owner Information

Owner Name: Indian River School District C/O Joseph Booth
Owner Address: 31 West Hosier Street
City: Selbyville State: DE Zip Code: 19975
Phone #: (302) 436-1000 E-mail: "

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: CDA Engineering, Inc - Colmcille DeAscanis
Agent/Attorney/Engineer Address: 6 Larch Avenue, Suite 401
City: Wilmington State: DE Zip Code: 19804
Phone #: (302) 998-9202 E-mail: cdeascanis@cdaengineering.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: 11/22/19

Signature of Owner

Indian River School District

Date: 11-25-19

For office use only:

Date Submitted: 11/26/19 Fee: $500.00 Check #: 5246

Staff accepting application: Deb Application & Case #: 201913093

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

February 7, 2020

Mr. Jamie Whitehouse, Acting 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 **Indian River School District** conditional use application, which we received on February 6, 2020. This application is for an approximately 32.43-acre parcel (Tax Parcel: 133-7.00-8.01). The subject land is located on the east side of Patriots Way (Sussex Road 318), directly opposite the Sussex Central High School, south of Georgetown. The subject land is currently zoned AR-1 (Agricultural Residential), and the applicant is seeking a conditional use approval to develop a 157,000 square-foot special needs school.

Per the 2018 Delaware Vehicle Volume Summary, the annual average daily traffic volume along the segment of Patriots Way where the subject land is located is 2,913 vehicles per day.

Based on our review, we estimate that the proposed land use will generate more than 50 vehicle trips per a weekly peak hour or 500 vehicle trips per day and would be considered to have a Minor impact to the local area roadways. In this instance, the Department considers a Minor impact to be when a proposed land use would generate more than either 50 vehicle trips per a weekly peak hour and / or 500 vehicle trips per day but fewer than 200 vehicle trips per a weekly peak hour and 2,000 vehicle trips per day. Because of this impact, we recommend that the applicant be required to perform a Traffic Impact Study (TIS) for the subject application. However, our Development Coordination Manual provides that where a TIS is required only because the volume warrants are met, and the projected trip generation will be fewer than 200 vehicle trips per a weekly peak hour and fewer than 2,000 vehicle trips per day, DelDOT may permit the developer to pay an Area-Wide Study Fee of $10 per daily trip in lieu of doing a TIS. For this application, if the County were agreeable, we would permit the developer to pay an Area-wide Study Fee.

Based on our review of site-specific data provided by the applicant, the proposed 157,000 square-foot special needs school would generate 420 vehicle trips per day, 199

vehicle trips during the morning peak hour, and 158 vehicle trips during the evening peak hour. As stated above, because this development would generate fewer than 2,000 vehicle trips per day and fewer than 200 vehicle trips during a weekly peak hour, the applicant has the option to pay the Area-Wide Study Fee in lieu of doing a TIS. The Area-Wide Study Fee for the proposed development would be $4,200.00. Payment of the Area-Wide Study Fee does not preclude a developer from having to make or participate in off-site improvements including a Traffic Operational Analysis (TOA) if one is found to be necessary.

On September 12, 2019, the applicant's consultant met with DelDOT to conduct a TOA scoping meeting for the subject development. In our TOA scope of work memorandum, issued October 14, 2019, DelDOT identified the facilities where analysis would be required. A copy of the scope of work memorandum is enclosed with this letter.

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,

for

T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:cjm
Enclosure
cc: Constance C. Holland, Coordinator, Cabinet Committee on State Planning Issues
Indian River School District, Applicant
J. Marc Coté, Assistant Director, Development Coordination
Gemez Norwood, South District Public Works Manager, Maintenance and Operations
Susanne Laws, Sussex County Subdivision 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

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

JENNIFER COHAN
SECRETARY

MEMORANDUM

TO: File

FROM: Claudy Joinville, Project Engineer C.J.

DATE: October 14, 2019

SUBJECT: **Howard T. Ennis School**
Traffic Operational Analysis (TOA) - Scoping Meeting (9/12/19)
Scope of Work

ATTENDANCE:
Janelle Cornwell, Sussex County Planning and Zoning (via skype)
Colmcille DeAscanis, CDA Engineering, Inc. (via skype)
Zak Kerstetter, CDA Engineering, Inc.
Eric Ostimchuk, Traffic Planning & Design (TPD)
Ken Fearn, Fearn Clendaniel Architects
Peter Haag, DelDOT Traffic (via skype)
Marc Coté, DelDOT Planning
Susanne Laws, DelDOT Planning
John Andrescavage, DelDOT Planning
T. William Brockenbrough, Jr., DelDOT Planning
Claudy Joinville, DelDOT Planning

Background and Discussion

Indian River School District seeks to develop a 157,000 square-foot Special Needs school on an approximately 32.43-acre parcel (Tax Parcel: 133-7.00-8.01). The land is located on the east side of Patriots Way (Sussex Road 318), directly opposite the Sussex Central High School, south of Georgetown. The land is currently zoned as AR-1 (Agricultural Residential), and the developer does not plan to rezone the land.

One full access point is proposed along Patriots Way. Construction is anticipated to be complete in 2022.

Cases to be Evaluated

The study shall evaluate the weekday morning and weekday evening peak hours for the following situations:

1) Existing (2019);
2) 2022 without development; and
3) 2022 with development.

Facilities to be Evaluated

The TOA should evaluate conditions at the following intersections for capacity and level of service using the Highway Capacity Software (HCS). It should also evaluate the extent to which they meet the relevant DelDOT, AASHTO and MUTCD standards for geometry and traffic control devices.

1) Patriots Way (Sussex Road 318) / Site Entrance / Sussex Central High School Entrance (center)
2) Patriots Way / Sussex Central High School Entrance (north)
3) Patriots Way / Sussex Central High School Entrance (south)

Traffic Counts

The Consultant should conduct traffic counts for the intersections listed above from 7:00 a.m. to 9:00 a.m. and from 2:00 p.m. to 4:00 p.m., on a Tuesday, Wednesday or Thursday to determine when the peaks occur. The weekday traffic counts should be performed during a time when schools are open and operating at a normal capacity.

Additionally, an Automatic Traffic Recorder (ATR) should be used to collect traffic data on Patriots Way south of the south high school entrance. The ATR should be placed for a one-week time period that includes the date(s) of the manual traffic counts. The ATR data will be used to verify the manual counts and determine whether adjustments are required.

Section 2.2.8.5, item 19, under Existing Traffic and Transportation Conditions in the Development Coordination Manual, addresses how oversaturated intersections are to be counted.

The traffic counts should be submitted to DelDOT both electronically as Portable Document Format (PDF)/Excel files and as draft report figures showing peak hour volumes (labeled with date and peak hour interval) posted on diagrams of the road network.

The Consultant should include counts of pedestrians, a separate count of right-turn on red (in addition to right-turn movement counts), and a separate count of heavy vehicles.

The Consultant should be alert for events affecting the traffic counts, such as accidents or nearby construction and shall make note of any such events when submitting the counts. As necessary, DelDOT reserves the right to reject the counts or require adjustments to them.

Trip Generation

DelDOT is agreeable to the Consultant's use of historical and site specific data to calculate the trips for the proposed school.

Trip Distribution

A trip distribution to be used for the site were developed using DelDOT's Travel Demand Model and is attached. School bus and parent traffic should reflect the school's feeder patterns as the model distribution only applies to staff traffic.

Future Growth

The Consultant shall apply growth factors to the traffic counts. DelDOT will develop those factors after we receive the Consultant's traffic counts.

Pedestrian Traffic Analysis

The Consultant shall complete a pedestrian crossing analysis using NCHRP 562. The analysis should evaluate multiple crossing scenarios, such as, but not limited to, a single crossing and a two-stage crossing with a median refuge island. In addition, the analysis should assume the pedestrian volume has met the NCHRP threshold. For more guidance on this analysis, the Consultant shall contact Peter Haag, Traffic Studies Manager of DelDOT's Traffic Section. Mr. Haag may be reached at (302) 659-4084.

Highway Capacity Software & Synchro

The Consultant shall use the most recent version of the Highway Capacity Software (HCS) that implements the 6th Edition of the Highway Capacity Manual (HCM). Presently, that is HCS7.

In addition, the Consultant shall use Synchro to conduct 15-minute analysis periods to accurately model the peak traffic volumes associated with the Sussex Central High School opposite the proposed school.

Seasonal Adjustment Factors for the roads in the study area are as follows:

Roads	September	October	November
Patriots Way (Sussex Road 318)	0.96	0.95	0.98
All Other Roads	1.00	1.00	1.00

DelDOT Projects

Currently, DelDOT has no active projects within the study area.

Transit, Bicycle, and Pedestrian Facilities

The study should describe the existing and proposed transit service in the project area and should also describe the existing and needed transit, bicycle, and pedestrian facilities on or near the project site. In determining these items, the Consultant shall contact Mr. David Dooley, a Service Development Planner at the Delaware Transit Corporation (DTC), and Mr. Anthony Aglio, of DelDOT's Local Systems Section. Mr. Dooley may be reached at (302) 576-6064. Mr. Aglio may be reached at (302) 760-2509.

General Notes

1) All submissions relating to this study should be made electronically via the Planning and Development Coordination Application (PDCA), preferably in Portable Document Format (PDF).

2) The Consultant should e-mail DelDOT's Transportation Management Center (TMC) at tmc1@delaware.gov to obtain advance approval for the use of any signal timings.

3) Before deploying temporary unmanned devices, e.g. cameras or radar detectors, in the State-maintained right-of-way, the individual or company proposing to do so shall execute and file a Right-of-Way Use Agreement. Before each specific deployment of devices, the individual or company shall email a completed Temporary Data Collection Device Notification Form to TMC1@delaware.gov. Deployment of Automatic Traffic Recorders, a.k.a. tube counters, and devices on portable trailers does not require a Right-of-Way Use Agreement but does require submission of the Temporary Data Collection Device Notification Form. Copies of the standard agreement and the form are available from Ms. Lara Brown at (302) 659-4062 or Lara.Brown@delaware.gov.

4) The Consultant should refer to the attached memorandum from Scott Neidert of DelDOT's Traffic Section for guidance regarding requests for crash data within the study area. The Consultant shall report on this data and make recommendations for improvements if safety problems exist in the study area. Mr. Neidert may be reached at (302) 659-4075.

5) Both DelDOT and Sussex County reserve the right to change this scope of work if the study is not performed within a reasonable time.

6) The developer may choose to have DelDOT's Consultant perform the TOA rather than use their own Consultant. If this option is of interest, the developer should contact Mr. Troy Brestel at (302) 760-2167 to request a cost estimate.

7) By copy of this memorandum I ask those copied to contact me at (302) 760-2124 regarding any significant errors or omissions.

CJ:cjm
Enclosure
cc: Drew Boyce, Director, Planning
Joseph Booth, Indian River School District
Michael Simmons, Assistant Director for Project Development South, DOTS
Alastair Probert, South District Engineer, DOTS
Gemez Norwood, South District Public Works Supervisor, DOTS
William Kirsch, South District Permit Supervisor, DOTS
Mark Whiteside, Project Manager, Project Development – South, DOTS
Scott Neidert, Design Resource Engineer, Traffic Section
Mark Buckalew, Traffic Safety Engineer, DelDOT Traffic
David Dooley, Service Development Planner, Delaware Transit Corporation
Anthony Aglio, Planning Supervisor, Local Systems
Lara Brown, Administrative Specialist, DelDOT Traffic DOTS
Kari Glanden, Statistical Information Supervisor, DelDOT Traffic, DOTS
Mark Galipo, Traffic Engineer, DelDOT Traffic, DOTS
Andrew Parker, McCormick & Taylor, Inc.
Mir Wahed, Johnson, Mirmiran, & Thompson, Inc.

AM Peak Distribution

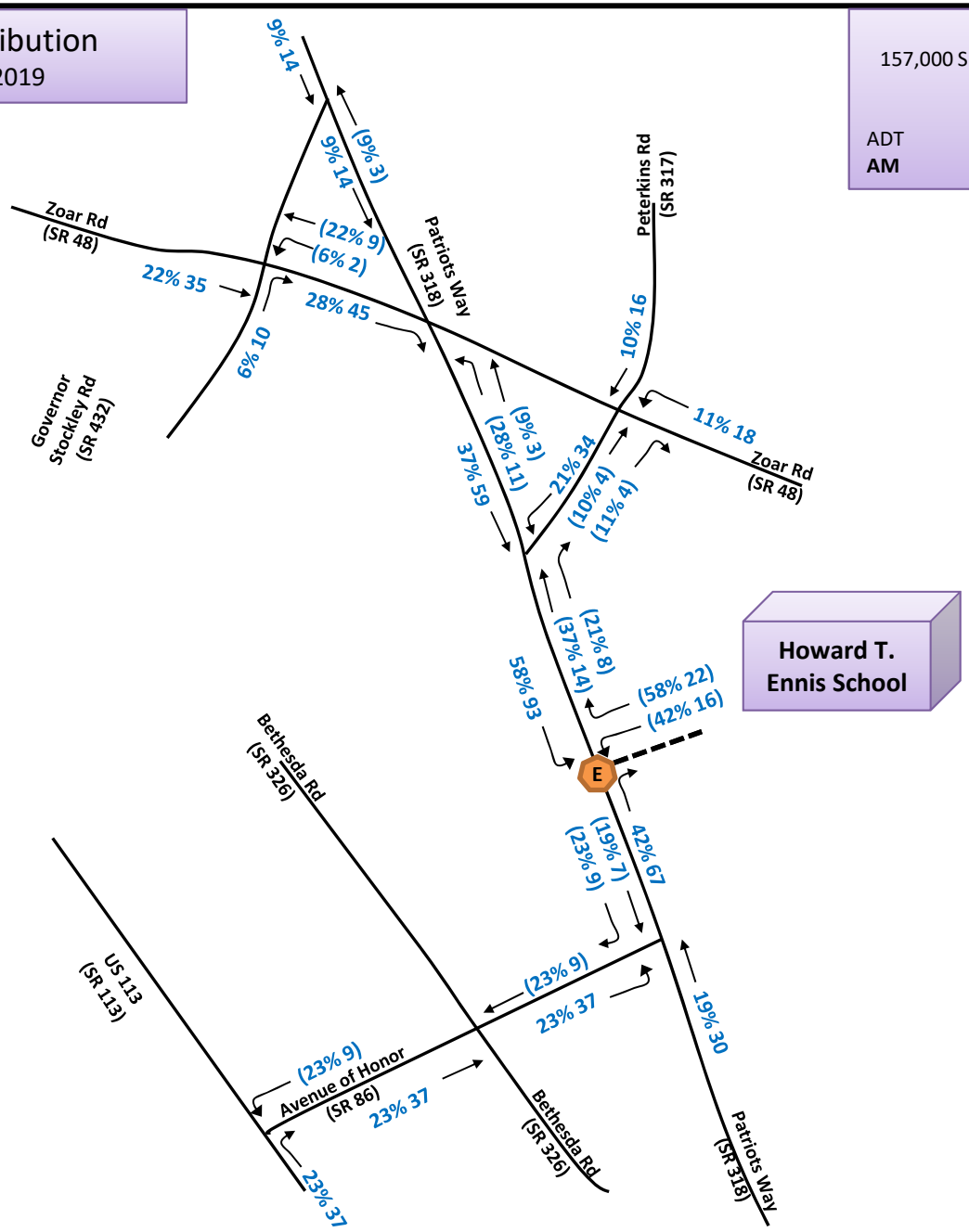
October 14, 2019

Howard T. Ennis School

157,000 SF / 235-student Special Needs School (Site Data)

Trip Generation

	Total	IN	OUT
ADT	420	210	210
AM	**207**	**161**	**38**



Legend

- State-maintained road
- Site Entrance
- Traffic lost / gained before intersections
- State-maintained Intersections
- XX Inbound Trips
- (XX) Outbound Trips

DelDOT

Figure 1 of 1

Note: Figure Not Drawn to Scale

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

JENNIFER COHAN
SECRETARY

TO: Requestors of Crash Data via DelDOT's Development Coordination Process

FROM: Scott Neidert, Design Resource Engineer, Traffic Section

DATE: **September 5, 2019**

SUBJECT: **Revisions to Crash Data Requests and Releases**

As of July 23, 2019, Governor Carney has signed SB 147 into law containing amendments to the release of crash data, namely permitting DelDOT to release certain de-identified data based on the nature of the requestor. Specifically, newly enacted 21 *Del. C.* §313(c)(1) provides that:

"The Department of Transportation may provide the information under this subsection if the person requesting the information provides proof of identity and a sworn representation that the data will be strictly used for any of the following purposes:

a. To comply with federal, State, or local law or regulations.
b. By a municipality or municipal planning organization in carrying out official functions."

To conform with the "proof of identity and… sworn representation…" clause, requestors will be required to complete an online crash data request as well as provide a notarized release form to be submitted with each crash request prior to being processed. A link to the release form is provided within the online crash request.

Effective immediately, all requests for crash data, when required, must be made at: *https://tmc.deldot.gov/tmcx/app/crashdata/public/info.html*

Requests for crash data will not be processed until all required fields are completed, and the release form has been completed and received.

SN
cc: Nicole Majeski, Deputy Secretary
Shanté Hastings, Chief Engineer
Drew Boyce, Director, Planning
Annie Cordo, Deputy Attorney General
Mark Luszcz, Deputy Director, Division of Transportation Solutions
Kari Glanden Thompson, Statistical Information Supervisor, Traffic Section

January 17, 2020
TPD# CDAE.00008

TRAFFIC PLANNING AND DESIGN, INC.

Howard T. Ennis School

Traffic Operational Analysis

Georgetown, Sussex County, Delaware

For Submission To:
DelDOT

HOWARD T. ENNIS SCHOOL DEVELOPMENT
TRAFFIC OPERATIONAL ANALYSIS

Georgetown, Sussex County, Delaware

Prepared For:
CDA Engineering, Inc.
6 Larch Avenue, Suite 401
Wilmington, DE 19804

January 17, 2020

TPD # CDAE.00008

Prepared By:
Traffic Planning and Design, Inc.
1025 Andrew Drive, Suite 110
West Chester, PA 19380

Phone: (610) 326-3100
Fax: (610) 326-9410
E-mail: TPD@TrafficPD.com
Website: www.trafficpd.com

Table of Contents

EXECUTIVE SUMMARY

The purpose of this study is to examine the potential traffic impact associated with the proposed Howard T. Ennis School on the roadway network in Georgetown, Sussex County, Delaware. Based on this evaluation, the following conclusions were reached:

1. The project scope and the extent of the study area were based on the Scoping Memo issued by DelDOT on 10/14/2019. The study area intersections included in this TIS are as follows:
   - Patriots Way (Sussex Road 318) and Sussex Central High School Entrance (north)
   - Patriots Way (Sussex Road 318) and Sussex Central High School Entrance (center)
   - Patriots Way (Sussex Road 318) and Sussex Central High School Entrance (south)
2. The project site is located on the east side of Patriots way, north of Boyd Boulevard and opposite the existing Sussex Central High School. The proposed site will consist of a 157,000 square foot (s.f.) special needs school;
3. Access to the site is proposed via one full-access driveway to Patriots Way, opposite the existing Sussex Central School Driveway (center).
4. All proposed driveway location sight distances will exceed AASHTO's Safe Stopping Sight Distance (SSSD) criteria.
5. Upon full build-out, the proposed development is expected to generate 199 new vehicle-trips during the weekday A.M. peak hour, and 158 new vehicle-trips during the weekday P.M. peak hour.
6. Under the 2022 projected conditions, with implementation of the site-related recommendations, all approaches and turning movements at the site driveway intersection with the external roadway network will operate at LOS C or better during weekday A.M. and P.M. peak hours.
7. All overall intersection levels of service (ILOS) will operate at an ILOS A during the 2022 projected condition scenarios.
8. Traffic Planning and Design Inc. (TPD) recommends the following roadway improvements as outlined at the study area intersections:

Patriots Way & Proposed Site Driveway

   - Provide a stop sign to control exiting traffic
   - Construct a 225-foot southbound left turn lane within the existing painted median
   - Consider installation of a painted crosswalk between the proposed Howard T. Ennis School driveway and the existing Sussex Central High School driveway (center)

9. Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Table I** details the overall intersection LOS for each study area intersection.

TABLE I
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
	Existing	2023 Conditions		Existing	2023 Conditions	
		Base	Projected		Base	Projected
Patriots Way & Sussex Central High School Driveway (north)	A (7.4)	A (7.6)	A (7.4)	A (8.6)	A (8.7)	A (8.2)
Patriots Way & Sussex Central High School Driveway (center)	A (1.3)	A (1.2)	A (3.1)	A (0.4)	A (0.3)	A (5.2)
Patriots Way & Sussex Central High School Driveway (south)	A (5.5)	A (5.5)	A (4.8)	A (8.1)	A (8.1)	A (7.9)

Base = No-Build scenario
Projected = Build scenario

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the proposed Howard T. Ennis School in Georgetown, Sussex County, Delaware. As shown in **Figure 1**, the proposed development is located on the east side of Patriots way, north of Boyd Boulevard and opposite the existing Sussex Central High School. As shown in **Figure 2**, the proposed site will consist of a 157,000 square foot (s.f.) special needs school.

The project scope and the extent of the study area were confirmed with representatives of DelDOT through the scoping process. All relevant correspondence pertaining to this project has been included in **Appendix A**.

Site Access Locations

The proposed site will be served by one full-access driveway to Patriots Way, opposite the existing Sussex Central School Center Driveway

EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**. Photographs of the study area intersections are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Ownership	Functional Classification/ Roadway Type	Predominant Directional Orientation	Average Daily Traffic	Posted Speed Limit
Patriots Way	County (Road 318)	Local	North-South	2,913	25/35 mph[1]

[1]*School zone speed limit = 20 mph*

Transit, Bicycle and Pedestrian Facilities

There is no mass transit provided in Georgetown, Sussex County, Delaware. Based on observations during field visits at the study area intersections, there are no pedestrian accommodations present in the vicinity of the proposed development. A bike lane is provided southbound on Patriots Way. A paved shoulder on the east side of Patriots Way accommodates pedestrian and bicycle activity traveling north.

TPD reached out to Mr. David Dooley and Mr. Anthony Aglio regarding existing, proposed and needed transit services, bicycle and pedestrian facilities in the area but has not received a response.

Crash Data Investigation

Crash data were obtained from DelDOT for the study area intersections for the three-year time period beginning 12/20/2016 and ending 12/20/2019. The number of crashes at the study area intersections is shown in **Table 2.**

TABLE 2
DELDOT CRASH DATA

Study Area Intersection	Number of Reportable Crashes		
	2017	2018	2019
Patriots Way & Central High School Driveway (north)	1	2	1
Patriots Way & Central High School Driveway (center)	1	0	0
Patriots Way & Central High School Driveway (south)	0	0	0

EXISTING TRAFFIC CONDITIONS

Manual Turning Movement Counts

Manual traffic counts were conducted on 15-minute intervals during the weekday morning (7:00 to 9:00 A.M.) and weekday afternoon (2:00 to 4:00 P.M.) peak periods. Data pertaining to heavy vehicles, and pedestrians were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 3**.

TABLE 3
MANUAL TRAFFIC COUNT INFORMATION

Intersection[1]	Date of Traffic Counts	Time Period	Peak Hour[2]
Patriots Way & Sussex Central High School Driveway (north)	Thursday November 7, 2019	Weekday A.M.	7:00 to 8:00 A.M.
		Weekday P.M.	2:30 to 3:30 P.M.
Patriots Way & Sussex Central High School Driveway (center)	Thursday November 7, 2019	Weekday A.M.	7:00 to 8:00 A.M.
		Weekday P.M.	2:30 to 3:30 P.M.
Patriots Way & Sussex Central High School Driveway (south)	Thursday November 7, 2019	Weekday A.M.	7:00 to 8:00 A.M.
		Weekday P.M.	2:30 to 3:30 P.M.

[1]Peak hours of the existing Sussex Central High School occurred from 7:00-8:00 AM and 2:15-3:15 PM
[2]Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur. Peak hours utilized are consistent among the Sussex Central High School driveways.

Existing condition traffic volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 4 and 5**, respectively. Manual traffic count data sheets are provided in **Appendix C**.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

Background growth factors for the roadways in the study area were provided by DelDOT. As such, the background growth factors of 0.5% for Patriots Way and 0% for all other roadways were applied annually to yield an overall growth percentage of 1.51% (0.5% per year compounded over 3 years) for Patriots Way and 0% for the Sussex Central High School Driveways.

The additional traffic volumes due to background growth were added to the existing traffic data to produce 2022 base (no-build) condition traffic volumes. Base condition volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 5 and 6.**

PROPOSED SITE ACCESS

The proposed site will be served by one full-movement driveway to Patriots Way, opposite the existing Sussex Central High School Driveway (center)

Sight Distance Analysis

A sight distance analysis was prepared for the proposed site driveways. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The measured sight distances at the proposed driveway were compared to AASHTO's safe stopping sight distance standard, which is calculated by the following equation:

$$\mathbf{SSSD = 1.47VT + V^2/[30(f \pm g)]}$$

SSSD = safe stopping sight distance (acceptable sight distance)
V = Vehicle Speed
T = Perception Reaction Time of Driver (2.5 seconds)
f = Coefficient of Friction for Wet Pavements
g = Percent of Roadway Grade Divided by 100

Tables 4 shows the measured and required sight distances at the site driveways for vehicles entering and exiting the site.

TABLE 4
SIGHT DISTANCE ANALYSIS
SITE DRIVEWAY TO PATRIOTS WAY

	Direction	Speed[1]	Grade[2]	Sight Distances (feet)	
				SSSD	EXIST
Exiting Movements	To the left	35 mph	1%	245	**600+**
	To the right	35 mph	-1%	252	**600+**
Entering Left Turns	Approaching same direction	35 mph	-1%	252	**600+**
	Approaching opposite direction	35 mph	1%	245	**600+**

SSSD = AASHTO Safe Stopping Sight Distance
EXIST = Existing (measured) Sight Distance
1 = Posted speed limit
2 = Roadway Grade Approaching Driveway

As shown in **Table 4** above, the measured sight distances at the site driveway exceeds AASHTO's safe stopping sight distance requirements.

TRIP GENERATION

The trip generation for the proposed school was developed based on site specific data provided by Howard T. Ennis School staff as coordinated previously with DelDOT. **Table 5** summarizes the peak hour trip generation of the proposed school.

TABLE 5
TRIP GENERATION SUMMARY

Time Period	Howard T. Ennis School		
	Total	Enter	Exit
Weekday A.M. Peak Hour	199	161	38
Weekday P.M. Peak Hour	158	0	158
Average Weekday	420	210	210

Based on the trip generation summarized in **Table 6**, the proposed development will generate approximately 199 new trips during the weekday A.M. peak hour, and 158 new trips during the weekday P.M. peak hour. Details of the trip generation calculations are included in **Appendix D**.

TRIP DISTRIBUTION

The distribution of staff trips generated by the proposed development was based on information provided by DelDOT. The distribution of bus and parent pick-up/drop-off traffic is consistent with the school's feeder patterns based on the following information provided by the district.

- School buses serve the entirety of Sussex County
- Most buses serve Georgetown and Millsboro
- 1 bus serving Lewis
- 3 buses serving western Sussex, including Delmar and Greenwood

The new trips for the proposed development were distributed to the local roadway network based on the percentages shown in **Table 6**.

TABLE 6
TRIP DISTRIBUTION PERCENTAGES

Direction - To/From	Assignment (To/From)	Distribution Percentage	
		Staff	Bus/Parent
North	via Patriots Way	58%	60%
South	via Patriots Way	42%	40%

This distribution is also consistent with the distribution noted at the high school driveways. The assignment of site-generated trips for the proposed development during the weekday A.M. and P.M. peak hours are shown in **Figures 7 and 8**, respectively.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed development were added to the 2022 base (no-build) condition traffic volumes to develop 2022 projected (build) condition traffic volumes.

In order to accurately model the peak traffic volumes associated with Sussex Central High School in conjunction with the Howard T. Ennis School peak hour traffic volumes, as requested in the DelDOT scoping memo, TPD developed future traffic volumes in 15-minute intervals over the duration of the A.M. and P.M. count periods. As such, the projected condition peak hour traffic volumes calculated based on the 15-minute interval volume development were utilized in the projected condition capacity analyses along with the corresponding calculated peak hour factor. Furthermore, since the P.M. peak hour of the proposed Howard T. Ennis School is slightly offset from the existing high school driveway P.M. peak hour, TPD shifted the proposed school P.M peak hour traffic to coincide with the existing high school driveway P.M. peak hour traffic, providing a conservative (i.e. highest volume) evaluation. The 15-minute volume development worksheets are provided in **Appendix D**.

Projected condition traffic volumes for the future year of 2022 for the weekday A.M. and P.M. peak hours are shown in **Figures 9 and 10**, respectively.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 7.** Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 7
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS [1]

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 and < 20	> 10 and < 15
C	> 20 and < 35	> 15 and < 25
D	> 35 and < 55	> 25 and < 35
E	> 55 and < 80	> 35 and < 50
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0

[1] *Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's Highway Capacity Manual 2010*

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M. and P.M. peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the *Highway Capacity Manual* (HCM) 6th Edition using *Synchro 10* software, a Trafficware product.

The following conditions were analyzed, as applicable:

- Existing conditions;
- 2022 Base conditions (Build-out year without development);
- 2022 Projected conditions (Build-out year with development);

In addition, capacity analyses were conducted at the proposed site driveway intersection under the 2022 projected conditions. The capacity analysis worksheets are included in **Appendix E**.

LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Tables 8** for the weekday A.M., and weekday P.M. peak hours.

TABLE 8
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

Intersection	Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
		Existing Conditions	2022 Conditions		Existing Conditions	2022 Conditions	
			Base	Projected		Base	Projected
Patriots Way & Sussex Central High School Driveway (north)	EB LR	E	E	E	C	C	C
	NB L	B	B	B	A	A	A
	ILOS	**A (7.4)**	**A (7.6)**	**A (7.4)**	**A (8.6)**	**A (8.7)**	**A (8.2)**
Patriots Way & Sussex Central High School Driveway (center)	WB LTR	--	--	C	--	--	C
	NB L	A	A	A	A	A	A
	SB L	--	--	A	--	--	A
	ILOS	**A (1.3)**	**A (1.2)**	**A (3.1)**	**A (0.4)**	**A (0.3)**	**A (5.2)**
Patriots Way & Sussex Central High School Driveway (south)	EB LR	C	C	C	C	C	C
	NB L	A	A	A	A	A	A
	ILOS	**A (5.5)**	**A (5.5)**	**A (4.8)**	**A (8.1)**	**A (8.1)**	**A (7.9)**

Base = No-Build scenario; Projected = Build scenario; ILOS = intersection level of service

As shown in **Table 8** under 2022 projected conditions with the development of the proposed site, the study area intersections will operate at ILOS A during the weekday A.M. and P.M. peak hours.

All approaches and turning movements at the proposed site driveway intersection will operate at LOS C or better under 2022 Projected Conditions during the weekday A.M. and P.M. peak hours.

The capacity analysis worksheets are included in **Appendix E**.

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 10* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 9** for the analyzed peak hours.

TABLE 9
95TH PERCENTILE QUEUE ANALYSIS

Intersection	Movement	Available Storage	2022 Conditions			
			Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			Base	Projected	Base	Projected
Patriots Way & Sussex Central High School Driveway (north)	EB LR	200+	120	123	98	108
	NB L	120	23	23	3	3
Patriots Way & Sussex Central High School Driveway (center)	WB LTR	100+	--	15	--	48
	NB L	235	8	8	3	3
	SB L	225	--	8	--	0
Patriots Way & Sussex Central High School Driveway (south)	EB LR	100+	70	63	90	98
	NB L	210	8	5	0	0

As shown in **Table 9,** adequate queue storage will be provided for the turn lanes in 2022 with construction and full build-out of the proposed development. Queue analysis worksheets are included with the capacity analysis worksheets provided in **Appendix E**.

TPD also completed a visual observation of the operations at the northern driveway of Sussex Central High School on Wednesday December 12, 2018 from 7:00 – 7:45 A.M. The existing northbound auxiliary left turn lane has approximately 100' of storage with a 75' taper length.

Based on this observation, the busiest time for northbound left turns entering the high school was between 7:15 and 7:35 A.M. Overall, the queue moved efficiently and was typically only one or two vehicles. The maximum queue of 6 vehicles, which occurred twice throughout the observed time period, did not extend beyond the provided left turn storage and the median area was therefore never occupied by a standing queue at any point.

AUXILIARY TURN LANE ANALYSIS

Methodology

Based on the ADT on Patriots Way, the daily trip generation for the site and the distribution of traffic, TPD evaluated the provision of a northbound right turn lane and southbound left turn lane for traffic entering the site.

Findings:

Table 10 summarizes the results of the auxiliary turn lane analysis at the proposed site driveway.

TABLE 10
AUXILIARY TURN LANE ANALYSIS SUMMARY

Intersection	Auxiliary Lane	Warrant Satisfied?	Required Lane Length[1]	Proposed Lane Length
Patriots Way & Proposed Site Access	NB Right-Turn Lane	No	--	--
	SB Left-Turn Lane	Yes	220'	225'

[1]*Based on a 35 mph speed limit*

The calculations for the auxiliary turn lane warrants are included in **Appendix F**.

PEDESTRIAN CROSSING ANALYSIS

Based on the *Guidelines for Pedestrian Crossing Treatments* contained in Appendix A of the NCHRP Report 562 "Improving Pedestrian Safety at Unsignalized Crossing" the following pedestrian crossing treatment could be considered at the proposed site.

- Painted crosswalk between the proposed Howard T. Ennis School Driveway and the existing Sussex Central High School center driveway

It should be noted, for purposes of this evaluation and at the request of DelDOT, TPD assumed the pedestrian peak hour volume threshold of 20 pedestrians per hour for both directions would be met under future conditions, despite the negligible existing pedestrian volumes and minimal pedestrian accommodations on the surrounding roadway network.

The completed NCHRP worksheets for the weekday A.M. and P.M. peak hours is provided in **Appendix G**.

RECOMMENDATIONS

TPD has made the following recommendations in relation to the proposed development in Sussex County Delaware:

Patriots Way & Proposed Site Driveway

- Provide a stop sign to control exiting traffic
- Construct a 225-foot southbound left turn lane within the existing painted median
- Consider installation of a painted crosswalk between the proposed Howard T. Ennis School driveway and the existing Sussex Central High School Driveway (center)

CONCLUSIONS

Based on the results of the transportation impact study, TPD offers the following conclusions:

- The project site is located on the east side of Patriots way, north of Boyd Boulevard and opposite the existing Sussex Central High School. The proposed site will consist of a 157,000 s.f. special needs school
- Access to the site is proposed via one full-access driveway to Patriots Way, opposite the existing Sussex Central School Driveway (center)
- All proposed driveway location sight distances will exceed AASHTO's Safe Stopping Sight Distance (SSSD) criteria.
- Upon full build-out, the proposed development is expected to generate 199 new vehicle-trips during the weekday A.M. peak hour, and 158 new vehicle-trips during the weekday P.M. peak hour.
- Under the 2022 projected conditions, with implementation of the site-related recommendations, all approaches and turning movements at the site driveway intersection with the external roadway network will operate at LOS C or better during weekday A.M. and P.M. peak hours.
- All overall intersection levels of service (ILOS) will operate at an ILOS A during the 2022 projected condition scenarios.

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$

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FIGURE 1

SITE LOCATION

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$

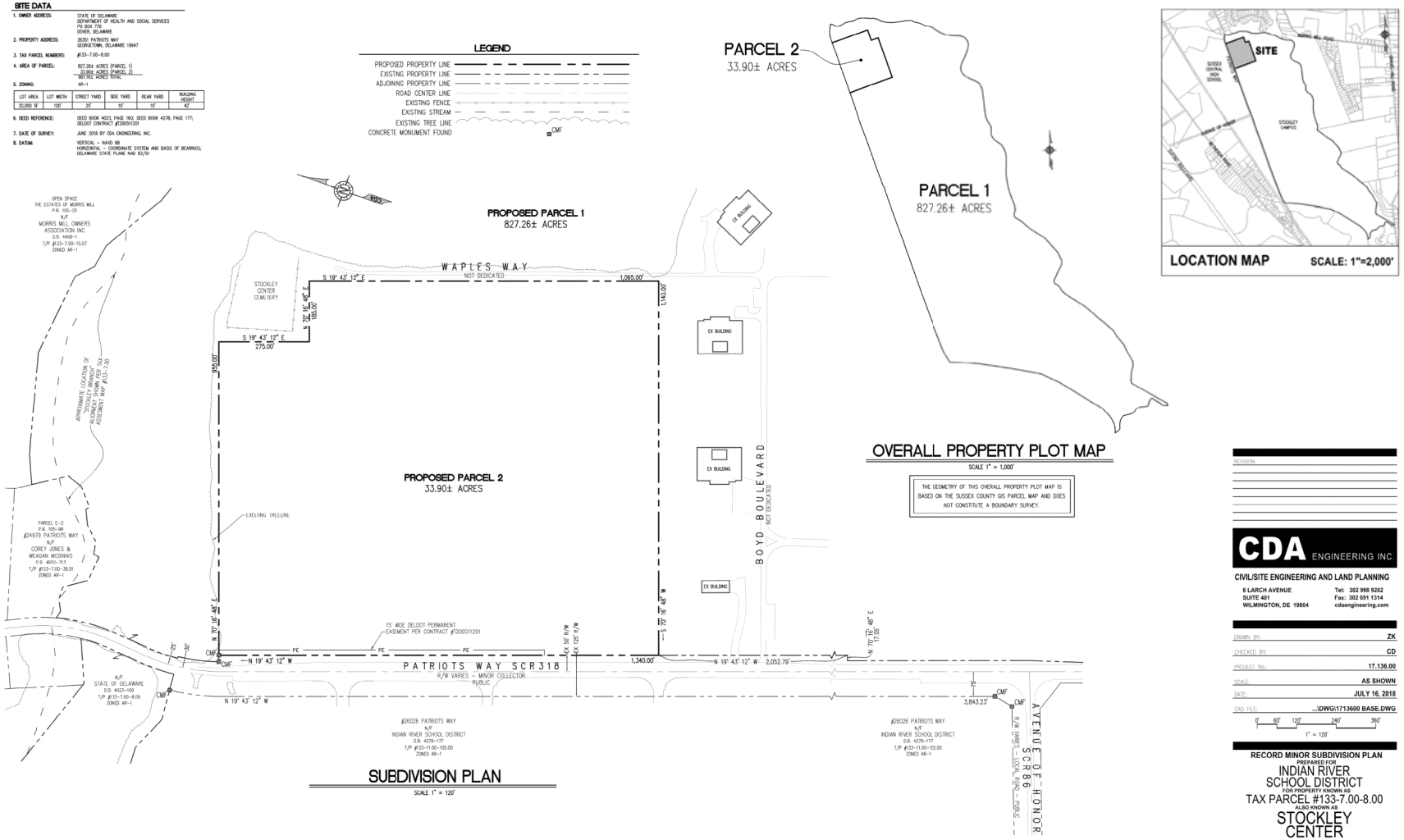

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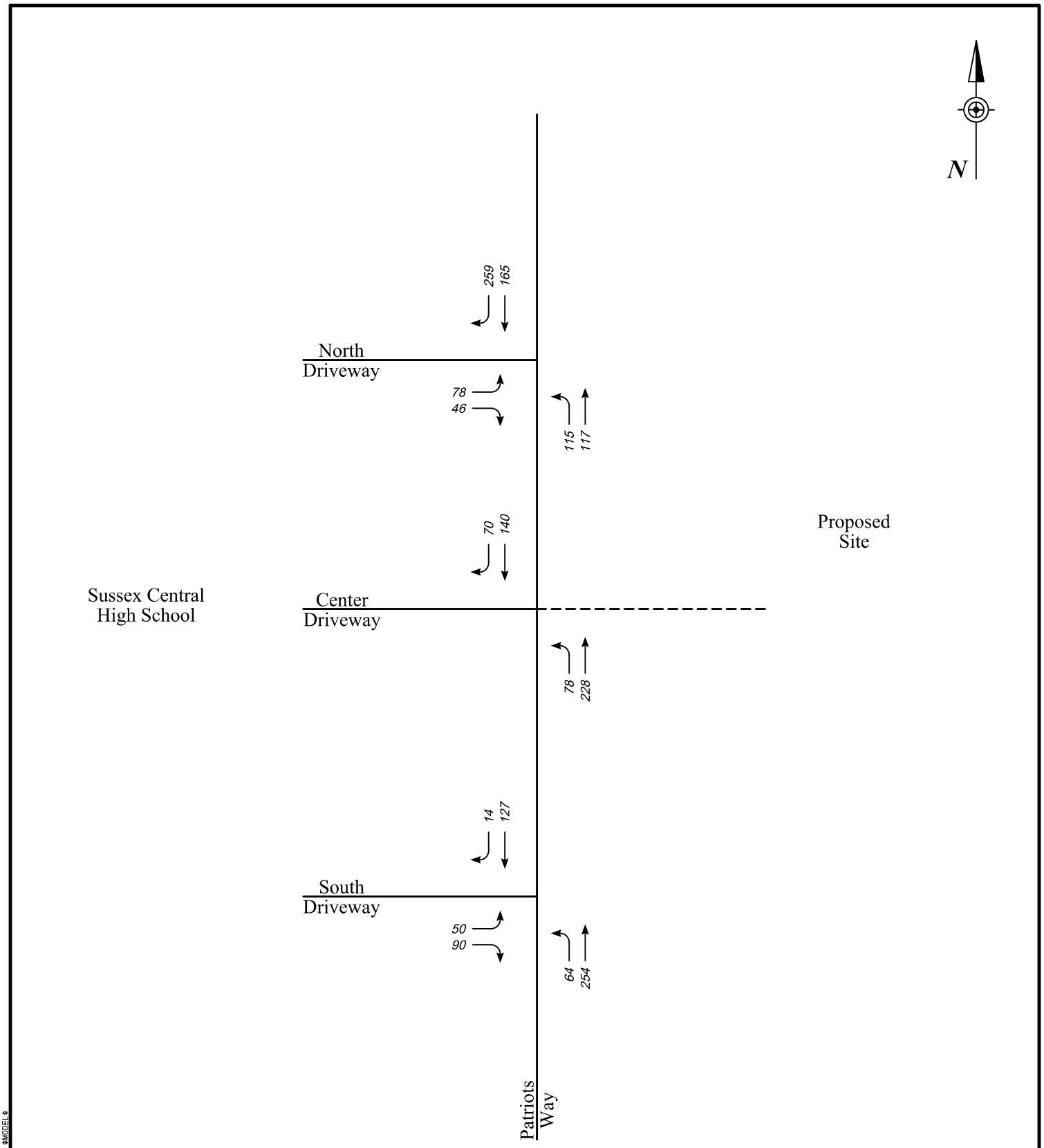
FIGURE 2

SITE PLAN



KEY:

- - - - - - PROPOSED DRIVEWAY

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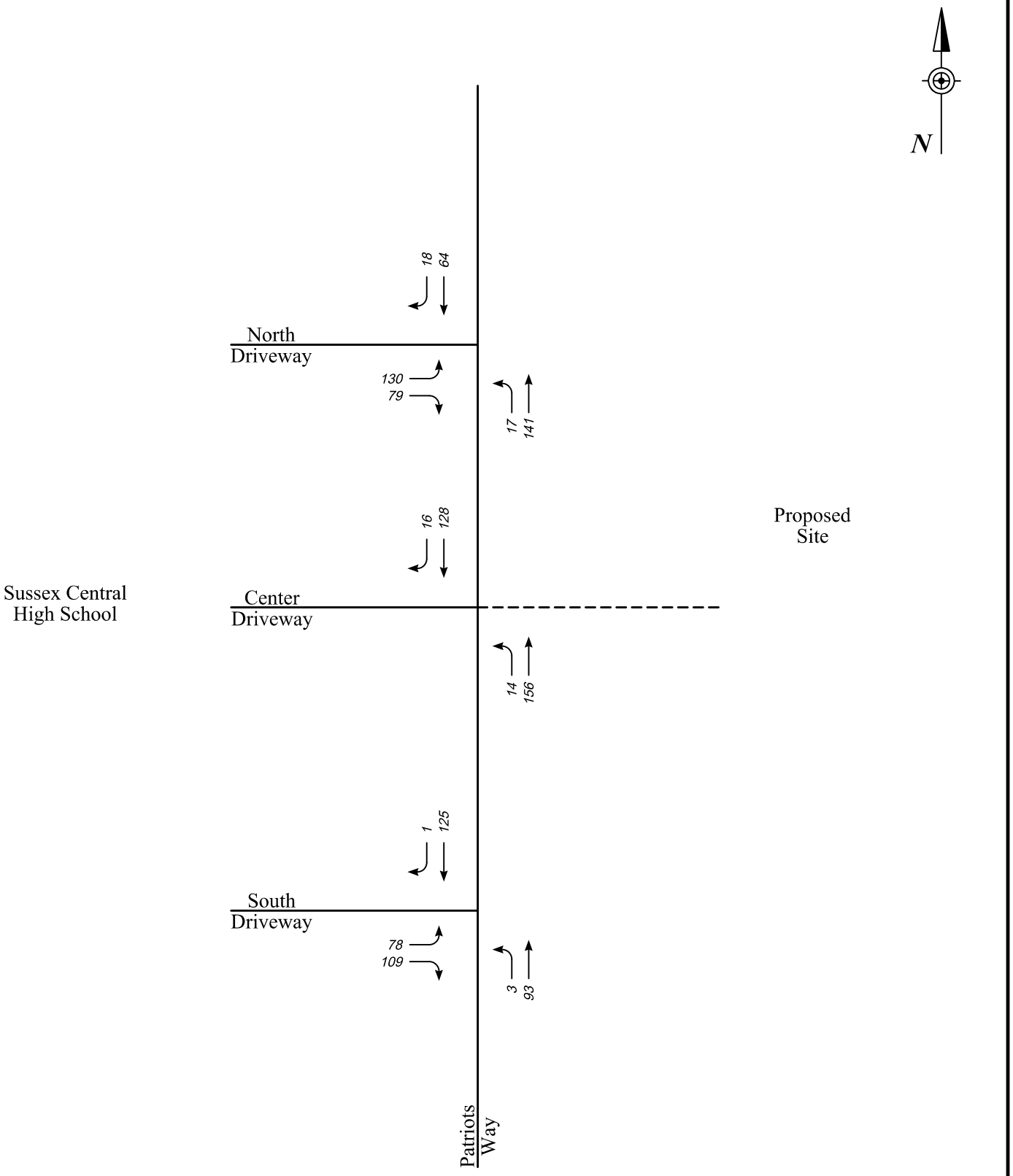
FIGURE 3

2019 EXISTING CONDITIONS
WEEKDAY A.M. PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

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FIGURE 4

2019 EXISTING CONDITIONS
WEEKDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

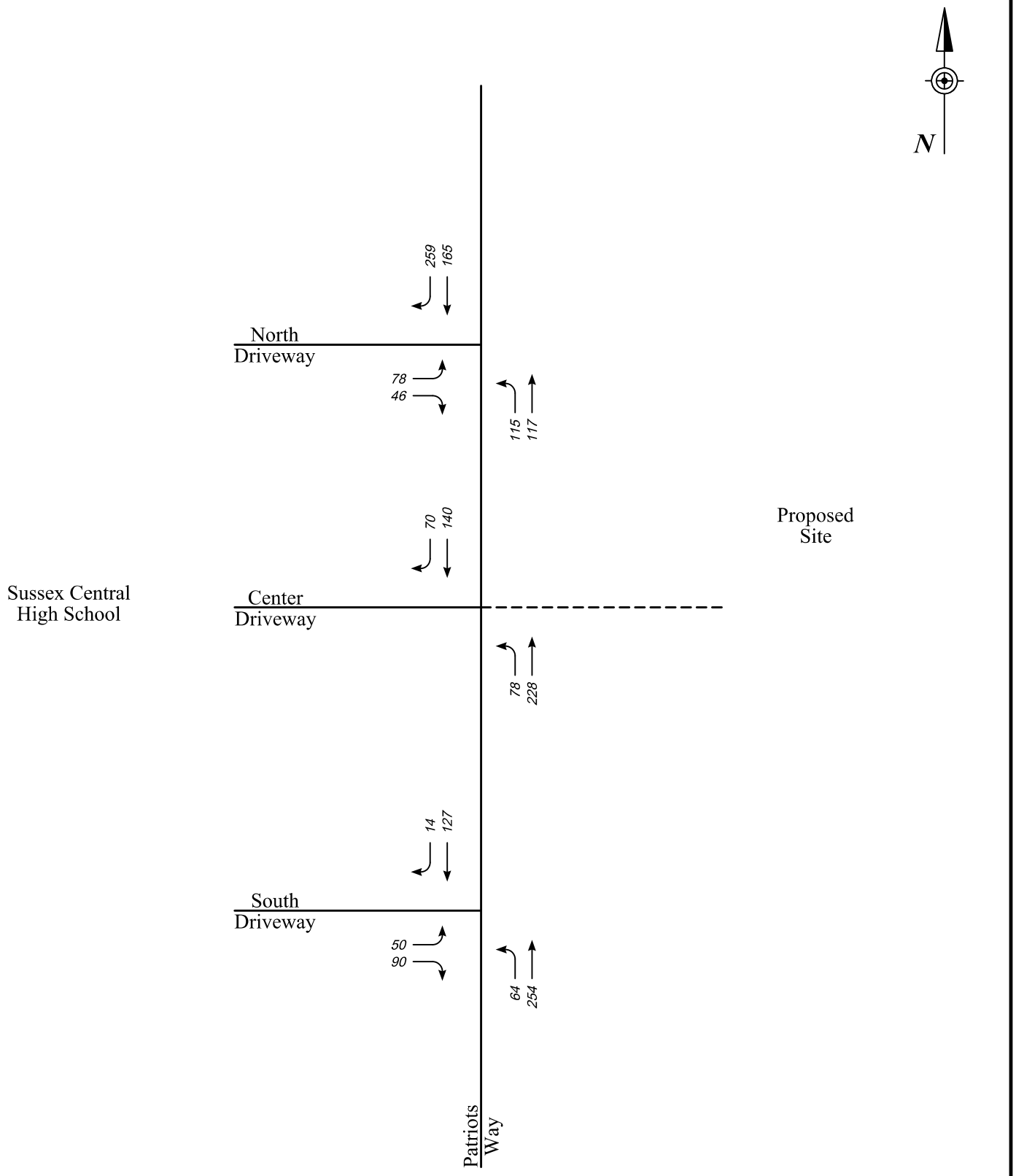

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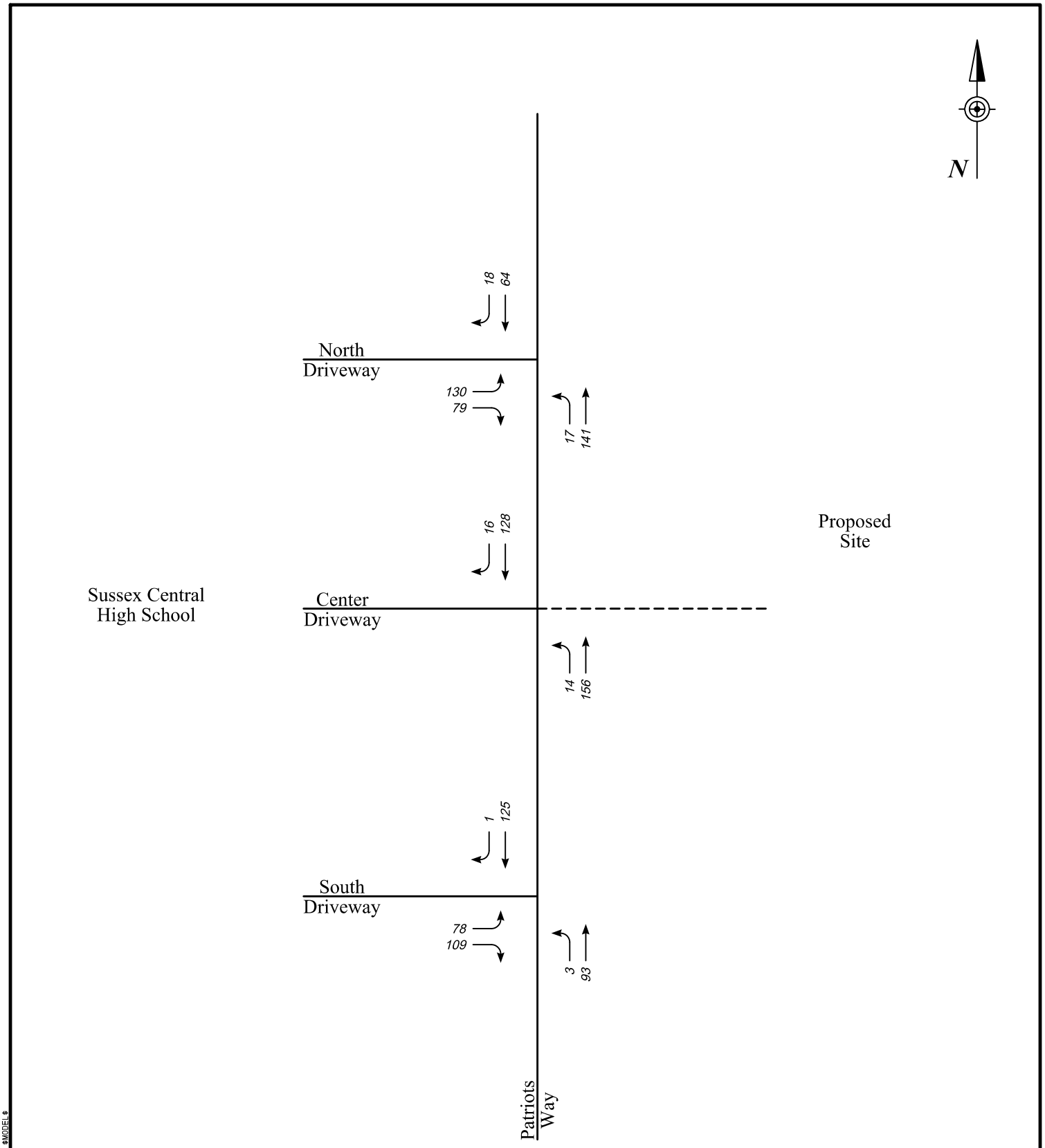
FIGURE 5

2022 BASE CONDITIONS
WEEKDAY A.M. PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

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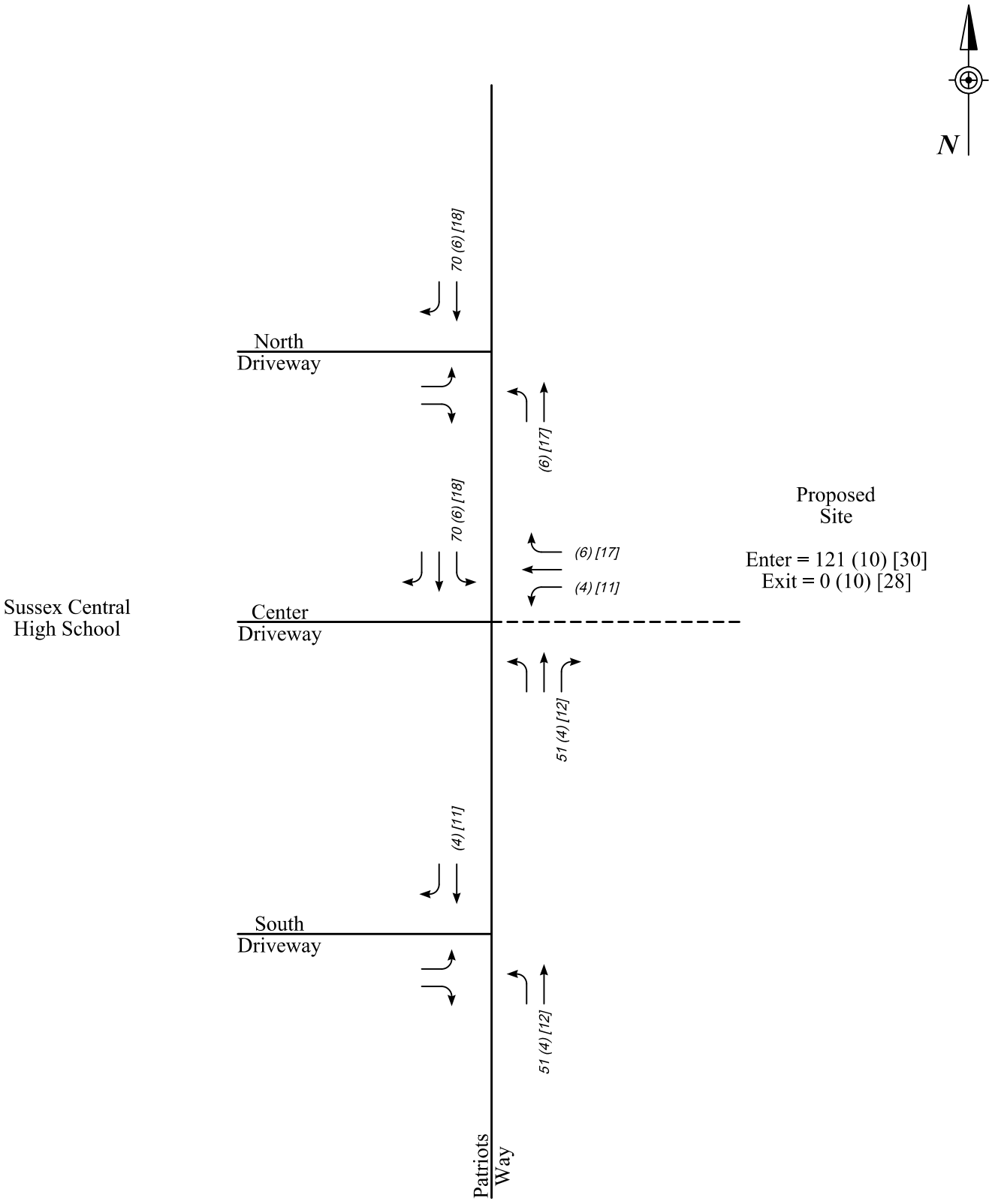
FIGURE 6

2022 BASE CONDITIONS
WEEKDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

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SCHEMATIC DRAWING:NOT TO SCALE

STAFF (PARENT) [BUS] TRIPS

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FIGURE 7

TRIP DISTRIBUTION
WEEKDAY A.M. PEAK HOUR

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

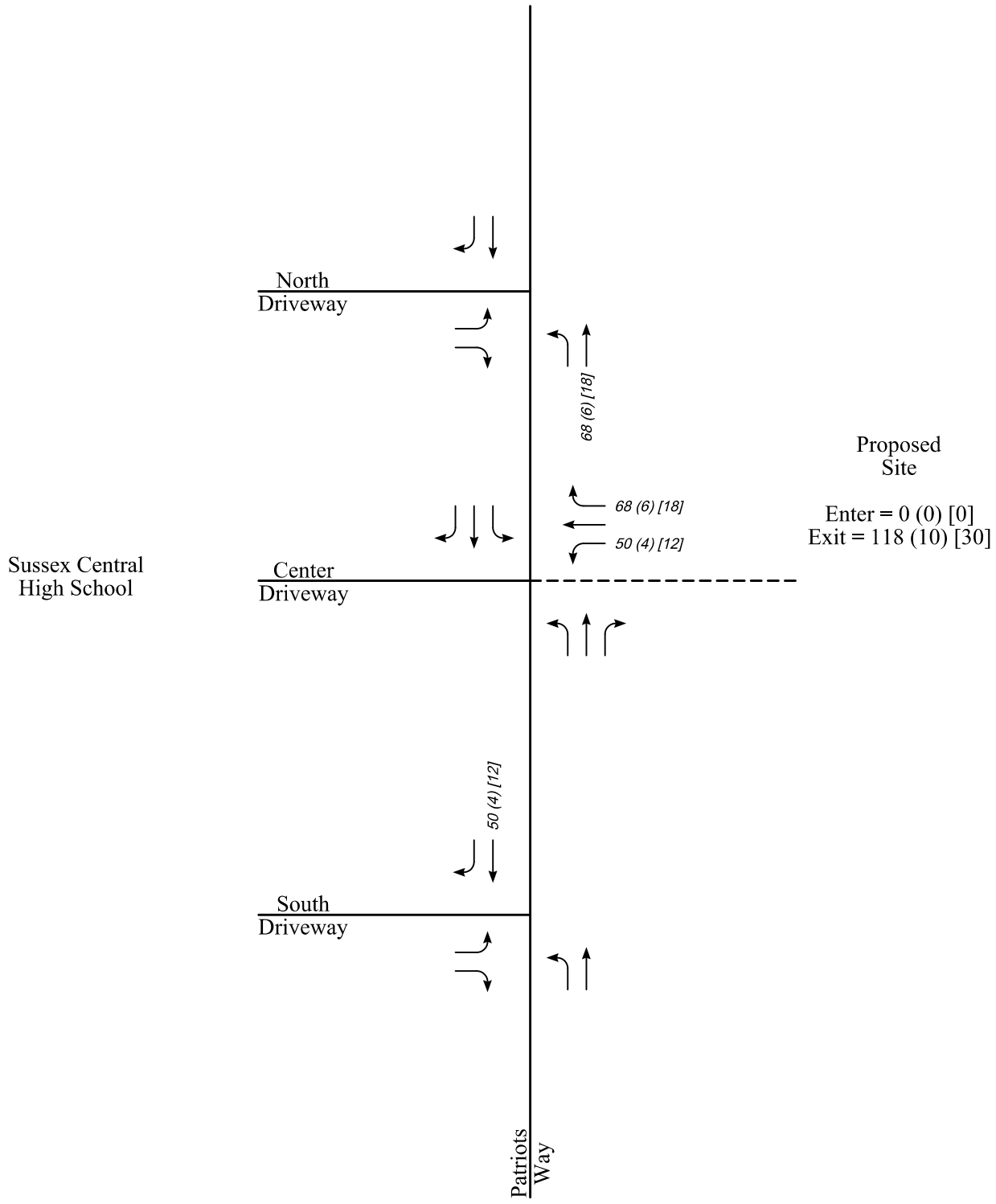

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FIGURE 8

TRIP DISTRIBUTION
WEEKDAY P.M. PEAK HOUR

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

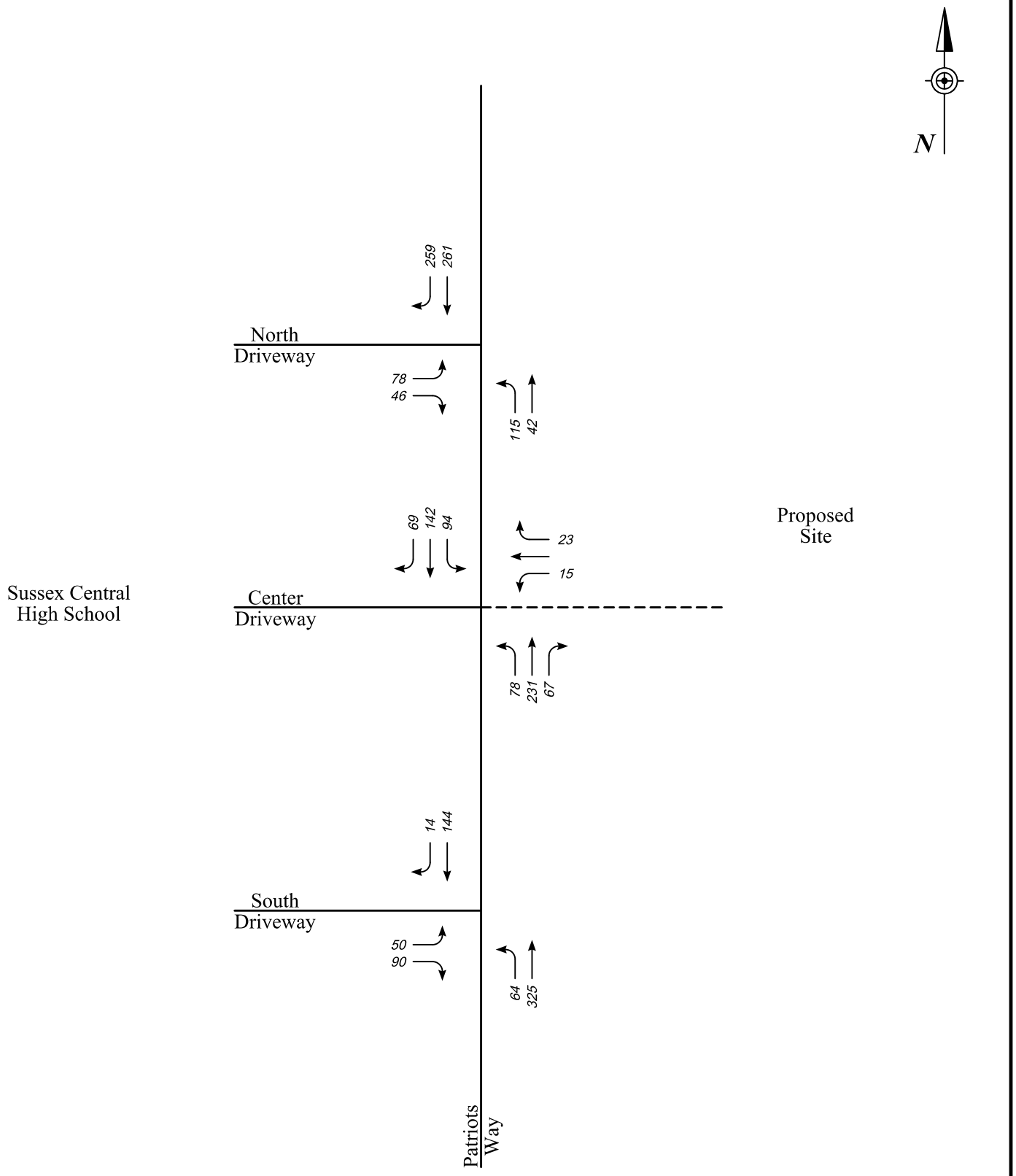

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FIGURE 9

2022 PROJECTED CONDITIONS
WEEKDAY A.M. PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

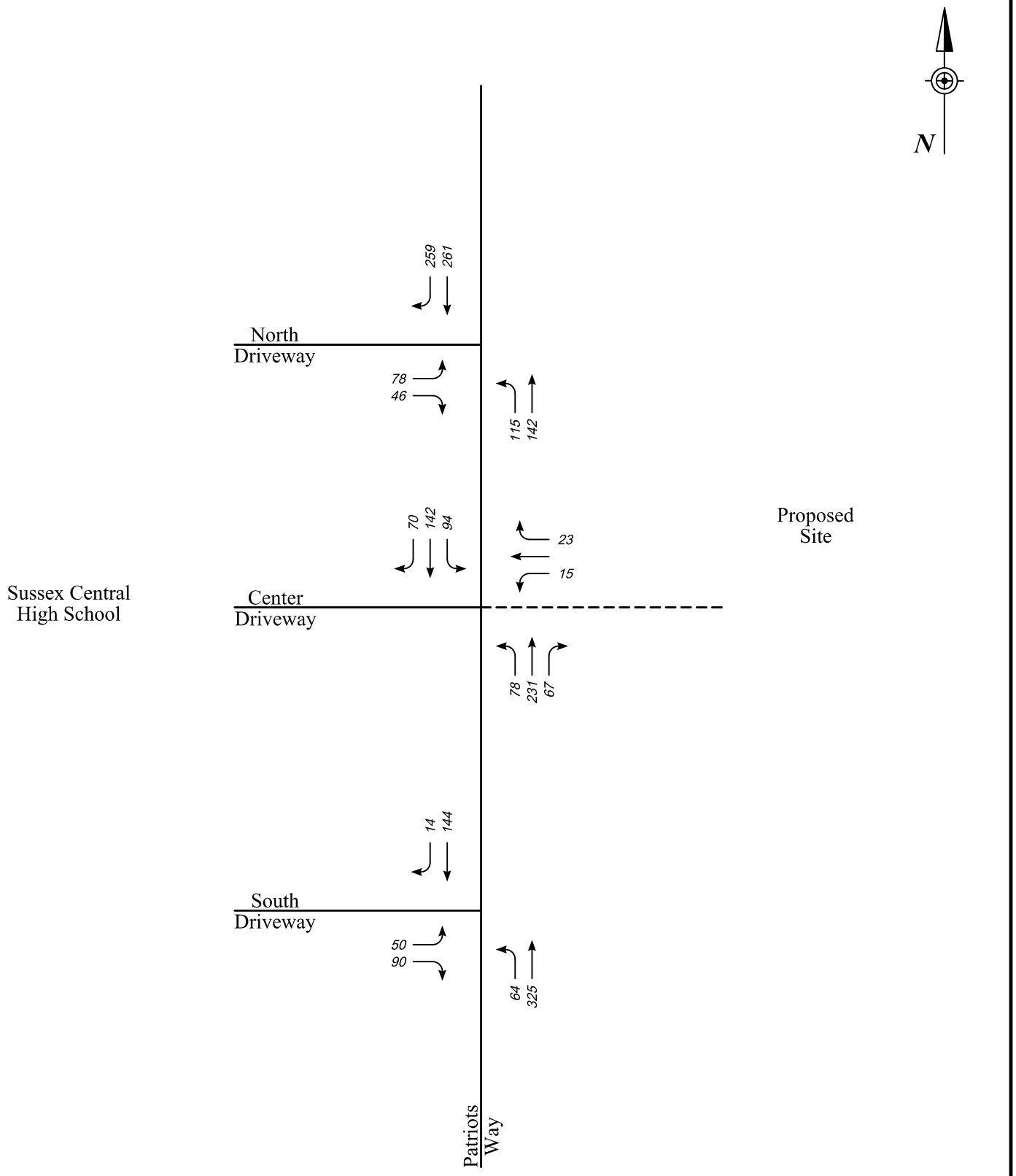

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FIGURE 10

2022 PROJECTED CONDITIONS
WEEKDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

Appendix A

PROJECT CORRESPONDENCE

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

JENNIFER COHAN
SECRETARY

December 20, 2019

Mr. Eric Ostimchuk
Traffic Planning and Design, Inc.
2500 East High Street
Suite 650
Pottstown, PA 19464

Dear Mr. Ostimchuk:

We have reviewed the traffic counts that we received on December 6, 2019 for the **Howard T. Ennis School** (Protocol Tax Parcel 133-7.00-8.00) traffic impact study (TIS). Upon our review, we find that the traffic counts are acceptable as submitted.

Considering background growth factors, please apply the following growth factors to the seasonally adjusted traffic volumes in developing future traffic:

Road	Growth Factor	Total Growth from 2019 to 2022
Patriots Way (Sussex Road 318)	1.005	1.015
All Other Roads	1.000	1.000

You may contact Mr. Troy Brestel at (302) 760-2167 if you have any questions concerning this correspondence.

Sincerely,

Troy Brestel for

T. William Brockenbrough, Jr.
County Coordinator

TWB:tbf
cc: Shelby Lynch, Traffic Planning and Design, Inc.
Janelle Cornwell, Sussex County Planning and Zoning
J. Marc Coté, Assistant Director, Development Coordination
Troy Brestel, Project Engineer, Development Coordination
Claudy Joinville, Project Engineer, Development Coordination

DelDOT

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

JENNIFER COHAN
SECRETARY

MEMORANDUM

TO: File

FROM: Claudy Joinville, Project Engineer C.J.

DATE: October 14, 2019

SUBJECT: **Howard T. Ennis School**
Traffic Operational Analysis (TOA) - Scoping Meeting (9/12/19)
Scope of Work

ATTENDANCE:
Janelle Cornwell, Sussex County Planning and Zoning (via skype)
Colmcille DeAscanis, CDA Engineering, Inc. (via skype)
Zak Kerstetter, CDA Engineering, Inc.
Eric Ostimchuk, Traffic Planning & Design (TPD)
Ken Fearn, Fearn Clendaniel Architects
Peter Haag, DelDOT Traffic (via skype)
Marc Coté, DelDOT Planning
Susanne Laws, DelDOT Planning
John Andrescavage, DelDOT Planning
T. William Brockenbrough, Jr., DelDOT Planning
Claudy Joinville, DelDOT Planning

Background and Discussion

Indian River School District seeks to develop a 157,000 square-foot Special Needs school on an approximately 32.43-acre parcel (Tax Parcel: 133-7.00-8.01). The land is located on the east side of Patriots Way (Sussex Road 318), directly opposite the Sussex Central High School, south of Georgetown. The land is currently zoned as AR-1 (Agricultural Residential), and the developer does not plan to rezone the land.

One full access point is proposed along Patriots Way. Construction is anticipated to be complete in 2022.

Cases to be Evaluated

The study shall evaluate the weekday morning and weekday evening peak hours for the following situations:

1) Existing (2019);
2) 2022 without development; and
3) 2022 with development.

Facilities to be Evaluated

The TOA should evaluate conditions at the following intersections for capacity and level of service using the Highway Capacity Software (HCS). It should also evaluate the extent to which they meet the relevant DelDOT, AASHTO and MUTCD standards for geometry and traffic control devices.

1) Patriots Way (Sussex Road 318) / Site Entrance / Sussex Central High School Entrance (center)
2) Patriots Way / Sussex Central High School Entrance (north)
3) Patriots Way / Sussex Central High School Entrance (south)

Traffic Counts

The Consultant should conduct traffic counts for the intersections listed above from 7:00 a.m. to 9:00 a.m. and from 2:00 p.m. to 4:00 p.m., on a Tuesday, Wednesday or Thursday to determine when the peaks occur. The weekday traffic counts should be performed during a time when schools are open and operating at a normal capacity.

Additionally, an Automatic Traffic Recorder (ATR) should be used to collect traffic data on Patriots Way south of the south high school entrance. The ATR should be placed for a one-week time period that includes the date(s) of the manual traffic counts. The ATR data will be used to verify the manual counts and determine whether adjustments are required.

Section 2.2.8.5, item 19, under Existing Traffic and Transportation Conditions in the Development Coordination Manual, addresses how oversaturated intersections are to be counted.

The traffic counts should be submitted to DelDOT both electronically as Portable Document Format (PDF)/Excel files and as draft report figures showing peak hour volumes (labeled with date and peak hour interval) posted on diagrams of the road network.

The Consultant should include counts of pedestrians, a separate count of right-turn on red (in addition to right-turn movement counts), and a separate count of heavy vehicles.

The Consultant should be alert for events affecting the traffic counts, such as accidents or nearby construction and shall make note of any such events when submitting the counts. As necessary, DelDOT reserves the right to reject the counts or require adjustments to them.

Trip Generation

DelDOT is agreeable to the Consultant's use of historical and site specific data to calculate the trips for the proposed school.

Trip Distribution

A trip distribution to be used for the site were developed using DelDOT's Travel Demand Model and is attached. School bus and parent traffic should reflect the school's feeder patterns as the model distribution only applies to staff traffic.

Future Growth

The Consultant shall apply growth factors to the traffic counts. DelDOT will develop those factors after we receive the Consultant's traffic counts.

Pedestrian Traffic Analysis

The Consultant shall complete a pedestrian crossing analysis using NCHRP 562. The analysis should evaluate multiple crossing scenarios, such as, but not limited to, a single crossing and a two-stage crossing with a median refuge island. In addition, the analysis should assume the pedestrian volume has met the NCHRP threshold. For more guidance on this analysis, the Consultant shall contact Peter Haag, Traffic Studies Manager of DelDOT's Traffic Section. Mr. Haag may be reached at (302) 659-4084.

Highway Capacity Software & Synchro

The Consultant shall use the most recent version of the Highway Capacity Software (HCS) that implements the 6th Edition of the Highway Capacity Manual (HCM). Presently, that is HCS7.

In addition, the Consultant shall use Synchro to conduct 15-minute analysis periods to accurately model the peak traffic volumes associated with the Sussex Central High School opposite the proposed school.

Seasonal Adjustment Factors for the roads in the study area are as follows:

Roads	September	October	November
Patriots Way (Sussex Road 318)	0.96	0.95	0.98
All Other Roads	1.00	1.00	1.00

DelDOT Projects

Currently, DelDOT has no active projects within the study area.

Transit, Bicycle, and Pedestrian Facilities

The study should describe the existing and proposed transit service in the project area and should also describe the existing and needed transit, bicycle, and pedestrian facilities on or near the project site. In determining these items, the Consultant shall contact Mr. David Dooley, a Service Development Planner at the Delaware Transit Corporation (DTC), and Mr. Anthony Aglio, of DelDOT's Local Systems Section. Mr. Dooley may be reached at (302) 576-6064. Mr. Aglio may be reached at (302) 760-2509.

General Notes

1) All submissions relating to this study should be made electronically via the Planning and Development Coordination Application (PDCA), preferably in Portable Document Format (PDF).

2) The Consultant should e-mail DelDOT's Transportation Management Center (TMC) at tmc1@delaware.gov to obtain advance approval for the use of any signal timings.

3) Before deploying temporary unmanned devices, e.g. cameras or radar detectors, in the State-maintained right-of-way, the individual or company proposing to do so shall execute and file a Right-of-Way Use Agreement. Before each specific deployment of devices, the individual or company shall email a completed Temporary Data Collection Device Notification Form to TMC1@delaware.gov. Deployment of Automatic Traffic Recorders, a.k.a. tube counters, and devices on portable trailers does not require a Right-of-Way Use Agreement but does require submission of the Temporary Data Collection Device Notification Form. Copies of the standard agreement and the form are available from Ms. Lara Brown at (302) 659-4062 or Lara.Brown@delaware.gov.

4) The Consultant should refer to the attached memorandum from Scott Neidert of DelDOT's Traffic Section for guidance regarding requests for crash data within the study area. The Consultant shall report on this data and make recommendations for improvements if safety problems exist in the study area. Mr. Neidert may be reached at (302) 659-4075.

5) Both DelDOT and Sussex County reserve the right to change this scope of work if the study is not performed within a reasonable time.

6) The developer may choose to have DelDOT's Consultant perform the TOA rather than use their own Consultant. If this option is of interest, the developer should contact Mr. Troy Brestel at (302) 760-2167 to request a cost estimate.

7) By copy of this memorandum I ask those copied to contact me at (302) 760-2124 regarding any significant errors or omissions.

CJ:cjm
Enclosure
cc: Drew Boyce, Director, Planning
Joseph Booth, Indian River School District
Michael Simmons, Assistant Director for Project Development South, DOTS
Alastair Probert, South District Engineer, DOTS
Gemez Norwood, South District Public Works Supervisor, DOTS
William Kirsch, South District Permit Supervisor, DOTS
Mark Whiteside, Project Manager, Project Development – South, DOTS
Scott Neidert, Design Resource Engineer, Traffic Section
Mark Buckalew, Traffic Safety Engineer, DelDOT Traffic
David Dooley, Service Development Planner, Delaware Transit Corporation
Anthony Aglio, Planning Supervisor, Local Systems
Lara Brown, Administrative Specialist, DelDOT Traffic DOTS
Kari Glanden, Statistical Information Supervisor, DelDOT Traffic, DOTS
Mark Galipo, Traffic Engineer, DelDOT Traffic, DOTS
Andrew Parker, McCormick & Taylor, Inc.
Mir Wahed, Johnson, Mirmiran, & Thompson, Inc.

AM Peak Distribution

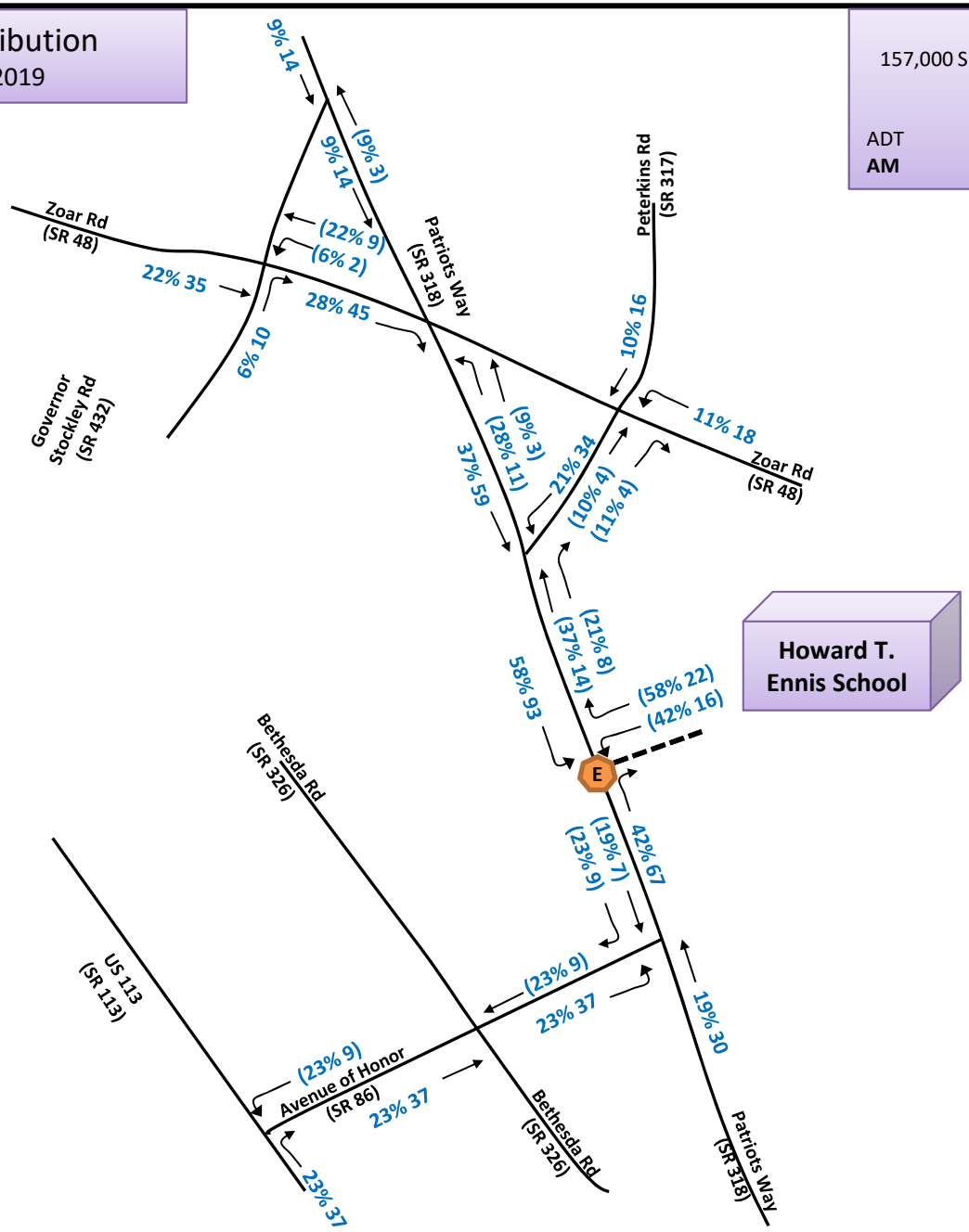
October 14, 2019

Howard T. Ennis School

157,000 SF / 235-student Special Needs School (Site Data)

Trip Generation

	Total	IN	OUT
ADT	420	210	210
AM	**207**	**161**	**38**



Legend

- State-maintained road
- Site Entrance
- Traffic lost / gained before intersections
- State-maintained Intersections
- XX Inbound Trips
- (XX) Outbound Trips

DelDOT

Figure 1 of 1

Note: Figure Not Drawn to Scale

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

JENNIFER COHAN
SECRETARY

TO: Requestors of Crash Data via DelDOT's Development Coordination Process

FROM: Scott Neidert, Design Resource Engineer, Traffic Section

DATE: **September 5, 2019**

SUBJECT: **Revisions to Crash Data Requests and Releases**

As of July 23, 2019, Governor Carney has signed SB 147 into law containing amendments to the release of crash data, namely permitting DelDOT to release certain de-identified data based on the nature of the requestor. Specifically, newly enacted 21 *Del. C.* §313(c)(1) provides that:

"The Department of Transportation may provide the information under this subsection if the person requesting the information provides proof of identity and a sworn representation that the data will be strictly used for any of the following purposes:

a. To comply with federal, State, or local law or regulations.
b. By a municipality or municipal planning organization in carrying out official functions."

To conform with the "proof of identity and… sworn representation…" clause, requestors will be required to complete an online crash data request as well as provide a notarized release form to be submitted with each crash request prior to being processed. A link to the release form is provided within the online crash request.

Effective immediately, all requests for crash data, when required, must be made at: *https://tmc.deldot.gov/tmcx/app/crashdata/public/info.html*

Requests for crash data will not be processed until all required fields are completed, and the release form has been completed and received.

SN
cc: Nicole Majeski, Deputy Secretary
Shanté Hastings, Chief Engineer
Drew Boyce, Director, Planning
Annie Cordo, Deputy Attorney General
Mark Luszcz, Deputy Director, Division of Transportation Solutions
Kari Glanden Thompson, Statistical Information Supervisor, Traffic Section

DelDOT

Appendix B

STUDY AREA PHOTOGRAPHS

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & North Driveway*

Direction / Road: NB Patriots Way
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB Patriots Way
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & North Driveway*

Direction / Road: NB Patriots Way
Approach / Departure: Departure
Distance: 50 feet

Direction / Road: NB Patriots Way
Approach / Departure: Departure
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & North Driveway*

Direction / Road: SB Patriots Way
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB Patriots Way
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & North Driveway*

Direction / Road:	SB Patriots Way
Approach / Departure:	Departure
Distance:	50 feet

Direction / Road:	SB Patriots Way
Approach / Departure:	Departure
Distance:	200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & North Driveway*

Direction / Road: EB Sussex Central High School DW (North)
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sussex Central High School DW (North)
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & North Driveway*

Direction / Road:	EB Sussex Central High School DW (North)
Approach / Departure:	Departure
Distance:	50 Feet

Direction / Road:	EB Sussex Central High School DW (North)
Approach / Departure:	Departure
Distance:	200 feet

Job #: CDAE.00008 *Date Taken:* 11-8-2019 *Intersection Of:* Patriots Way & Central Driveway

Direction / Road: NB Patriots Way
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB Patriots Way
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & Central Driveway*

Direction / Road: NB Patriots Way
Approach / Departure: Departure
Distance: 50 feet

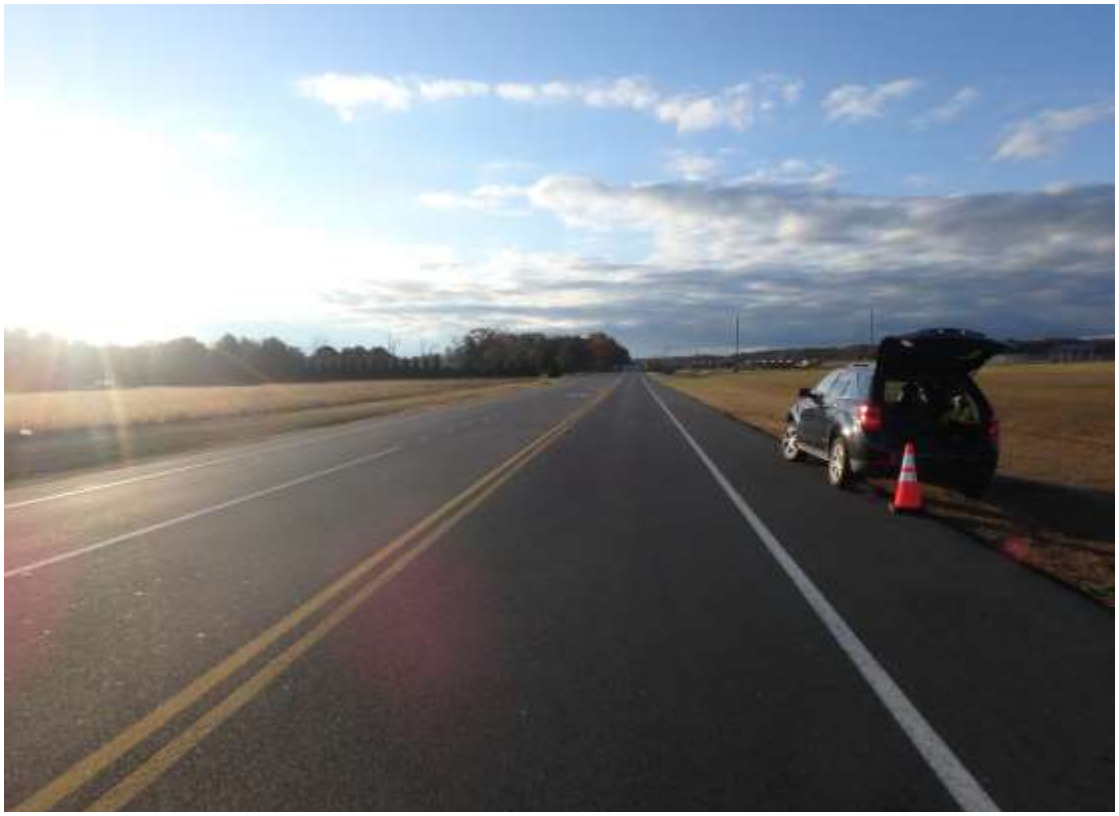
Direction / Road: NB Patriots Way
Approach / Departure: Departure
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & Central Driveway*

Direction / Road: SB Patriots Way
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB Patriots Way
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & Central Driveway*



Direction / Road:	SB Patriots Way
Approach / Departure:	Departure
Distance:	50 feet

Direction / Road:	SB Patriots Way
Approach / Departure:	Departure
Distance:	200 feet

Job #: CDAE.00008 *Date Taken:* 11-8-2019 *Intersection Of:* Patriots Way & Central Driveway

Direction / Road: EB Sussex Central High School DW (Center)
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sussex Central High School DW (Center)
Approach / Departure: Approach
Distance: 200 feet

Job #: CDAE.00008 *Date Taken:* 11-8-2019 *Intersection Of:* Patriots Way & Central Driveway

Direction / Road:	EB Sussex Central High School DW (Center)
Approach / Departure:	Departure
Distance:	50 Feet

Direction / Road:	EB Sussex Central High School DW (Center)
Approach / Departure:	Departure
Distance:	200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & South Driveway*

Direction / Road: NB Patriots Way
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB Patriots Way
Approach / Departure: Approach
Distance: 200 feet

Job #: CDAE.00008 *Date Taken:* 11-8-2019 *Intersection Of:* Patriots Way & South Driveway

Direction / Road: NB Patriots Way
Approach / Departure: Departure
Distance: 50 feet

Direction / Road: NB Patriots Way
Approach / Departure: Departure
Distance: 200 feet

Job #: CDAE.00008 *Date Taken:* 11-8-2019 *Intersection Of:* Patriots Way & South Driveway

Direction / Road: SB Patriots Way
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB Patriots Way
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & South Driveway*

Direction / Road: SB Patriots Way
Approach / Departure: Departure
Distance: 50 feet

Direction / Road: SB Patriots Way
Approach / Departure: Departure
Distance: 200 feet

Job #: CDAE.00008 *Date Taken:* 11-8-2019 *Intersection Of:* Patriots Way & South Driveway

Direction / Road: EB Sussex Central High School DW (South)
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sussex Central High School DW (South)
Approach / Departure: Approach
Distance: 200 feet

Job #: *CDAE.00008* *Date Taken:* *11-8-2019* *Intersection Of:* *Patriots Way & South Driveway*

Direction / Road:	EB Sussex Central High School DW (South)
Approach / Departure:	Departure
Distance:	50 Feet

Direction / Road:	EB Sussex Central High School DW (South)
Approach / Departure:	Departure
Distance:	200 feet

Appendix C

MANUAL TRAFFIC COUNT PRINTOUTS

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Count Name: Patriots Way & Sussex Central High School DW (North)
Site Code:
Start Date: 11/07/2019

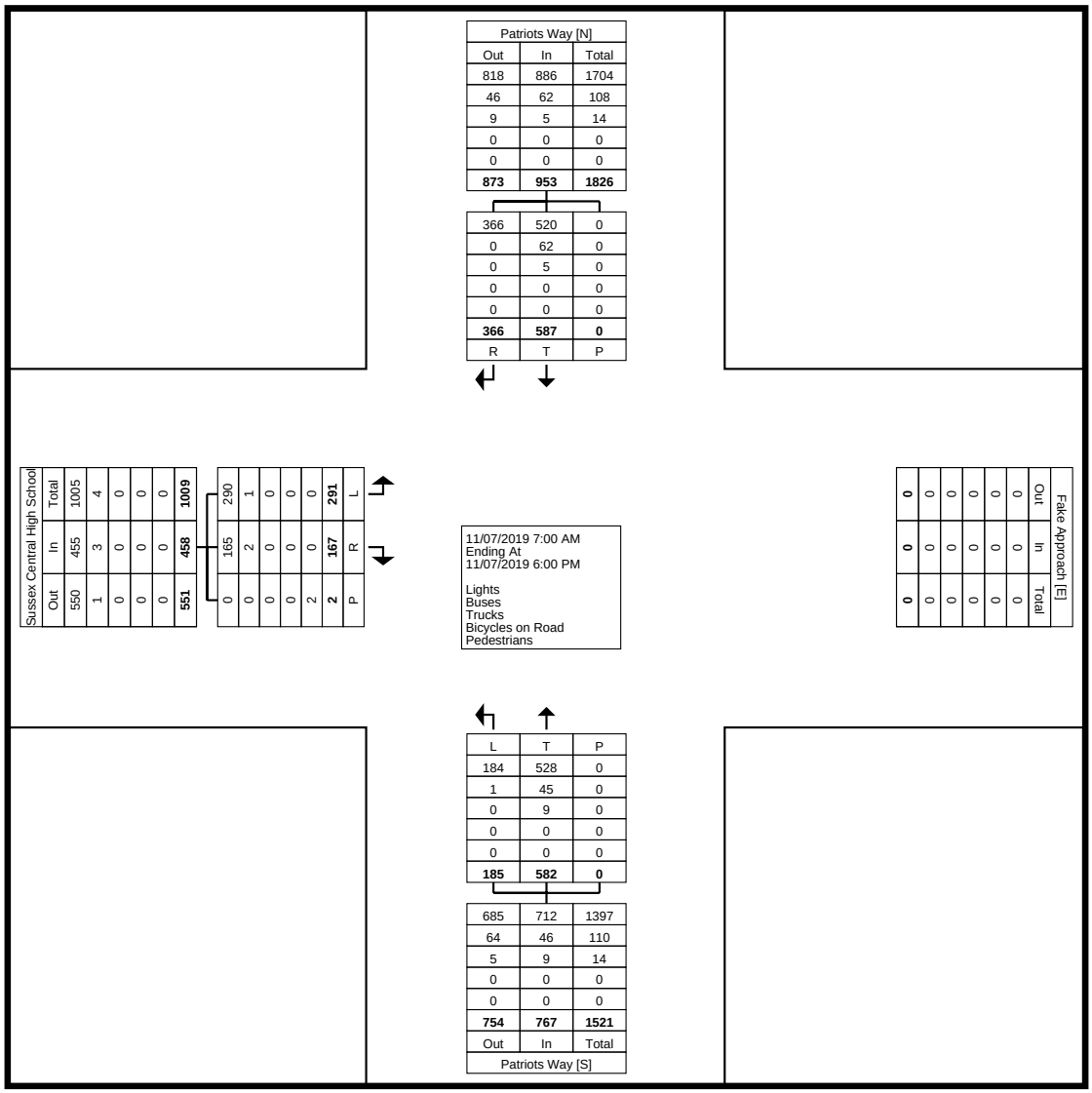
Turning Movement Data

Start Time	Sussex Central High School DW (North) Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	14	13	0	27	44	28	0	72	51	75	0	126	225
7:15 AM	30	22	0	52	62	32	0	94	56	146	0	202	348
7:30 AM	29	9	0	38	10	38	0	48	32	37	0	69	155
7:45 AM	5	2	0	7	1	21	0	22	29	6	0	35	64
Hourly Total	78	46	0	124	117	119	0	236	168	264	0	432	792
8:00 AM	3	0	0	3	6	13	0	19	21	5	0	26	48
8:15 AM	0	0	0	0	5	19	0	24	19	9	0	28	52
8:30 AM	3	1	0	4	1	17	0	18	19	4	0	23	45
8:45 AM	4	2	0	6	1	16	0	17	17	6	0	23	46
Hourly Total	10	3	0	13	13	65	0	78	76	24	0	100	191
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	4	4	0	8	5	23	0	28	22	6	0	28	64
2:15 PM	3	1	0	4	14	19	0	33	20	25	0	45	82
2:30 PM	64	46	0	110	11	70	0	81	13	5	0	18	209
2:45 PM	17	12	0	29	0	19	0	19	14	5	0	19	67
Hourly Total	88	63	0	151	30	131	0	161	69	41	0	110	422
3:00 PM	24	8	1	32	2	31	0	33	15	7	0	22	87
3:15 PM	25	13	1	38	4	24	0	28	23	1	0	24	90
3:30 PM	12	5	0	17	5	22	0	27	20	2	0	22	66
3:45 PM	12	9	0	21	3	25	0	28	25	5	0	30	79
Hourly Total	73	35	2	108	14	102	0	116	83	15	0	98	322
4:00 PM	4	5	0	9	0	31	0	31	25	6	0	31	71
4:15 PM	12	4	0	16	2	24	0	26	23	10	0	33	75
4:30 PM	7	10	0	17	4	26	0	30	29	2	0	31	78
4:45 PM	13	0	0	13	1	13	0	14	19	2	0	21	48
Hourly Total	36	19	0	55	7	94	0	101	96	20	0	116	272
5:00 PM	3	1	0	4	4	24	0	28	19	0	0	19	51
5:15 PM	0	0	0	0	0	15	0	15	35	2	0	37	52
5:30 PM	1	0	0	1	0	19	0	19	24	0	0	24	44
5:45 PM	2	0	0	2	0	13	0	13	17	0	0	17	32
Hourly Total	6	1	0	7	4	71	0	75	95	2	0	97	179
Grand Total	291	167	2	458	185	582	0	767	587	366	0	953	2178
Approach %	63.5	36.5	-	-	24.1	75.9	-	-	61.6	38.4	-	-	-
Total %	13.4	7.7	-	21.0	8.5	26.7	-	35.2	27.0	16.8	-	43.8	-
Lights	290	165	-	455	184	528	-	712	520	366	-	886	2053
% Lights	99.7	98.8	-	99.3	99.5	90.7	-	92.8	88.6	100.0	-	93.0	94.3
Buses	1	2	-	3	1	45	-	46	62	0	-	62	111
% Buses	0.3	1.2	-	0.7	0.5	7.7	-	6.0	10.6	0.0	-	6.5	5.1
Trucks	0	0	-	0	0	9	-	9	5	0	-	5	14
% Trucks	0.0	0.0	-	0.0	0.0	1.5	-	1.2	0.9	0.0	-	0.5	0.6
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	2	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (North)
Site Code:
Start Date: 11/07/2019



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (North)
Site Code:
Start Date: 11/07/2019

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Sussex Central High School DW (North) Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	14	13	0	27	44	28	0	72	51	75	0	126	225
7:15 AM	30	22	0	52	62	32	0	94	56	146	0	202	348
7:30 AM	29	9	0	38	10	38	0	48	32	37	0	69	155
7:45 AM	5	2	0	7	1	21	0	22	29	6	0	35	64
Total	78	46	0	124	117	119	0	236	168	264	0	432	792
Approach %	62.9	37.1	-	-	49.6	50.4	-	-	38.9	61.1	-	-	-
Total %	9.8	5.8	-	15.7	14.8	15.0	-	29.8	21.2	33.3	-	54.5	-
PHF	0.650	0.523	-	0.596	0.472	0.783	-	0.628	0.750	0.452	-	0.535	0.569
Lights	78	46	-	124	117	97	-	214	141	264	-	405	743
% Lights	100.0	100.0	-	100.0	100.0	81.5	-	90.7	83.9	100.0	-	93.8	93.8
Buses	0	0	-	0	0	18	-	18	26	0	-	26	44
% Buses	0.0	0.0	-	0.0	0.0	15.1	-	7.6	15.5	0.0	-	6.0	5.6
Trucks	0	0	-	0	0	4	-	4	1	0	-	1	5
% Trucks	0.0	0.0	-	0.0	0.0	3.4	-	1.7	0.6	0.0	-	0.2	0.6
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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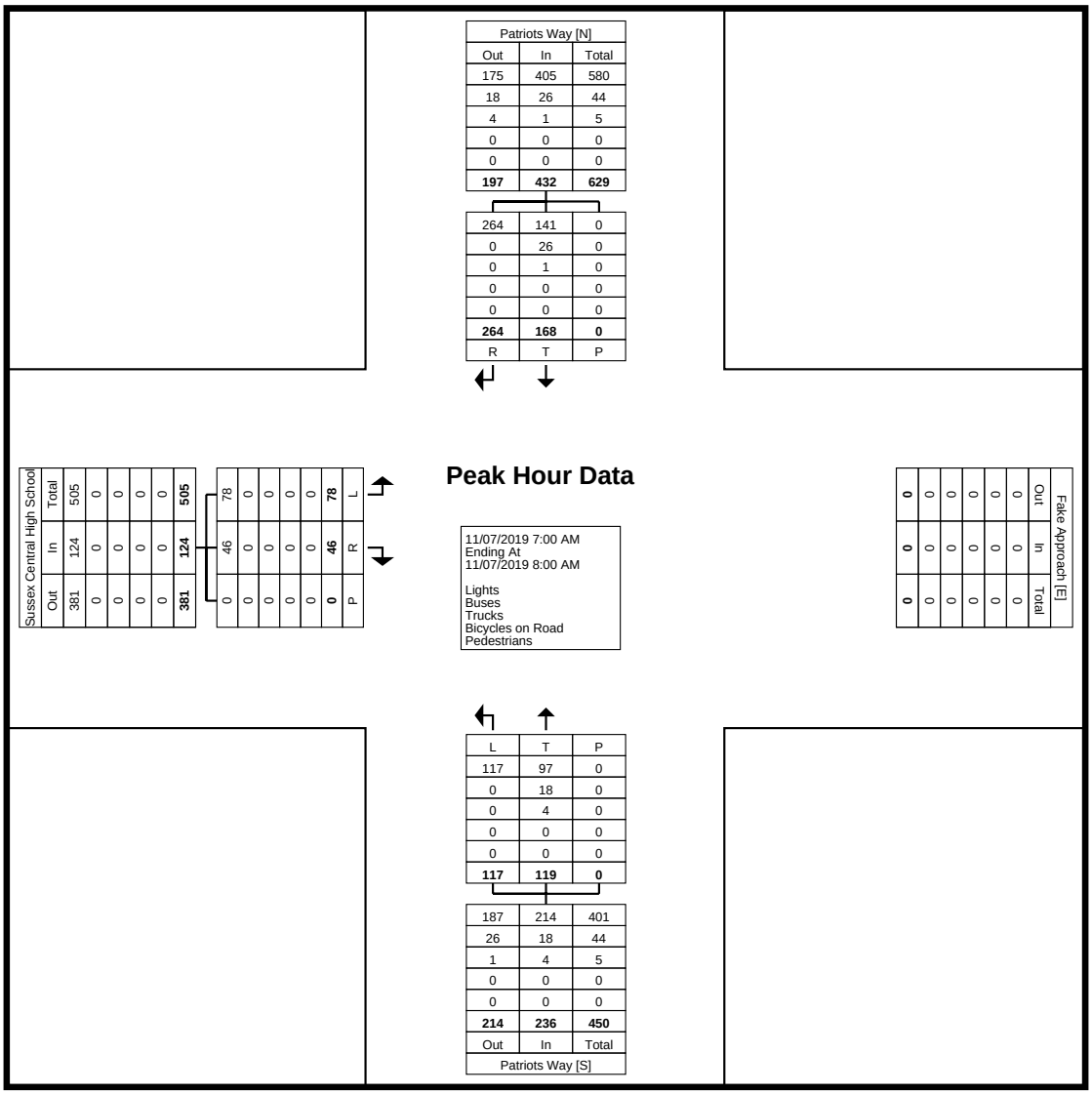
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (North)
Site Code:
Start Date: 11/07/2019



Turning Movement Peak Hour Data Plot (7:00 AM)

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Count Name: Patriots Way & Sussex Central High School DW (North)
Site Code:
Start Date: 11/07/2019

Turning Movement Peak Hour Data (2:30 PM)

Start Time	Sussex Central High School DW (North) Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
2:30 PM	64	46	0	110	11	70	0	81	13	5	0	18	209
2:45 PM	17	12	0	29	0	19	0	19	14	5	0	19	67
3:00 PM	24	8	1	32	2	31	0	33	15	7	0	22	87
3:15 PM	25	13	1	38	4	24	0	28	23	1	0	24	90
Total	130	79	2	209	17	144	0	161	65	18	0	83	453
Approach %	62.2	37.8	-	-	10.6	89.4	-	-	78.3	21.7	-	-	-
Total %	28.7	17.4	-	46.1	3.8	31.8	-	35.5	14.3	4.0	-	18.3	-
PHF	0.508	0.429	-	0.475	0.386	0.514	-	0.497	0.707	0.643	-	0.865	0.542
Lights	130	79	-	209	17	121	-	138	60	18	-	78	425
% Lights	100.0	100.0	-	100.0	100.0	84.0	-	85.7	92.3	100.0	-	94.0	93.8
Buses	0	0	-	0	0	23	-	23	3	0	-	3	26
% Buses	0.0	0.0	-	0.0	0.0	16.0	-	14.3	4.6	0.0	-	3.6	5.7
Trucks	0	0	-	0	0	0	-	0	2	0	-	2	2
% Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	3.1	0.0	-	2.4	0.4
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	2	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

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Counted By: Mio:
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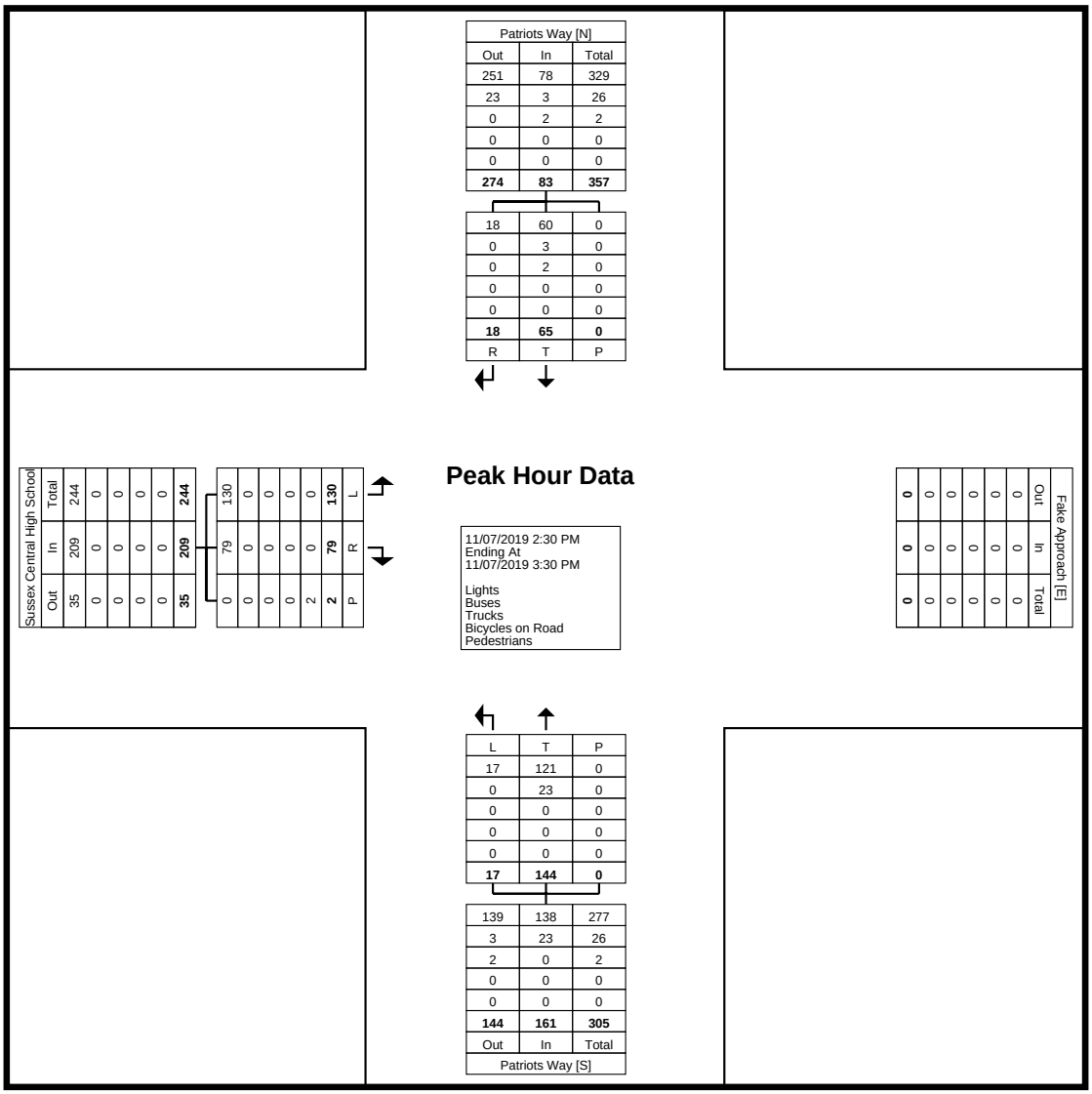
Site Code:
Start Date: 11/07/2019



Turning Movement Peak Hour Data Plot (2:30 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (North)
Site Code:
Start Date: 11/07/2019

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019

Turning Movement Data

Start Time	Sussex Central High School DW (Center Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	28	78	0	106	34	34	0	68	174
7:15 AM	0	0	0	0	32	90	0	122	50	27	0	77	199
7:30 AM	0	0	0	0	17	44	0	61	32	10	0	42	103
7:45 AM	0	0	0	0	3	21	0	24	27	0	0	27	51
Hourly Total	0	0	0	0	80	233	0	313	143	71	0	214	527
8:00 AM	0	0	0	0	5	21	0	26	18	5	0	23	49
8:15 AM	0	0	0	0	2	23	0	25	21	0	0	21	46
8:30 AM	1	0	0	1	5	17	0	22	17	3	0	20	43
8:45 AM	0	0	0	0	2	18	0	20	16	1	0	17	37
Hourly Total	1	0	0	1	14	79	0	93	72	9	0	81	175
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	0	0	0	9	32	0	41	11	11	0	22	63
2:15 PM	0	0	0	0	9	30	0	39	14	9	0	23	62
2:30 PM	0	0	0	0	5	79	0	84	52	6	0	58	142
2:45 PM	1	0	0	1	5	19	0	24	25	4	0	29	54
Hourly Total	1	0	0	1	28	160	0	188	102	30	0	132	321
3:00 PM	0	0	1	0	3	36	0	39	25	4	0	29	68
3:15 PM	0	0	1	0	1	25	0	26	29	2	0	31	57
3:30 PM	0	0	0	0	4	29	0	33	22	2	0	24	57
3:45 PM	0	0	0	0	4	27	0	31	28	4	0	32	63
Hourly Total	0	0	2	0	12	117	0	129	104	12	0	116	245
4:00 PM	0	0	0	0	3	33	0	36	28	5	0	33	69
4:15 PM	0	0	0	0	3	23	0	26	24	1	0	25	51
4:30 PM	0	0	0	0	0	27	0	27	33	5	0	38	65
4:45 PM	0	0	0	0	2	20	0	22	20	0	0	20	42
Hourly Total	0	0	0	0	8	103	0	111	105	11	0	116	227
5:00 PM	0	0	0	0	0	22	0	22	19	2	0	21	43
5:15 PM	0	0	0	0	1	14	0	15	34	2	0	36	51
5:30 PM	0	1	0	1	0	19	0	19	20	1	0	21	41
5:45 PM	0	0	0	0	0	13	0	13	19	0	0	19	32
Hourly Total	0	1	0	1	1	68	0	69	92	5	0	97	167
Grand Total	2	1	2	3	143	760	0	903	618	138	0	756	1662
Approach %	66.7	33.3	-	-	15.8	84.2	-	-	81.7	18.3	-	-	-
Total %	0.1	0.1	-	0.2	8.6	45.7	-	54.3	37.2	8.3	-	45.5	-
Lights	2	1	-	3	115	707	-	822	591	96	-	687	1512
% Lights	100.0	100.0	-	100.0	80.4	93.0	-	91.0	95.6	69.6	-	90.9	91.0
Buses	0	0	-	0	28	47	-	75	21	42	-	63	138
% Buses	0.0	0.0	-	0.0	19.6	6.2	-	8.3	3.4	30.4	-	8.3	8.3
Trucks	0	0	-	0	0	6	-	6	6	0	-	6	12
% Trucks	0.0	0.0	-	0.0	0.0	0.8	-	0.7	1.0	0.0	-	0.8	0.7
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	2	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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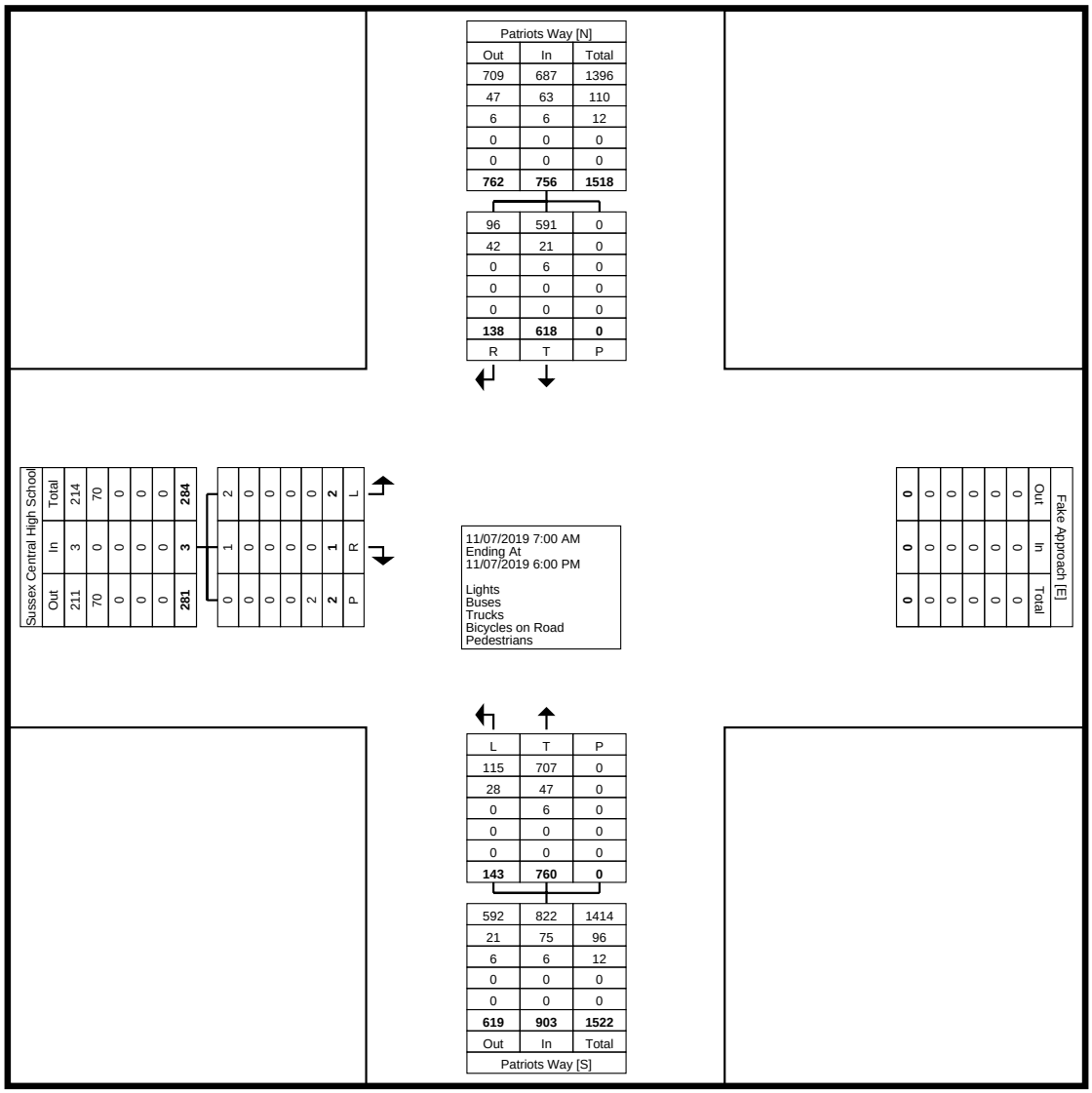
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019



Turning Movement Data Plot

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
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610.326.3100 jhudak@trafficpd.com

Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Sussex Central High School DW (Center Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	28	78	0	106	34	34	0	68	174
7:15 AM	0	0	0	0	32	90	0	122	50	27	0	77	199
7:30 AM	0	0	0	0	17	44	0	61	32	10	0	42	103
7:45 AM	0	0	0	0	3	21	0	24	27	0	0	27	51
Total	0	0	0	0	80	233	0	313	143	71	0	214	527
Approach %	0.0	0.0	-	-	25.6	74.4	-	-	66.8	33.2	-	-	-
Total %	0.0	0.0	-	0.0	15.2	44.2	-	59.4	27.1	13.5	-	40.6	-
PHF	0.000	0.000	-	0.000	0.625	0.647	-	0.641	0.715	0.522	-	0.695	0.662
Lights	0	0	-	0	65	212	-	277	141	46	-	187	464
% Lights	-	-	-	-	81.3	91.0	-	88.5	98.6	64.8	-	87.4	88.0
Buses	0	0	-	0	15	18	-	33	1	25	-	26	59
% Buses	-	-	-	-	18.8	7.7	-	10.5	0.7	35.2	-	12.1	11.2
Trucks	0	0	-	0	0	3	-	3	1	0	-	1	4
% Trucks	-	-	-	-	0.0	1.3	-	1.0	0.7	0.0	-	0.5	0.8
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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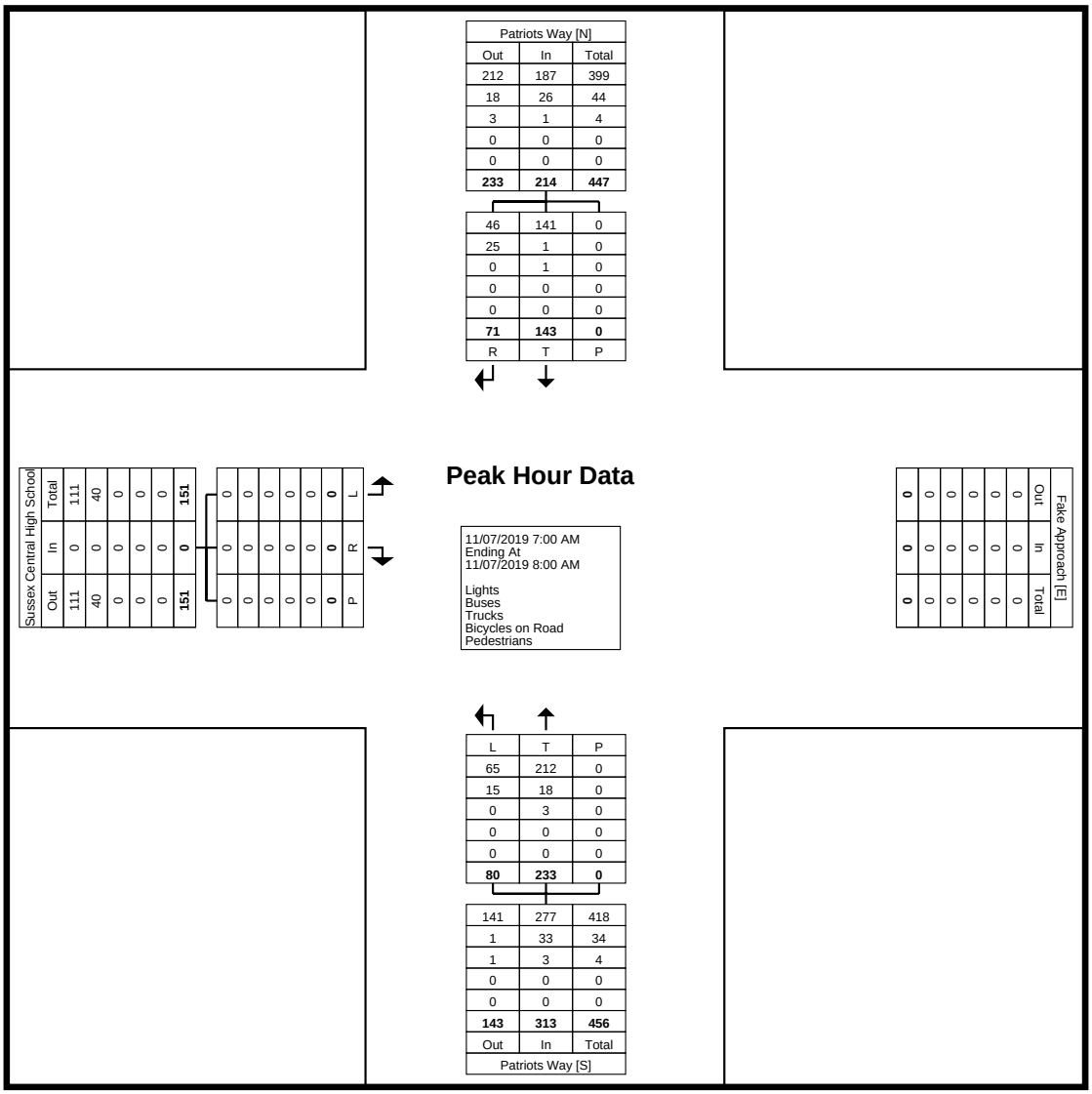
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019



Turning Movement Peak Hour Data Plot (7:00 AM)

Traffic Planning and Design, Inc
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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019

Turning Movement Peak Hour Data (2:30 PM)

Start Time	Sussex Central High School DW (Center Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
2:30 PM	0	0	0	0	5	79	0	84	52	6	0	58	142
2:45 PM	1	0	0	1	5	19	0	24	25	4	0	29	54
3:00 PM	0	0	1	0	3	36	0	39	25	4	0	29	68
3:15 PM	0	0	1	0	1	25	0	26	29	2	0	31	57
Total	1	0	2	1	14	159	0	173	131	16	0	147	321
Approach %	100.0	0.0	-	-	8.1	91.9	-	-	89.1	10.9	-	-	-
Total %	0.3	0.0	-	0.3	4.4	49.5	-	53.9	40.8	5.0	-	45.8	-
PHF	0.250	0.000	-	0.250	0.700	0.503	-	0.515	0.630	0.667	-	0.634	0.565
Lights	1	0	-	1	12	136	-	148	126	16	-	142	291
% Lights	100.0	-	-	100.0	85.7	85.5	-	85.5	96.2	100.0	-	96.6	90.7
Buses	0	0	-	0	2	23	-	25	2	0	-	2	27
% Buses	0.0	-	-	0.0	14.3	14.5	-	14.5	1.5	0.0	-	1.4	8.4
Trucks	0	0	-	0	0	0	-	0	3	0	-	3	3
% Trucks	0.0	-	-	0.0	0.0	0.0	-	0.0	2.3	0.0	-	2.0	0.9
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	-	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	2	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

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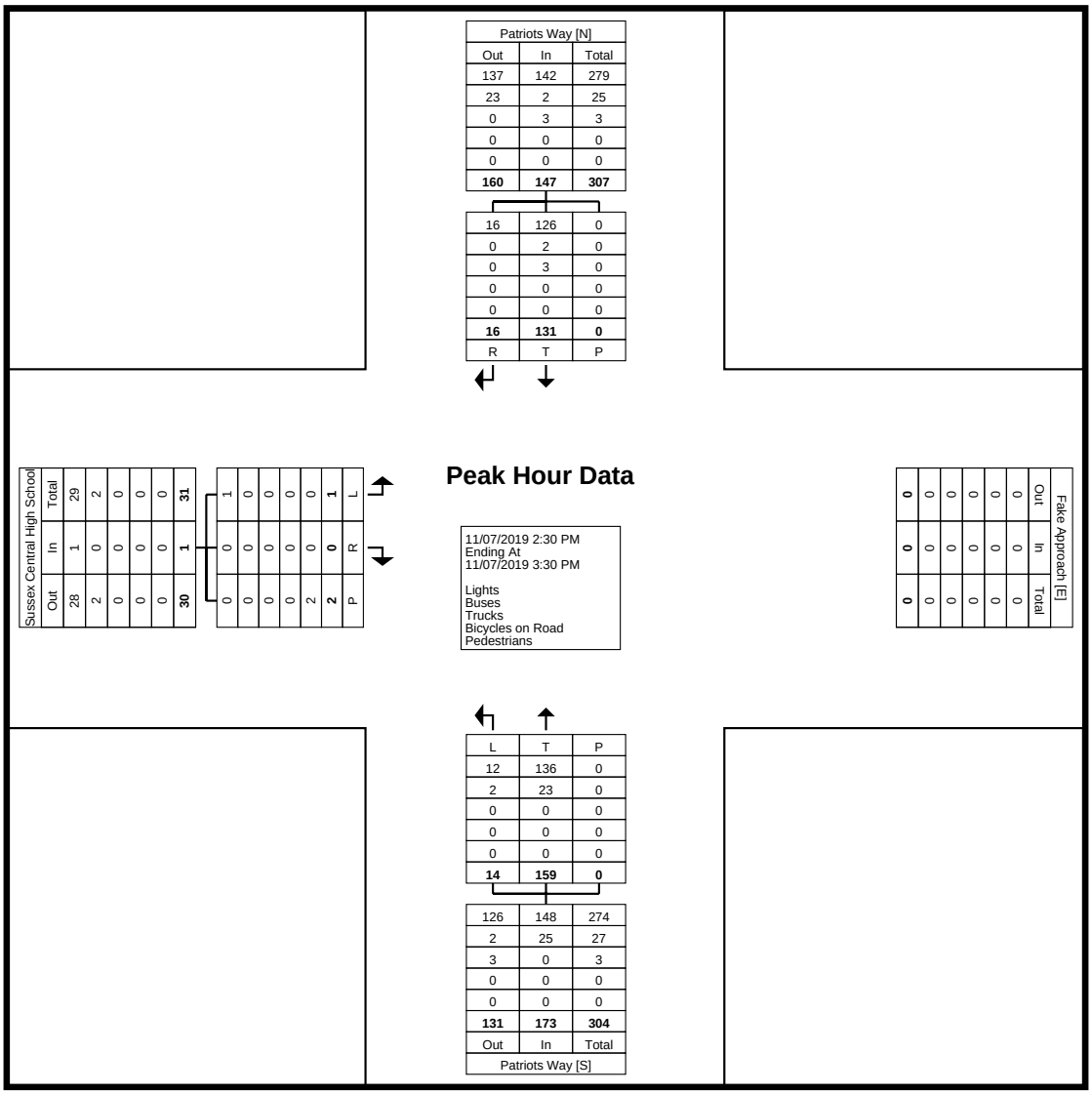
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019



Turning Movement Peak Hour Data Plot (2:30 PM)

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Counted By: Mio:
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Count Name: Patriots Way & Sussex Central High School DW (Center)
Site Code:
Start Date: 11/07/2019

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Count Name: Patriots Way & Sussex Central High School DW (South)
Site Code:
Start Date: 11/07/2019

Turning Movement Data

Start Time	Sussex Central High School DW (South) Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	15	16	0	31	21	88	0	109	29	5	0	34	174
7:15 AM	18	39	0	57	40	105	1	145	41	9	0	50	252
7:30 AM	15	31	0	46	2	47	0	49	32	0	0	32	127
7:45 AM	2	4	0	6	2	19	0	21	28	0	0	28	55
Hourly Total	50	90	0	140	65	259	1	324	130	14	0	144	608
8:00 AM	3	4	0	7	1	23	0	24	16	2	0	18	49
8:15 AM	2	5	0	7	2	23	0	25	21	0	0	21	53
8:30 AM	3	3	0	6	2	18	0	20	16	1	0	17	43
8:45 AM	3	4	0	7	1	18	0	19	15	1	0	16	42
Hourly Total	11	16	0	27	6	82	0	88	68	4	0	72	187
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	4	6	0	10	4	35	0	39	12	1	0	13	62
2:15 PM	2	1	1	3	2	37	0	39	9	4	0	13	55
2:30 PM	57	66	0	123	0	27	0	27	52	0	0	52	202
2:45 PM	6	19	0	25	0	19	0	19	24	0	0	24	68
Hourly Total	69	92	1	161	6	118	0	124	97	5	0	102	387
3:00 PM	11	14	1	25	2	27	0	29	22	1	0	23	77
3:15 PM	4	10	1	14	1	22	0	23	30	0	0	30	67
3:30 PM	3	11	0	14	2	28	0	30	21	0	0	21	65
3:45 PM	6	9	0	15	0	25	0	25	29	0	0	29	69
Hourly Total	24	44	2	68	5	102	0	107	102	1	0	103	278
4:00 PM	5	9	0	14	1	32	0	33	28	0	0	28	75
4:15 PM	4	2	0	6	0	22	0	22	24	0	0	24	52
4:30 PM	1	2	0	3	1	26	0	27	32	0	0	32	62
4:45 PM	4	6	0	10	0	18	0	18	20	0	0	20	48
Hourly Total	14	19	0	33	2	98	0	100	104	0	0	104	237
5:00 PM	2	3	0	5	0	21	0	21	19	0	0	19	45
5:15 PM	1	3	0	4	0	15	0	15	31	2	0	33	52
5:30 PM	2	5	0	7	0	16	0	16	21	0	0	21	44
5:45 PM	0	0	0	0	0	13	0	13	21	0	0	21	34
Hourly Total	5	11	0	16	0	65	0	65	92	2	0	94	175
Grand Total	173	272	3	445	84	724	1	808	593	26	0	619	1872
Approach %	38.9	61.1	-	-	10.4	89.6	-	-	95.8	4.2	-	-	-
Total %	9.2	14.5	-	23.8	4.5	38.7	-	43.2	31.7	1.4	-	33.1	-
Lights	134	230	-	364	82	684	-	766	566	26	-	592	1722
% Lights	77.5	84.6	-	81.8	97.6	94.5	-	94.8	95.4	100.0	-	95.6	92.0
Buses	39	41	-	80	2	35	-	37	23	0	-	23	140
% Buses	22.5	15.1	-	18.0	2.4	4.8	-	4.6	3.9	0.0	-	3.7	7.5
Trucks	0	1	-	1	0	5	-	5	4	0	-	4	10
% Trucks	0.0	0.4	-	0.2	0.0	0.7	-	0.6	0.7	0.0	-	0.6	0.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	3	-	-	-	1	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	-	-	-

Traffic Planning and Design, Inc
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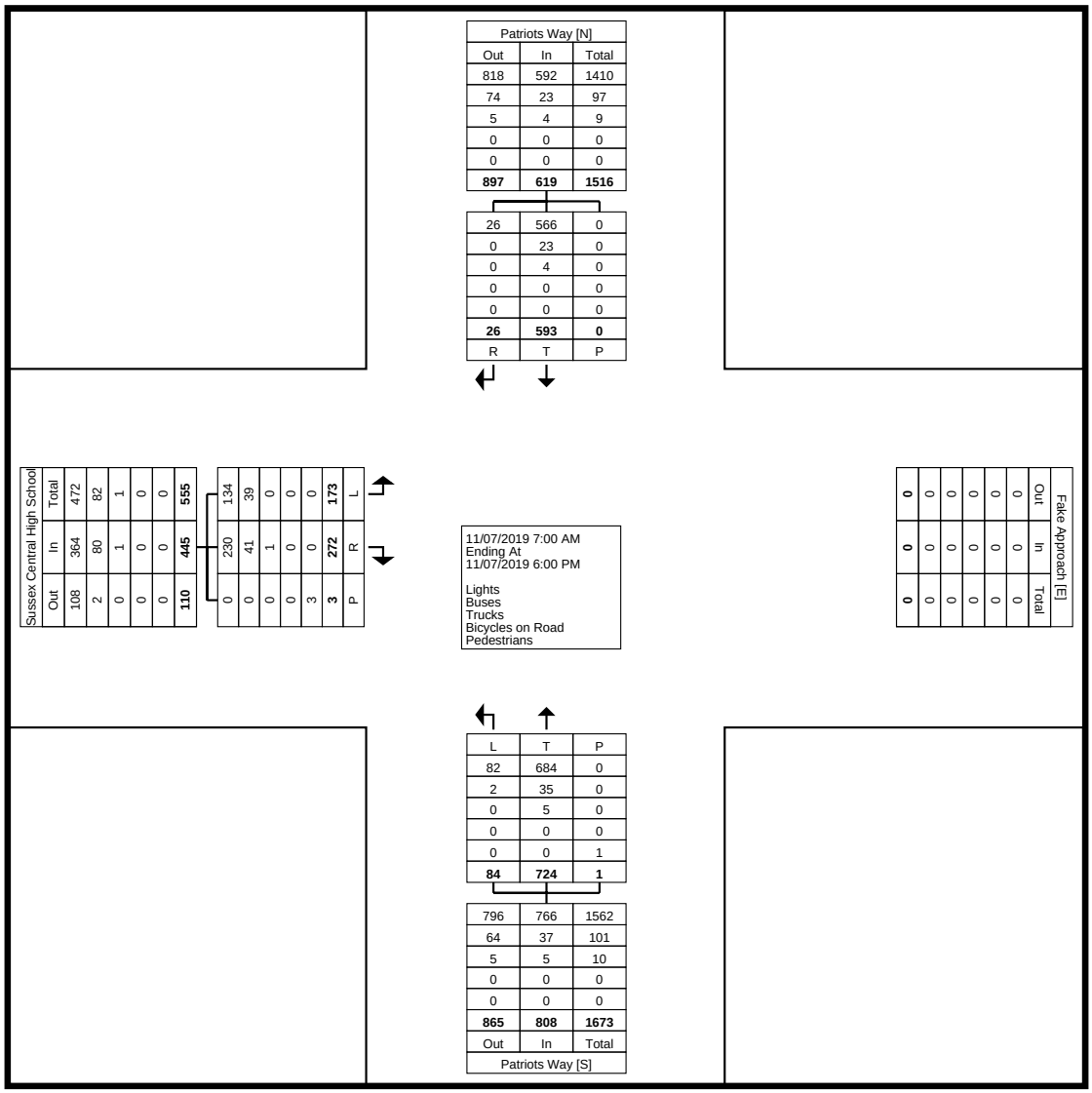
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (South)
Site Code:
Start Date: 11/07/2019



Turning Movement Data Plot

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2500 East High Street
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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (South)
Site Code:
Start Date: 11/07/2019

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Sussex Central High School DW (South) Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	15	16	0	31	21	88	0	109	29	5	0	34	174
7:15 AM	18	39	0	57	40	105	1	145	41	9	0	50	252
7:30 AM	15	31	0	46	2	47	0	49	32	0	0	32	127
7:45 AM	2	4	0	6	2	19	0	21	28	0	0	28	55
Total	50	90	0	140	65	259	1	324	130	14	0	144	608
Approach %	35.7	64.3	-	-	20.1	79.9	-	-	90.3	9.7	-	-	-
Total %	8.2	14.8	-	23.0	10.7	42.6	-	53.3	21.4	2.3	-	23.7	-
PHF	0.694	0.577	-	0.614	0.406	0.617	-	0.559	0.793	0.389	-	0.720	0.603
Lights	33	66	-	99	65	240	-	305	128	14	-	142	546
% Lights	66.0	73.3	-	70.7	100.0	92.7	-	94.1	98.5	100.0	-	98.6	89.8
Buses	17	23	-	40	0	16	-	16	1	0	-	1	57
% Buses	34.0	25.6	-	28.6	0.0	6.2	-	4.9	0.8	0.0	-	0.7	9.4
Trucks	0	1	-	1	0	3	-	3	1	0	-	1	5
% Trucks	0.0	1.1	-	0.7	0.0	1.2	-	0.9	0.8	0.0	-	0.7	0.8
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	1	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

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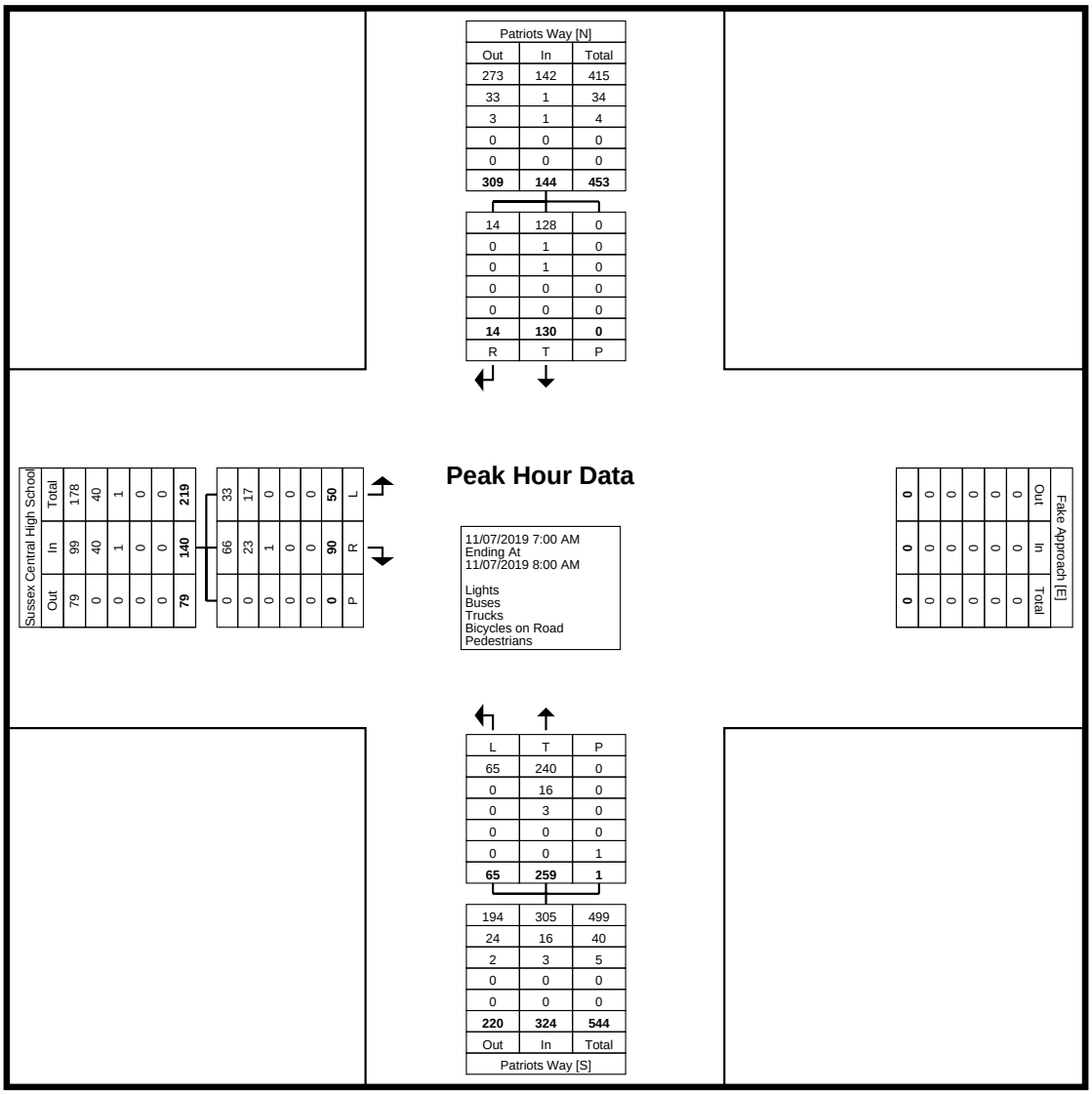
Start Date: 11/07/2019



Turning Movement Peak Hour Data Plot (7:00 AM)

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Count Name: Patriots Way & Sussex Central High School DW (South)
Site Code:
Start Date: 11/07/2019

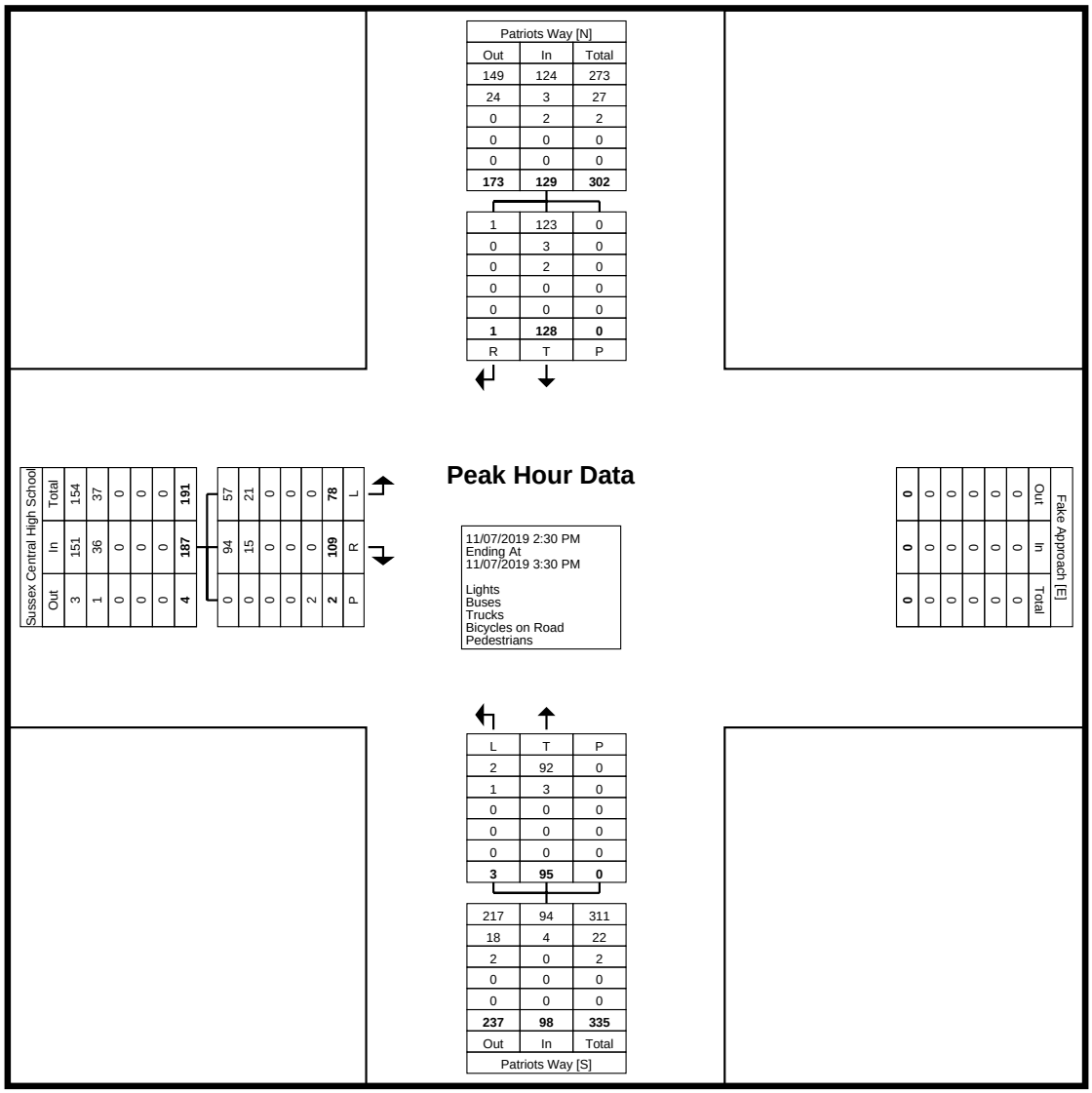
Turning Movement Peak Hour Data (2:30 PM)

Start Time	Sussex Central High School DW (South) Eastbound				Patriots Way Northbound				Patriots Way Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
2:30 PM	57	66	0	123	0	27	0	27	52	0	0	52	202
2:45 PM	6	19	0	25	0	19	0	19	24	0	0	24	68
3:00 PM	11	14	1	25	2	27	0	29	22	1	0	23	77
3:15 PM	4	10	1	14	1	22	0	23	30	0	0	30	67
Total	78	109	2	187	3	95	0	98	128	1	0	129	414
Approach %	41.7	58.3	-	-	3.1	96.9	-	-	99.2	0.8	-	-	-
Total %	18.8	26.3	-	45.2	0.7	22.9	-	23.7	30.9	0.2	-	31.2	-
PHF	0.342	0.413	-	0.380	0.375	0.880	-	0.845	0.615	0.250	-	0.620	0.512
Lights	57	94	-	151	2	92	-	94	123	1	-	124	369
% Lights	73.1	86.2	-	80.7	66.7	96.8	-	95.9	96.1	100.0	-	96.1	89.1
Buses	21	15	-	36	1	3	-	4	3	0	-	3	43
% Buses	26.9	13.8	-	19.3	33.3	3.2	-	4.1	2.3	0.0	-	2.3	10.4
Trucks	0	0	-	0	0	0	-	0	2	0	-	2	2
% Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	1.6	0.0	-	1.6	0.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	2	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Patriots Way & Sussex Central High School DW (South)
Site Code:
Start Date: 11/07/2019



Turning Movement Peak Hour Data Plot (2:30 PM)

Appendix D

VOLUME DEVELOPMENT INFORMATION

TPD# CDAE.00008
1/16/2020
Traffic Volumes Worksheet

Intersection:	**Patriots Way & Existing High School Entrance (north)**									
Synchro Node:	**1**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**2**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
Existing Counts	**78**		**46**				**117**	**119**			**168**	**264**	**792**
Seasonal Adjustment Factor	1.00		1.00				0.98	0.98			0.98	0.98	6
Existing Volumes (Seasonally Adjusted)	**78**	**0**	**46**	**0**	**0**	**0**	**115**	**117**	**0**	**0**	**165**	**259**	**779**
Base growth	0	0	0	0	0	0	0	2	0	0	2	0	4
Base growth (1% compounded for 2 years)	0	0	0	0	0	0	0	0	0	0	0	0	
2022 Base Volumes	**78**	**0**	**46**	**0**	**0**	**0**	**115**	**119**	**0**	**0**	**167**	**259**	**783**
Staff Trips											70		70
Parent Trips								6			6		
Bus Trips								(17)			(18)		35
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**0**	**94**	**0**	**117**
2022 Projected Volumes	**78**	**0**	**46**	**0**	**0**	**0**	**115**	**142**	**0**	**0**	**261**	**259**	**900**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
Existing Counts	**130**		**79**				**17**	**144**			**65**	**18**	**453**
Seasonal Adjustment Factor	1.00		1.00				0.98	0.98			0.98	0.98	6
Existing Volumes (Seasonally Adjusted)	**130**	**0**	**79**	**0**	**0**	**0**	**17**	**141**	**0**	**0**	**64**	**18**	**448**
Base growth	0	0	0	0	0	0	0	2	0	0	1	0	3
0													0
Base growth (1% compounded for 2 years)	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Base Volumes	**130**	**0**	**79**	**0**	**0**	**0**	**17**	**143**	**0**	**0**	**65**	**18**	**451**
Staff Trips								68					68
Parent Trips								6					
Bus Trips								(18)					18
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**92**	**0**	**0**	**0**	**0**	**92**
2022 Projected Volumes	**130**	**0**	**79**	**0**	**0**	**0**	**17**	**235**	**0**	**0**	**65**	**18**	**543**

TPD# CDAE.00008
1/16/2020
Traffic Volumes Worksheet

Intersection:	**Patriots Way & Existing High School Entrance (Center)/Proposed Site Entrance**											
Synchro Node:	**3**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**2**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
Existing Counts	**0**		**0**				**80**	**233**			**143**	**71**	**527**
Seasonal Adjustment Factor	1.00		1.00				0.98	0.98			0.98	0.98	6
Existing Volumes (Seasonally Adjusted)	**0**	**0**	**0**	**0**	**0**	**0**	**78**	**228**	**0**	**0**	**140**	**70**	**516**
Base growth	0	0	0	0	0	0	0	3	0	0	2	0	5
Base growth (1% compounded for 2 years)	0	0	0	0	0	0	0	0	0	0	0	0	
2022 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**78**	**231**	**0**	**0**	**142**	**70**	**521**
Staff Trips									51	70			121
Parent Trips				4		6			4	6			
Bus Trips				(11)		(17)			(12)	(18)			58
Total Trip Distribution	**0**	**0**	**0**	**15**	**0**	**23**	**0**	**0**	**67**	**94**	**0**	**0**	**199**
2022 Projected Volumes	**0**	**0**	**0**	**15**	**0**	**23**	**78**	**231**	**67**	**94**	**142**	**70**	**720**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
Existing Counts			**0**				**14**	**159**			**131**	**16**	**320**
Seasonal Adjustment Factor	1.00		1.00				0.98	0.98			0.98	0.98	6
Existing Volumes (Seasonally Adjusted)	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**156**	**0**	**0**	**128**	**16**	**314**
Base growth	0	0	0	0	0	0	0	2	0	0	2	0	4
0													0
Base growth (1% compounded for 2 years)	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**158**	**0**	**0**	**130**	**16**	**318**
Staff Trips				50		68							118
Parent Trips				4		6							
Bus Trips				(12)		(18)							30
Total Trip Distribution	**0**	**0**	**0**	**66**	**0**	**92**	**0**	**0**	**0**	**0**	**0**	**0**	**158**
2022 Projected Volumes	**0**	**0**	**0**	**66**	**0**	**92**	**14**	**158**	**0**	**0**	**130**	**16**	**476**

TPD# CDAE.00008
1/16/2020
Traffic Volumes Worksheet

Intersection:	**Patriots Way & Existing High School Entrance (south)**									
Synchro Node:	**3**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**2**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
Existing Counts	**50**		**90**				**65**	**259**			**130**	**14**	**608**
Seasonal Adjustment Factor	1.00		1.00				0.98	0.98			0.98	0.98	6
Existing Volumes (Seasonally Adjusted)	**50**	**0**	**90**	**0**	**0**	**0**	**64**	**254**	**0**	**0**	**127**	**14**	**599**
Base growth	0	0	0	0	0	0	0	4	0	0	2	0	6
Base growth (1% compounded for 2 years)	0	0	0	0	0	0	0	0	0	0	0	0	
2022 Base Volumes	**50**	**0**	**90**	**0**	**0**	**0**	**64**	**258**	**0**	**0**	**129**	**14**	**605**
Staff Trips								51					51
Parent Trips								4			4		
Bus Trips								(12)			(11)		23
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**67**	**0**	**0**	**15**	**0**	**82**
2022 Projected Volumes	**50**	**0**	**90**	**0**	**0**	**0**	**64**	**325**	**0**	**0**	**144**	**14**	**687**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
Existing Counts	**78**		**109**				**3**	**95**			**128**	**1**	**414**
Seasonal Adjustment Factor	1.00		1.00				0.98	0.98			0.98	0.98	6
Existing Volumes (Seasonally Adjusted)	**78**	**0**	**109**	**0**	**0**	**0**	**3**	**93**	**0**	**0**	**125**	**1**	**409**
Base growth	0	0	0	0	0	0	0	1	0	0	2	0	3
0													0
Base growth (1% compounded for 2 years)	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Base Volumes	**78**	**0**	**109**	**0**	**0**	**0**	**3**	**94**	**0**	**0**	**127**	**1**	**412**
Staff Trips											50		50
Parent Trips											4		
Bus Trips											(12)		12
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**66**	**0**	**66**
2022 Projected Volumes	**78**	**0**	**109**	**0**	**0**	**0**	**3**	**94**	**0**	**0**	**193**	**1**	**478**

15-MIN VOLUME DEVELOPMENT WORKSHEETS

Patriots Way & Sussex Central HS Driveway (north)

Existing Counts							Seasonally Adjusted							Base Growth	Base							New Trips						Projected Volumes								PHF
Time	Eastbound		Northbound		Southbound		Time	Eastbound		Northbound		Southbound			Time	Eastbound		Northbound		Southbound		Time	Eastbound		Northbound		Southbound		Time	Eastbound		Northbound		Southbound		Total		
	Left	Right	Left	Thru	Thru	Right		Left	Right	Left	Thru	Thru	Right	1.0151		Left	Right	Left	Thru	Thru	Right		Left	Right	Left	Thru	Thru	Right		Left	Right	Left	Thru	Thru	Right	15 min.	Hour	
7:00	14	13	44	28	51	75	7:00	14	13	43	27	50	74		7:00	14	13	43	28	51	74	7:00				17	2		7:00	14	13	43	45	53	74	242	901	0.633
7:15	30	22	62	32	56	146	7:15	30	22	61	31	55	143		7:15	30	22	61	32	56	143	7:15				0	12		7:15	30	22	61	32	68	143	356	707	
7:30	29	9	10	38	32	37	7:30	29	9	10	37	31	36		7:30	29	9	10	38	31	36	7:30				0	0		7:30	29	9	10	38	31	36	153	403	
7:45	5	2	1	21	29	6	7:45	5	2	1	21	28	6		7:45	5	2	1	21	28	6	7:45				6	81		7:45	5	2	1	27	109	6	150	295	
8:00	3	0	6	13	21	5	8:00	3	0	6	13	21	5		8:00	3	0	6	13	21	5	8:00				0	0		8:00	3	0	6	13	21	5	48	191	
8:15	0	0	5	19	19	9	8:15	0	0	5	19	19	9		8:15	0	0	5	19	19	9	8:15				0	0		8:15	0	0	5	19	19	9	52		
8:30	3	1	1	17	19	4	8:30	3	1	1	17	19	4		8:30	3	1	1	17	19	4	8:30				0	0		8:30	3	1	1	17	19	4	45		
8:45	4	2	1	16	17	6	8:45	4	2	1	16	17	6		8:45	4	2	1	16	17	6	8:45				0	0		8:45	4	2	1	16	17	6	46		
2:00	4	4	5	23	22	6	2:00	4	4	5	23	22	6		2:00	4	4	5	23	22	6	2:00				1	0		2:00	4	4	5	24	22	6	65	454	
2:15	3	1	14	19	20	25	2:15	3	1	14	19	20	25		2:15	3	1	14	19	20	25	2:15				0	6		2:15	3	1	14	19	26	25	88	474	
2:30	64	46	11	70	13	5	2:30	64	46	11	68	13	5		2:30	64	46	11	70	14	5	2:30				24	0		2:30	64	46	11	94	14	5	234	544	0.581
2:45	17	12	0	19	14	5	2:45	17	12	0	19	14	5		2:45	17	12	0	19	14	5	2:45				0	0		2:45	17	12	0	19	14	5	67	376	
3:00	24	8	2	31	15	7	3:00	24	8	2	30	14	7		3:00	24	8	2	30	14	7	3:00				0	0		3:00	24	8	2	30	14	7	85	406	
3:15	25	13	4	24	23	1	3:15	25	13	4	24	23	1		3:15	25	13	4	24	23	1	3:15				68	0		3:15	25	13	4	92	23	1	158	391	
3:30	12	5	5	22	20	2	3:30	12	5	5	22	20	2		3:30	12	5	5	22	20	2	3:30				0	0		3:30	12	5	5	22	20	2	66	308	
3:45	12	9	3	25	25	5	3:45	12	9	3	25	25	5		3:45	12	9	3	25	25	5	3:45				0	18		3:45	12	9	3	25	43	5	97	318	
4:00	4	5	0	31	25	6	4:00	4	5	0	30	25	6		4:00	4	5	0	30	25	6	4:00				0	0		4:00	4	5	0	30	25	6	70	269	
4:15	12	4	2	24	23	10	4:15	12	4	2	24	23	10		4:15	12	4	2	24	23	10	4:15				0	0		4:15	12	4	2	24	23	10	75	250	
4:30	7	10	4	26	29	2	4:30	7	10	4	25	28	2		4:30	7	10	4	25	28	2	4:30				0	0		4:30	7	10	4	25	28	2	76	227	
4:45	13	0	1	13	19	2	4:45	13	0	1	13	19	2		4:45	13	0	1	13	19	2	4:45				0	0		4:45	13	0	1	13	19	2	48	195	
5:00	3	1	4	24	19	0	5:00	3	1	4	24	19	0		5:00	3	1	4	24	19	0	5:00				0	0		5:00	3	1	4	24	19	0	51	179	
5:15	0	0	0	15	35	2	5:15	0	0	0	15	34	2		5:15	0	0	0	15	35	2	5:15				0	0		5:15	0	0	0	15	35	2	52		
5:30	1	0	0	19	24	0	5:30	1	0	0	19	24	0		5:30	1	0	0	19	24	0	5:30				0	0		5:30	1	0	0	19	24	0	44		
5:45	2	0	0	13	17	0	5:45	2	0	0	13	17	0		5:45	2	0	0	13	17	0	5:45				0	0		5:45	2	0	0	13	17	0	32		

AM Peak	78	46	115	142	261	259		901
PHF	0.650	0.523	0.471	0.789	0.599	0.453		0.633
PM Peak	130	79	17	235	65	18		544
PHF	0.508	0.429	0.386	0.625	0.707	0.643		0.581

Patriots Way & Sussex Central HS Driveway (center)

Existing Counts					Seasonally Adjusted					Base Growth	Base					New Trips										Projected Volumes										PHF
Time	Northbound		Southbound		Time	Northbound		Southbound		1.0151	Time	Northbound		Southbound		Time	Westbound			Northbound			Southbound			Time	Westbound			Northbound			Southbound			Total		
	Left	Thru	Thru	Right		Left	Thru	Thru	Right			Left	Thru	Thru	Right		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	15 min.	Hour	
7:00	28	78	34	34	7:00	27	76	33	34		7:00	27	77	34	34	7:00	11		17			2	1			7:00	11	0	17	27	77	2	1	34	34	203	720	0.833
7:15	32	90	50	27	7:15	31	88	49	26		7:15	31	89	50	26	7:15	0		0			8	12			7:15	0	0	0	31	89	8	12	50	26	216	566	
7:30	17	44	32	10	7:30	17	43	31	10		7:30	17	44	32	10	7:30	0		0			0	0			7:30	0	0	0	17	44	0	0	32	10	103	396	
7:45	3	21	27	0	7:45	3	21	26	0		7:45	3	21	26	0	7:45	4		6			57	81			7:45	4	0	6	3	21	57	81	26	0	198	335	
8:00	5	21	18	5	8:00	5	21	18	5		8:00	5	21	18	5	8:00	0		0			0	0			8:00	0	0	0	5	21	0	0	18	5	49	174	
8:15	2	23	21	0	8:15	2	23	21	0		8:15	2	23	21	0	8:15	0		0			0	0			8:15	0	0	0	2	23	0	0	21	0	46		
8:30	5	17	17	3	8:30	5	17	17	3		8:30	5	17	17	3	8:30	0		0			0	0			8:30	0	0	0	5	17	0	0	17	3	42		
8:45	2	18	16	1	8:45	2	18	16	1		8:45	2	18	16	1	8:45	0		0			0	0			8:45	0	0	0	2	18	0	0	16	1	37		
2:00	9	32	11	11	2:00	9	31	11	11		2:00	9	31	11	11	2:00	0		1			0	0			2:00	0	0	1	9	31	0	0	11	11	63	368	
2:15	9	30	14	9	2:15	9	29	14	9		2:15	9	29	14	9	2:15	0		0			4	6			2:15	0	0	0	9	29	4	6	14	9	71	373	
2:30	5	79	52	6	2:30	5	77	50	6		2:30	5	78	51	6	2:30	16		24			0	0			2:30	16	0	24	5	78	0	0	51	6	180	476	0.661
2:45	5	19	25	4	2:45	5	19	25	4		2:45	5	19	26	4	2:45	0		0			0	0			2:45	0	0	0	5	19	0	0	26	4	54	352	
3:00	3	36	25	4	3:00	3	35	25	4		3:00	3	36	25	4	3:00	0		0			0	0			3:00	0	0	0	3	36	0	0	25	4	68	389	
3:15	1	25	29	2	3:15	1	25	28	2		3:15	1	25	28	2	3:15	50		68			0	0			3:15	50	0	68	1	25	0	0	28	2	174	388	
3:30	4	29	22	2	3:30	4	28	22	2		3:30	4	28	22	2	3:30	0		0			0	0			3:30	0	0	0	4	28	0	0	22	2	56	265	
3:45	4	27	28	4	3:45	4	26	27	4		3:45	4	26	27	4	3:45	0		0			12	18			3:45	0	0	0	4	26	12	18	27	4	91	272	
4:00	3	33	28	5	4:00	3	32	27	5		4:00	3	32	27	5	4:00	0		0			0	0			4:00	0	0	0	3	32	0	0	27	5	67	223	
4:15	3	23	24	1	4:15	3	23	24	1		4:15	3	23	24	1	4:15	0		0			0	0			4:15	0	0	0	3	23	0	0	24	1	51	199	
4:30	0	27	33	5	4:30	0	26	32	5		4:30	0	26	32	5	4:30	0		0			0	0			4:30	0	0	0	0	26	0	0	32	5	63	198	
4:45	2	20	20	0	4:45	2	20	20	0		4:45	2	20	20	0	4:45	0		0			0	0			4:45	0	0	0	2	20	0	0	20	0	42	175	
5:00	0	22	19	2	5:00	0	22	19	2		5:00	0	22	19	2	5:00	0		0			0	0			5:00	0	0	0	0	22	0	0	19	2	43	165	
5:15	1	14	34	2	5:15	1	14	33	2		5:15	1	14	33	2	5:15	0		0			0	0			5:15	0	0	0	1	14	0	0	33	2	50		
5:30	0	19	20	1	5:30	0	19	20	1		5:30	0	19	20	1	5:30	0		0			0	0			5:30	0	0	0	0	19	0	0	20	1	40		
5:45	0	13	19	0	5:45	0	13	19	0		5:45	0	13	19	0	5:45	0		0			0	0			5:45	0	0	0	0	13	0	0	19	0	32		

AM Peak	15	0	23	78	231	67	94	142	70		720	
PHF	0.341		0.338	0.629	0.649	0.294	0.290	0.710	0.515		0.833	
PM Peak	66	0	92	14	158	0	0	130	16		476	
PHF	0.330		0.338	0.700	0.506			0.637	0.667		0.661	

Patriots Way & Sussex Central HS Driveway (south)

Existing Counts							Seasonally Adjusted							Base Growth	Base							New Trips						Projected Volumes								PHF
Time	Eastbound		Northbound		Southbound		Time	Eastbound		Northbound		Southbound			Time	Eastbound		Northbound		Southbound		Time	Eastbound		Northbound		Southbound		Time	Eastbound		Northbound		Southbound		Total		
	Left	Right	Left	Thru	Thru	Right		Left	Right	Left	Thru	Thru	Right	1.0151		Left	Right	Left	Thru	Thru	Right		Left	Right	Left	Thru	Thru	Right		Left	Right	Left	Thru	Thru	Right	15 min.	Hour	
7:00	15	16	21	88	29	5	7:00	15	16	21	86	28	5		7:00	15	16	21	87	29	5	7:00				2	11		7:00	15	16	21	89	40	5	186	687	0.663
7:15	18	39	40	105	41	9	7:15	18	39	39	103	40	9		7:15	18	39	39	105	41	9	7:15				8	0		7:15	18	39	39	113	41	9	259	550	
7:30	15	31	2	47	32	0	7:30	15	31	2	46	31	0		7:30	15	31	2	47	32	0	7:30				0	0		7:30	15	31	2	47	32	0	127	344	
7:45	2	4	2	19	28	0	7:45	2	4	2	19	27	0		7:45	2	4	2	19	27	0	7:45				57	4		7:45	2	4	2	76	31	0	115	260	
8:00	3	4	1	23	16	2	8:00	3	4	1	23	16	2		8:00	3	4	1	23	16	2	8:00				0	0		8:00	3	4	1	23	16	2	49	187	
8:15	2	5	2	23	21	0	8:15	2	5	2	23	21	0		8:15	2	5	2	23	21	0	8:15				0	0		8:15	2	5	2	23	21	0	53		
8:30	3	3	2	18	16	1	8:30	3	3	2	18	16	1		8:30	3	3	2	18	16	1	8:30				0	0		8:30	3	3	2	18	16	1	43		
8:45	3	4	1	18	15	1	8:45	3	4	1	18	15	1		8:45	3	4	1	18	15	1	8:45				0	0		8:45	3	4	1	18	15	1	42		
2:00	4	6	4	35	12	1	2:00	4	6	4	34	12	1		2:00	4	6	4	35	12	1	2:00				0	0		2:00	4	6	4	35	12	1	62	407	
2:15	2	1	2	37	9	4	2:15	2	1	2	36	9	4		2:15	2	1	2	37	9	4	2:15				4	0		2:15	2	1	2	41	9	4	59	421	
2:30	57	66	0	27	52	0	2:30	57	66	0	26	51	0		2:30	57	66	0	27	52	0	2:30				0	16		2:30	57	66	0	27	68	0	218	478	0.548
2:45	6	19	0	19	24	0	2:45	6	19	0	19	24	0		2:45	6	19	0	19	24	0	2:45				0	0		2:45	6	19	0	19	24	0	68	324	
3:00	11	14	2	27	22	1	3:00	11	14	2	26	22	1		3:00	11	14	2	26	22	1	3:00				0	0		3:00	11	14	2	26	22	1	76	336	
3:15	4	10	1	22	30	0	3:15	4	10	1	22	29	0		3:15	4	10	1	22	29	0	3:15				0	50		3:15	4	10	1	22	79	0	116	333	
3:30	3	11	2	28	21	0	3:30	3	11	2	27	21	0		3:30	3	11	2	27	21	0	3:30				0	0		3:30	3	11	2	27	21	0	64	269	
3:45	6	9	0	25	29	0	3:45	6	9	0	25	28	0		3:45	6	9	0	25	28	0	3:45				12	0		3:45	6	9	0	37	28	0	80	265	
4:00	5	9	1	32	28	0	4:00	5	9	1	31	27	0		4:00	5	9	1	31	27	0	4:00				0	0		4:00	5	9	1	31	27	0	73	233	
4:15	4	2	0	22	24	0	4:15	4	2	0	22	24	0		4:15	4	2	0	22	24	0	4:15				0	0		4:15	4	2	0	22	24	0	52	205	
4:30	1	2	1	26	32	0	4:30	1	2	1	25	31	0		4:30	1	2	1	25	31	0	4:30				0	0		4:30	1	2	1	25	31	0	60	204	
4:45	4	6	0	18	20	0	4:45	4	6	0	18	20	0		4:45	4	6	0	18	20	0	4:45				0	0		4:45	4	6	0	18	20	0	48	188	
5:00	2	3	0	21	19	0	5:00	2	3	0	21	19	0		5:00	2	3	0	21	19	0	5:00				0	0		5:00	2	3	0	21	19	0	45	174	
5:15	1	3	0	15	31	2	5:15	1	3	0	15	30	2		5:15	1	3	0	15	30	2	5:15				0	0		5:15	1	3	0	15	30	2	51		
5:30	2	5	0	16	21	0	5:30	2	5	0	16	21	0		5:30	2	5	0	16	21	0	5:30				0	0		5:30	2	5	0	16	21	0	44		
5:45	0	0	0	13	21	0	5:45	0	0	0	13	21	0		5:45	0	0	0	13	21	0	5:45				0	0		5:45	0	0	0	13	21	0	34		

AM Peak	50	90	64	325	144	14		687
PHF	0.694	0.577	0.410	0.719	0.878	0.389		0.663
PM Peak	78	109	3	94	193	1		478
PHF	0.342	0.413	0.375	0.870	0.611	0.250		0.548

Appendix E

CAPACITY ANALYSES

EXISTING CONDITIONS

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	78	46	115	117	165	259
Future Volume (vph)	78	46	115	117	165	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	9	9	9	9
Grade (%)	0%			1%	0%	
Storage Length (ft)	0	0	120			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	725			447	479	
Travel Time (s)	19.8			12.2	13.1	
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles (%)	0%	0%	0%	19%	16%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	46	115	117	165	259
Future Vol, veh/h	78	46	115	117	165	259
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	0	0	0	19	16	0
Mvmt Flow	137	81	202	205	289	454

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	898	289	743	0	-	0
Stage 1	289	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	312	755	873	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	240	755	873	-	-	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	547	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.9	5.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	873	-	321	-	-
HCM Lane V/C Ratio	0.231	-	0.678	-	-
HCM Control Delay (s)	10.4	-	36.9	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.9	-	4.6	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	78	228	140	70
Future Volume (vph)	0	0	78	228	140	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	0	235			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	427			549	447	
Travel Time (s)	11.6			15.0	12.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	0%	0%	19%	9%	1%	36%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

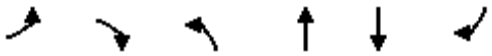
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	78	228	140	70
Future Vol, veh/h	0	0	78	228	140	70
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	235	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	0	0	19	9	1	36
Mvmt Flow	0	0	118	345	212	106

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	794	214	319	0	-	0
Stage 1	213	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Critical Hdwy	6.2	6.1	4.29	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	376	836	1151	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	337	835	1150	-	-	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1150	-	-	-	-
HCM Lane V/C Ratio	0.103	-	-	-	-
HCM Control Delay (s)	8.5	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	90	64	254	127	14
Future Volume (vph)	50	90	64	254	127	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			-1%	-1%	
Storage Length (ft)	0	0	210			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	578			700	549	
Travel Time (s)	15.8			19.1	15.0	
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles (%)	34%	27%	0%	7%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

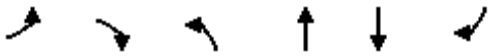
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	90	64	254	127	14
Future Vol, veh/h	50	90	64	254	127	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	210	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	-1	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	34	27	0	7	2	0
Mvmt Flow	83	150	107	423	212	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	861	224	235	0	-	0
Stage 1	224	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Critical Hdwy	6.54	6.37	4.1	-	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.806	3.543	2.2	-	-	-
Pot Cap-1 Maneuver	302	762	1344	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	278	762	1344	-	-	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	488	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1344	-	470	-	-
HCM Lane V/C Ratio	0.079	-	0.496	-	-
HCM Control Delay (s)	7.9	-	20	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.7	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	79	17	141	64	18
Future Volume (vph)	130	79	17	141	64	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	9	9	9	9
Grade (%)	0%			1%	0%	
Storage Length (ft)	0	0	120			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	725			447	479	
Travel Time (s)	19.8			12.2	13.1	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0.54
Heavy Vehicles (%)	0%	0%	0%	16%	8%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

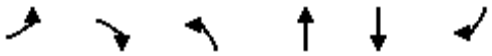
Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	130	79	17	141	64	18
Future Vol, veh/h	130	79	17	141	64	18
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	0	0	0	16	8	0
Mvmt Flow	241	146	31	261	119	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	444	121	154	0	-	0
Stage 1	121	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	575	936	1439	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	934	1436	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.9	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1436	-	660	-	-
HCM Lane V/C Ratio	0.022	-	0.586	-	-
HCM Control Delay (s)	7.6	-	17.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.8	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	14	156	128	16
Future Volume (vph)	0	0	14	156	128	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	0	235			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	427			549	447	
Travel Time (s)	11.6			15.0	12.2	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles (%)	0%	0%	14%	15%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

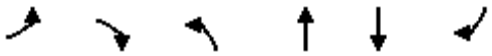
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	14	156	128	16
Future Vol, veh/h	0	0	14	156	128	16
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	235	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	0	0	14	15	2	0
Mvmt Flow	0	0	25	274	225	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	550	226	254	0	-	0
Stage 1	226	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6.2	6.1	4.24	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.326	-	-	-
Pot Cap-1 Maneuver	515	824	1244	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	504	823	1243	-	-	-
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	750	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1243	-	-	-	-
HCM Lane V/C Ratio	0.02	-	-	-	-
HCM Control Delay (s)	8	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	78	109	3	93	125	1
Future Volume (vph)	78	109	3	93	125	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			-1%	-1%	
Storage Length (ft)	0	0	210			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	578			700	549	
Travel Time (s)	15.8			19.1	15.0	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.51	0.51	0.51	0.51	0.51	0.51
Heavy Vehicles (%)	27%	14%	33%	3%	4%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	8.1

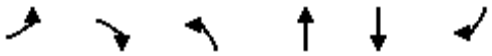
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	109	3	93	125	1
Future Vol, veh/h	78	109	3	93	125	1
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	210	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	-1	-
Peak Hour Factor	51	51	51	51	51	51
Heavy Vehicles, %	27	14	33	3	4	0
Mvmt Flow	153	214	6	182	245	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	442	248	249	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.47	6.24	4.43	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.743	3.426	2.497	-	-	-
Pot Cap-1 Maneuver	542	767	1156	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	537	766	1154	-	-	-
Mov Cap-2 Maneuver	537	-	-	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.5	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1154	-	650	-	-
HCM Lane V/C Ratio	0.005	-	0.564	-	-
HCM Control Delay (s)	8.1	-	17.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	3.5	-	-

2022 BASE CONDITIONS



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	78	46	115	119	167	259
Future Volume (vph)	78	46	115	119	167	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	9	9	9	9
Grade (%)	0%			1%	0%	
Storage Length (ft)	0	0	120			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	725			447	479	
Travel Time (s)	19.8			12.2	13.1	
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles (%)	2%	2%	0%	19%	16%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

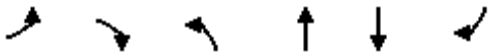
Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	46	115	119	167	259
Future Vol, veh/h	78	46	115	119	167	259
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	2	2	0	19	16	0
Mvmt Flow	137	81	202	209	293	454

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	906	293	747	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.1	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.2	-	-	-
Pot Cap-1 Maneuver	307	746	870	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	746	870	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	541	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	38.2	5.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	316	-	-
HCM Lane V/C Ratio	0.232	-	0.688	-	-
HCM Control Delay (s)	10.4	-	38.2	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.9	-	4.8	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	78	231	142	70
Future Volume (vph)	0	0	78	231	142	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	0	235			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	427			549	447	
Travel Time (s)	11.6			15.0	12.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	0%	0%	19%	9%	1%	36%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

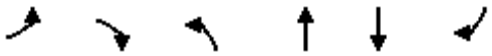
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	78	231	142	70
Future Vol, veh/h	0	0	78	231	142	70
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	235	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	0	0	19	9	1	36
Mvmt Flow	0	0	118	350	215	106

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	802	217	322	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Critical Hdwy	6.2	6.1	4.29	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	372	833	1148	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	832	1147	-	-	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1147	-	-	-	-
HCM Lane V/C Ratio	0.103	-	-	-	-
HCM Control Delay (s)	8.5	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	90	64	258	129	14
Future Volume (vph)	50	90	64	258	129	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			-1%	-1%	
Storage Length (ft)	0	0	210			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	578			700	549	
Travel Time (s)	15.8			19.1	15.0	
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles (%)	34%	27%	0%	7%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

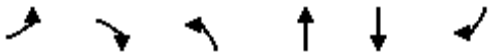
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	90	64	258	129	14
Future Vol, veh/h	50	90	64	258	129	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	210	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	-1	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	34	27	0	7	2	0
Mvmt Flow	83	150	107	430	215	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	871	227	238	0	-	0
Stage 1	227	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Critical Hdwy	6.54	6.37	4.1	-	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.806	3.543	2.2	-	-	-
Pot Cap-1 Maneuver	297	759	1341	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	759	1341	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.3	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1341	-	464	-	-
HCM Lane V/C Ratio	0.08	-	0.503	-	-
HCM Control Delay (s)	7.9	-	20.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.8	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	79	17	143	65	18
Future Volume (vph)	130	79	17	143	65	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	9	9	9	9
Grade (%)	0%			1%	0%	
Storage Length (ft)	0	0	120			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	725			447	479	
Travel Time (s)	19.8			12.2	13.1	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0.54
Heavy Vehicles (%)	0%	0%	0%	16%	8%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

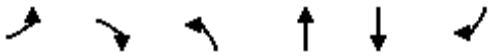
Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	130	79	17	143	65	18
Future Vol, veh/h	130	79	17	143	65	18
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	0	0	0	16	8	0
Mvmt Flow	241	146	31	265	120	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	449	122	155	0	-	0
Stage 1	122	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	571	935	1438	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	556	933	1435	-	-	-
Mov Cap-2 Maneuver	556	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1435	-	656	-	-
HCM Lane V/C Ratio	0.022	-	0.59	-	-
HCM Control Delay (s)	7.6	-	18.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.9	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	14	158	130	16
Future Volume (vph)	0	0	14	158	130	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	0	235			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	427			549	447	
Travel Time (s)	11.6			15.0	12.2	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles (%)	0%	0%	14%	15%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

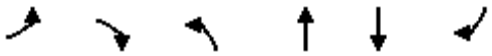
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	14	158	130	16
Future Vol, veh/h	0	0	14	158	130	16
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	235	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	0	0	14	15	2	0
Mvmt Flow	0	0	25	277	228	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	556	229	257	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Critical Hdwy	6.2	6.1	4.24	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.326	-	-	-
Pot Cap-1 Maneuver	511	820	1241	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	500	819	1240	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1240	-	-	-	-
HCM Lane V/C Ratio	0.02	-	-	-	-
HCM Control Delay (s)	8	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	78	109	3	94	127	1
Future Volume (vph)	78	109	3	94	127	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			-1%	-1%	
Storage Length (ft)	0	0	210			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	578			700	549	
Travel Time (s)	15.8			19.1	15.0	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.51	0.51	0.51	0.51	0.51	0.51
Heavy Vehicles (%)	27%	14%	33%	3%	4%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	8.1

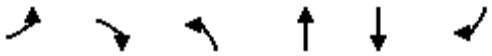
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	109	3	94	127	1
Future Vol, veh/h	78	109	3	94	127	1
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	210	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	-1	-
Peak Hour Factor	51	51	51	51	51	51
Heavy Vehicles, %	27	14	33	3	4	0
Mvmt Flow	153	214	6	184	249	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	448	252	253	0	-	0
Stage 1	252	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.47	6.24	4.43	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.743	3.426	2.497	-	-	-
Pot Cap-1 Maneuver	538	764	1151	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	533	763	1149	-	-	-
Mov Cap-2 Maneuver	533	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1149	-	647	-	-
HCM Lane V/C Ratio	0.005	-	0.567	-	-
HCM Control Delay (s)	8.1	-	17.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	3.6	-	-

2022 PROJECTED CONDITIONS



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	78	46	115	142	261	259
Future Volume (vph)	78	46	115	142	261	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	9	9	9	9
Grade (%)	0%			1%	0%	
Storage Length (ft)	0	0	120			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	725			447	479	
Travel Time (s)	19.8			12.2	13.1	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Heavy Vehicles (%)	0%	0%	0%	19%	16%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

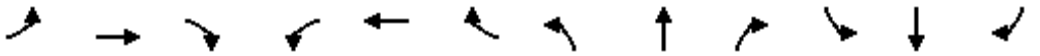
Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	46	115	142	261	259
Future Vol, veh/h	78	46	115	142	261	259
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	63	63	63	63	63	63
Heavy Vehicles, %	0	0	0	19	16	0
Mvmt Flow	124	73	183	225	414	411

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1005	414	825	0	-	0
Stage 1	414	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	270	643	814	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	209	643	814	-	-	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43.8	4.8	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	814	-	279	-	-
HCM Lane V/C Ratio	0.224	-	0.705	-	-
HCM Control Delay (s)	10.7	-	43.8	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.9	-	4.9	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	15	0	23	78	231	67	94	142	70
Future Volume (vph)	0	0	0	15	0	23	78	231	67	94	142	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	9	9	12	12	9	9
Grade (%)		-1%			0%			1%			-1%	
Storage Length (ft)	0		0	0		0	235		0	225		210
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		427			556			549			447	
Travel Time (s)		11.6			15.2			15.0			12.2	
Confl. Peds. (#/hr)			1				1					
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	2%	0%	73%	2%	74%	19%	9%	18%	19%	1%	36%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

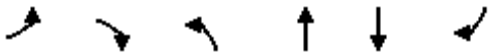
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↕		↰	↱		↰	↑	↗
Traffic Vol, veh/h	0	0	0	15	0	23	78	231	67	94	142	70
Future Vol, veh/h	0	0	0	15	0	23	78	231	67	94	142	70
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	235	-	-	225	-	210
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	2	0	73	2	74	19	9	18	19	1	36
Mvmt Flow	0	0	0	18	0	28	94	278	81	113	171	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	945	-	946	989	319	256	0	0	359	0	0
Stage 1	-	398	-	507	507	-	-	-	-	-	-	-
Stage 2	-	547	-	439	482	-	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	7.83	6.52	6.94	4.29	-	-	4.29	-	-
Critical Hdwy Stg 1	-	5.32	-	6.83	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.32	-	6.83	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	-	4.157	4.018	3.966	2.371	-	-	2.371	-	-
Pot Cap-1 Maneuver	0	276	0	182	247	582	1216	-	-	1111	-	-
Stage 1	0	616	0	437	539	-	-	-	-	-	-	-
Stage 2	0	533	0	480	553	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	229	-	158	205	582	1215	-	-	1111	-	-
Mov Cap-2 Maneuver	-	229	-	158	205	-	-	-	-	-	-	-
Stage 1	-	553	-	403	497	-	-	-	-	-	-	-
Stage 2	-	492	-	431	496	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20.2	1.7	2.6
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1215	-	-	-	283	1111	-	-
HCM Lane V/C Ratio	0.077	-	-	-	0.162	0.102	-	-
HCM Control Delay (s)	8.2	-	-	0	20.2	8.6	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6	0.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	90	64	325	144	14
Future Volume (vph)	50	90	64	325	144	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			-1%	-1%	
Storage Length (ft)	0	0	210			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	578			700	549	
Travel Time (s)	15.8			19.1	15.0	
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	34%	27%	0%	7%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

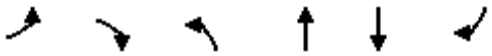
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	90	64	325	144	14
Future Vol, veh/h	50	90	64	325	144	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	210	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	-1	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	34	27	0	7	2	0
Mvmt Flow	76	136	97	492	218	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	915	229	239	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Critical Hdwy	6.54	6.37	4.1	-	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.806	3.543	2.2	-	-	-
Pot Cap-1 Maneuver	280	757	1340	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	260	757	1340	-	-	-
Mov Cap-2 Maneuver	260	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	463	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.9	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1340	-	450	-	-
HCM Lane V/C Ratio	0.072	-	0.471	-	-
HCM Control Delay (s)	7.9	-	19.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	2.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	79	17	235	65	18
Future Volume (vph)	130	79	17	235	65	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	9	9	9	9
Grade (%)	0%			1%	0%	
Storage Length (ft)	0	0	120			210
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	725			447	479	
Travel Time (s)	19.8			12.2	13.1	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	0%	0%	0%	16%	8%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	130	79	17	235	65	18
Future Vol, veh/h	130	79	17	235	65	18
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	0	0	0	16	8	0
Mvmt Flow	224	136	29	405	112	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	577	114	145	0	-	0
Stage 1	114	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	482	944	1450	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	470	942	1447	-	-	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.8	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1447	-	580	-	-
HCM Lane V/C Ratio	0.02	-	0.621	-	-
HCM Control Delay (s)	7.5	-	20.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	4.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	0	92	14	158	0	0	130	16
Future Volume (vph)	0	0	0	66	0	92	14	158	0	0	130	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	9	9	12	12	9	9
Grade (%)		-1%			0%			1%			-1%	
Storage Length (ft)	0		0	0		0	235		0	225		210
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		427			545			549			447	
Travel Time (s)		11.6			14.9			15.0			12.2	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	0%	2%	0%	18%	2%	20%	14%	15%	2%	2%	2%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

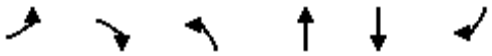
Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↕		↰	↱		↰	↑	↗
Traffic Vol, veh/h	0	0	0	66	0	92	14	158	0	0	130	16
Future Vol, veh/h	0	0	0	66	0	92	14	158	0	0	130	16
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	235	-	-	225	-	210
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	0	2	0	18	2	20	14	15	2	2	2	0
Mvmt Flow	0	0	0	100	0	139	21	239	0	0	197	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	479	-	490	503	239	222	0	0	239	0	0
Stage 1	-	198	-	281	281	-	-	-	-	-	-	-
Stage 2	-	281	-	209	222	-	-	-	-	-	-	-
Critical Hdwy	-	6.32	-	7.28	6.52	6.4	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.32	-	6.28	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.32	-	6.28	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	-	3.662	4.018	3.48	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	499	0	463	471	758	1279	-	-	1328	-	-
Stage 1	0	745	0	692	678	-	-	-	-	-	-	-
Stage 2	0	689	0	758	720	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	491	-	457	463	758	1278	-	-	1328	-	-
Mov Cap-2 Maneuver	-	491	-	457	463	-	-	-	-	-	-	-
Stage 1	-	744	-	681	667	-	-	-	-	-	-	-
Stage 2	-	678	-	758	719	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	15.1	0.6	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1278	-	-	-	594	1328	-	-
HCM Lane V/C Ratio	0.017	-	-	-	0.403	-	-	-
HCM Control Delay (s)	7.9	-	-	0	15.1	0	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	1.9	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	78	109	3	94	193	1
Future Volume (vph)	78	109	3	94	193	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	-1%			-1%	-1%	
Storage Length (ft)	0	0	210			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	578			700	549	
Travel Time (s)	15.8			19.1	15.0	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55
Heavy Vehicles (%)	27%	14%	33%	3%	4%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	109	3	94	193	1
Future Vol, veh/h	78	109	3	94	193	1
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	210	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	-1	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	27	14	33	3	4	0
Mvmt Flow	142	198	5	171	351	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	535	354	355	0	-	0
Stage 1	354	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.47	6.24	4.43	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.743	3.426	2.497	-	-	-
Pot Cap-1 Maneuver	479	670	1051	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	475	669	1049	-	-	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	799	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.1	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1049	-	572	-	-
HCM Lane V/C Ratio	0.005	-	0.594	-	-
HCM Control Delay (s)	8.4	-	20.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	3.9	-	-

Appendix F

AUXILIARY TURN LANE WARRANT ANALYSES

June 26, 2019 V2019.1

DelDOT Auxiliary Lane Worksheet

Roadway Information and Entrance

Manually Update Cell	XX
Auto-Calculated Cells	XX

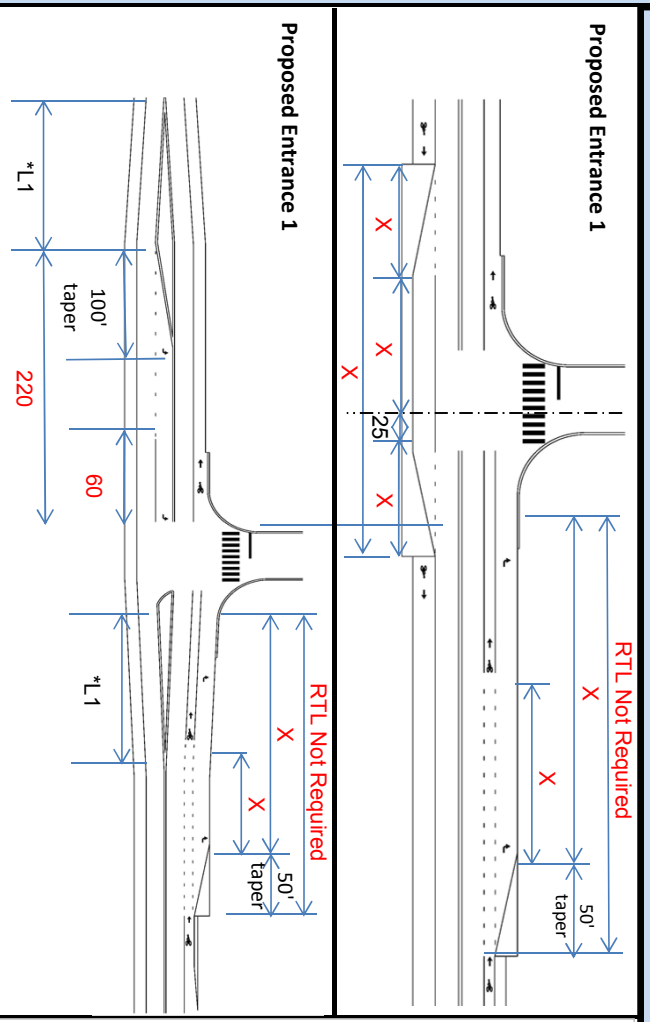
Name of Project	Howard T. Ennis			Date of Submittal	1/16/2020		
Maintenance Road No. (i.e. K234A)				Road Name	Patriots Way		
Signalized / Unsignalized	Unsignalized			Posted Speed Limit	35		
Roadway ADT (From DelDOT Traffic Manual)	2913			Traffic Pattern Group	7		
Left Approach Site ADT	248	Committed Development ADT	0	Total Left Approach ADT	248		
Right Approach Site ADT	172	Committed Development ADT	0	Total Right Approach ADT	172		
Total Number of Through Lanes (Does Not Include Turn Lanes)	2 lanes			Number of intersection legs	4		
Roadway Functional Classification	Local			Calculation for (specify leg)	Proposed Entrance 1		
Left-Approach Projected 10 yr Roadway ADT + Total Site + Committed Development ADT	3627			Right-Approach Projected 10 yr Roadway ADT + Total Site + Committed Development ADT	3551		
K Factor	14.15			D Factor	62.08		

Left Turn Information

Left Turn VPH	94
Left Turn Approach Grade	-1.0%
Heavy Vehicle %	20
10 Yr Opposing Vol. (Manual Input - Veh/hr)	0
10 Yr Opposing Volume (Calculated)	297 Veh/hr
10 Yr Opposing Volume (Calculated Vol.)	297 Veh/hr
Left Turn Length	220 ft

Right Turn Information

Right Turn ADT	51 - 100
Right Turn Approach Grade	1.0%
Effective Radius of Entrance	R≤50'
Right Turn Length	RTL Not Required



The Engineer shall submit a separate spreadsheet for the existing entrance.

Howard T. Ennis

NOTE:
This worksheet is for Right Turn Auxiliary Lanes, and Unsignalized Left Turn Auxiliary Lanes. If a signal analysis is required, please refer to signalized intersection analysis spreadsheet (Tab 6).
*L1 - See Typical Entrance Diagram located at: http://www.deldot.gov/information/business/subdivisions/Typical_Entrance_Diagrams.pdf

Appendix G

PEDESTRIAN CROSSING WORKSHEETS

2022 Projected Conditions - Weekday A.M. Peak Hour

WORKSHEET 1: PEAK-HOUR, 35 MPH (55 KM/H) OR LESS

Analyst and Site Information	
Analyst: Shelby Lynch Analysis Date: 1/16/2020 Data Collection Date: 11/7/19	Major Street: Patriots Way Minor Street or Location: Proposed Site Access opposite Sussex Central HS Access (center) Peak Hour: AM

Step 1: Select worksheet (speed reflects posted or statutory speed limit or 85th percentile speed on the major street):
a) Worksheet 1 – 35 mph (55 km/h) or less
b) Worksheet 2 – exceeds 35 mph (55 km/h), communities with less than 10,000, or where major transit stop exists

Step 2: Does the crossing meet minimum pedestrian volumes to be considered for a TCD type of treatment?		
Peak-hour pedestrian volume (ped/h), V_p	*2a*	20 (assumed per DelDOT)
If *2a* ≥ 20 ped/h, then go to Step 3.		
If *2a* < 20 ped/h, then consider median refuge islands, curb extensions, traffic calming, etc. as feasible.		

Step 3: Does the crossing meet the pedestrian volume warrant for a traffic signal?		
Major road volume, total of both approaches during peak hour (veh/h), V_{maj-s}	*3a*	682
Minimum signal warrant volume for peak hour (use *3a* for V_{maj-s}), SC SC = (0.00021 V_{maj-s}^2 – 0.74072 V_{maj-s} + 734.125)/0.75 OR [(0.00021 *3a*^{2} – 0.74072 *3a* + 734.125)/0.75]	*3b*	436
If *3b* < 133, then enter 133. If *3b* ≥ 133, then enter *3b*.	*3c*	436
If 15th percentile crossing speed of pedestrians is less than 3.5 ft/s (1.1 m/s), then reduce *3c* by up to 50 percent; otherwise enter *3c*.	*3d*	436
If *2a* ≥ *3d*, then the warrant has been met and a traffic signal should be considered if not within 300 ft (91 m) of another traffic signal. Otherwise, the warrant has not been met. Go to Step 4.		Warrant NOT Met

Step 4: Estimate pedestrian delay.		
Pedestrian crossing distance, curb to curb (ft), L	*4a*	55
Pedestrian walking speed (ft/s), S_p	*4b*	3.5
Pedestrian start-up time and end clearance time (s), t_s	*4c*	3
Critical gap required for crossing pedestrian (s), $t_c = (L/S_p) + t_s$ OR [(*4a*/*4b*) + *4c*)]	*4d*	18.7
Major road volume, total both approaches or approach being crossed if median refuge island is present during peak hour (veh/h), V_{maj-d}	*4e*	682
Major road flow rate (veh/s), $v = V_{maj-d}/3600$ OR [*4e/3600*]	*4f*	0.189
Average pedestrian delay (s/person), $d_p = (e^{v\,tc} – v\,t_c – 1) / v$ OR $[\,(e^{4f \times 4d} – 4f \times 4d – 1) / 4f\,]$	*4g*	157.3
Total pedestrian delay (h), $D_p = (d_p \times V_p)/3{,}600$ OR [(*4g*×*2a*)/3600] (this is estimated delay for all pedestrians crossing the major roadway without a crossing treatment – assumes 0% compliance). This calculated value can be replaced with the actual total pedestrian delay measured at the site.	*4h*	0.874

Step 5: Select treatment based upon total pedestrian delay and expected motorist compliance.		
Expected motorist compliance at pedestrian crossings in region, Comp = high or low	*5a*	high

Total Pedestrian Delay, D_p (from *4h*) and Motorist Compliance, Comp (from *5a*)	**Treatment Category** (see Descriptions of Sample Treatments for examples)
$D_p \geq 21.3$ h (Comp = high or low) OR 5.3 h ≤ D_p < 21.3 h and Comp = low	RED
1.3 h ≤ D_p < 5.3 h (Comp = high or low) OR 5.3 h ≤ D_p < 21.3 h and Comp = high	ACTIVE OR ENHANCED
D_p < 1.3 h (Comp = high or low)	CROSSWALK

Figure A-2. Worksheet 1.

2022 Projected Conditions - Weekday P.M. Peak Hour

WORKSHEET 1: PEAK-HOUR, 35 MPH (55 KM/H) OR LESS

Analyst and Site Information	
Analyst: Shelby Lynch Analysis Date: 1/16/2020 Data Collection Date: 11/7/19	Major Street: Patriots Way Minor Street or Location: Proposed Site Access opposite Sussex Central HS Access (center) Peak Hour: PM

Step 1: Select worksheet (speed reflects posted or statutory speed limit or 85th percentile speed on the major street):
a) Worksheet 1 – 35 mph (55 km/h) or less
b) Worksheet 2 – exceeds 35 mph (55 km/h), communities with less than 10,000, or where major transit stop exists

Step 2: Does the crossing meet minimum pedestrian volumes to be considered for a TCD type of treatment?		
Peak-hour pedestrian volume (ped/h), V_p	*2a*	20 (assumed per DelDOT)
If *2a* ≥ 20 ped/h, then go to Step 3.		
If *2a* < 20 ped/h, then consider median refuge islands, curb extensions, traffic calming, etc. as feasible.		

Step 3: Does the crossing meet the pedestrian volume warrant for a traffic signal?		
Major road volume, total of both approaches during peak hour (veh/h), V_{maj-s}	*3a*	324
Minimum signal warrant volume for peak hour (use *3a* for V_{maj-s}), SC SC = $(0.00021\ V_{maj-s}^2 - 0.74072\ V_{maj-s} + 734.125)/0.75$ OR $[(0.00021\ 3a^2 - 0.74072\ 3a + 734.125)/0.75]$	*3b*	688
If *3b* < 133, then enter 133. If *3b* ≥ 133, then enter *3b*.	*3c*	688
If 15th percentile crossing speed of pedestrians is less than 3.5 ft/s (1.1 m/s), then reduce *3c* by up to 50 percent; otherwise enter *3c*.	*3d*	688
If *2a* ≥ *3d*, then the warrant has been met and a traffic signal should be considered if not within 300 ft (91 m) of another traffic signal. Otherwise, the warrant has not been met. Go to Step 4.		Warrant NOT Met

Step 4: Estimate pedestrian delay.		
Pedestrian crossing distance, curb to curb (ft), L	*4a*	55
Pedestrian walking speed (ft/s), S_p	*4b*	3.5
Pedestrian start-up time and end clearance time (s), t_s	*4c*	3
Critical gap required for crossing pedestrian (s), $t_c = (L/S_p) + t_s$ OR [(*4a*/*4b*) + *4c*)]	*4d*	18.7
Major road volume, total both approaches or approach being crossed if median refuge island is present during peak hour (veh/h), V_{maj-d}	*4e*	324
Major road flow rate (veh/s), $v = V_{maj-d}/3600$ OR [*4e/3600*]	*4f*	0.09
Average pedestrian delay (s/person), $d_p = (e^{v\ tc} - v\ t_c - 1) / v$ OR $[\ (e^{4f\ x\ 4d} - 4f\ x\ 4d - 1) / 4f\ ]$	*4g*	30
Total pedestrian delay (h), $D_p = (d_p \times V_p)/3{,}600$ OR [(*4g*×*2a*)/3600] (this is estimated delay for all pedestrians crossing the major roadway without a crossing treatment – assumes 0% compliance). This calculated value can be replaced with the actual total pedestrian delay measured at the site.	*4h*	0.167

Step 5: Select treatment based upon total pedestrian delay and expected motorist compliance.		
Expected motorist compliance at pedestrian crossings in region, Comp = high or low	*5a*	high

Total Pedestrian Delay, D_p (from *4h*) and Motorist Compliance, Comp (from *5a*)	**Treatment Category** (see Descriptions of Sample Treatments for examples)
$D_p \geq 21.3$ h (Comp = high or low) OR 5.3 h ≤ D_p < 21.3 h and Comp = low	RED
1.3 h ≤ D_p < 5.3 h (Comp = high or low) OR 5.3 h ≤ D_p < 21.3 h and Comp = high	ACTIVE OR ENHANCED
D_p < 1.3 h (Comp = high or low)	CROSSWALK

Figure A-2. Worksheet 1.

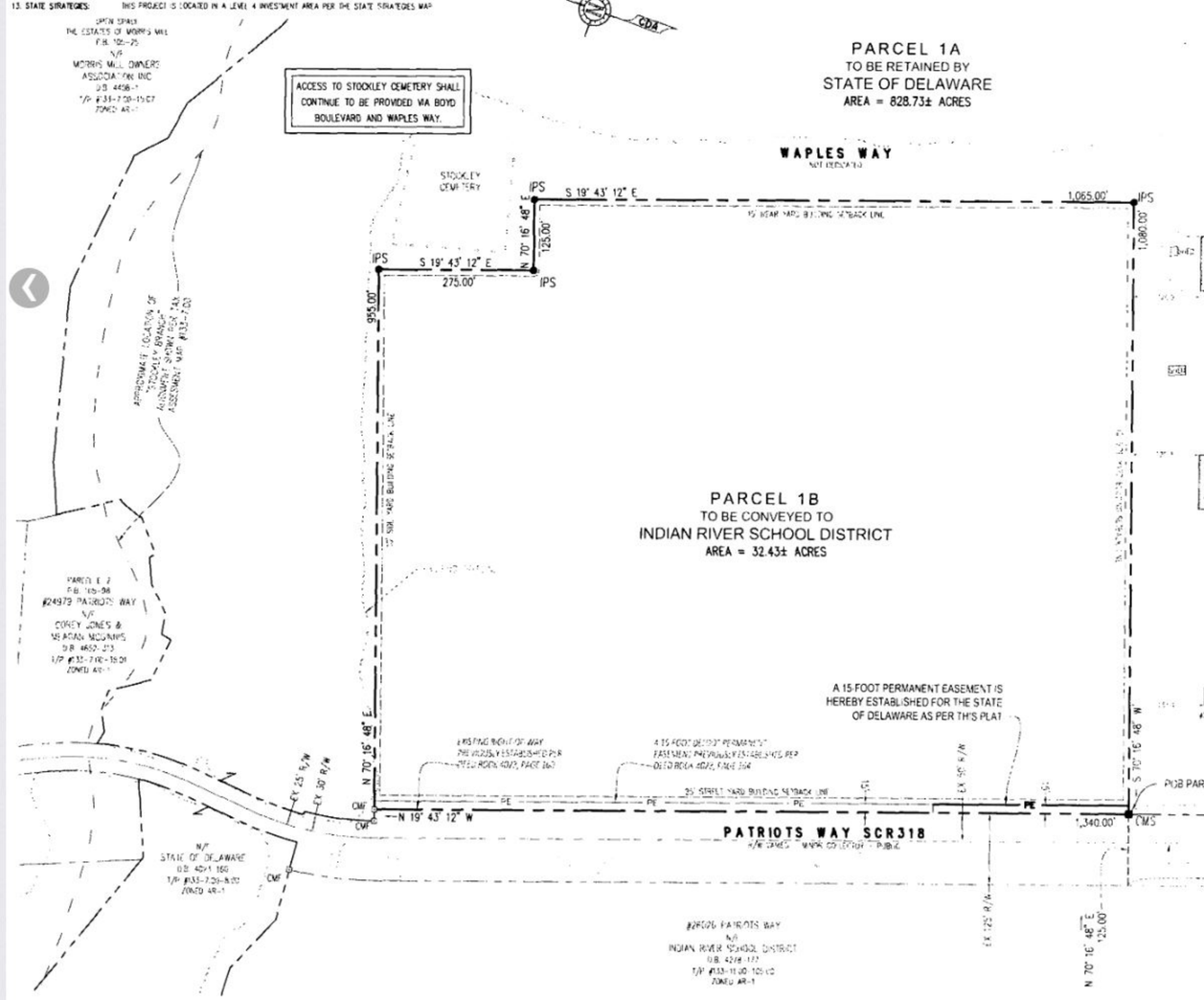
1. OWNER ADDRESS:	STATE OF DELAWARE DEPARTMENT OF HEALTH AND SOCIAL SERVICES PO BOX 778 DOVER, DELAWARE
2. PROPERTY ADDRESS:	26351 PATRIOTS WAY GEORGETOWN, DELAWARE 19947
3. TAX PARCEL NUMBERS:	#133-7.00-8.00
4. AREA OF PARCEL:	828.73± ACRES (PARCEL 1A) 32.43± ACRES (PARCEL 1B) 861.16± ACRES TOTAL
5. ZONING:	AR-1 - AGRICULTURAL REGIONAL EXISTING USE: INSTITUTIONAL PROPOSED USE: INSTITUTIONAL

LOT AREA	LOT WIDTH	STREET YARD	SIDE YARD	REAR YARD	BUILDING HEIGHT
20,000 SF	100'	25'	10'	10'	42'

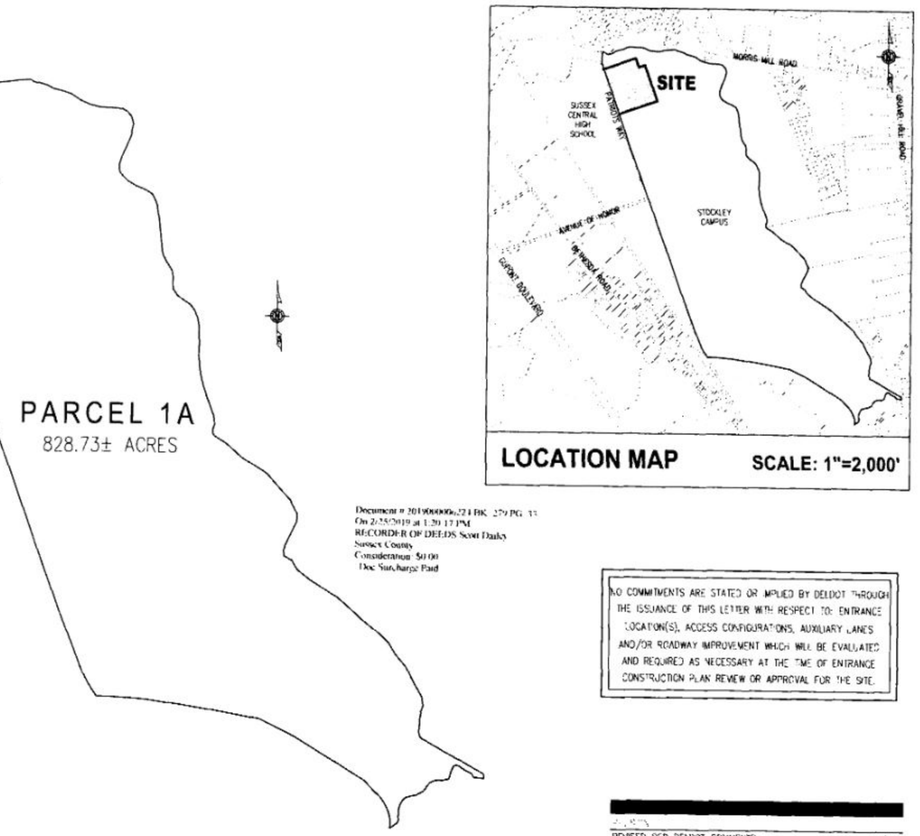
6. DEED REFERENCE:	DEED BOOK 4023, PAGE 160; DEED BOOK 4221, PAGE 184; DEED BOOK 4218, PAGE 177; DELDOT CONTRACT #T200511201
7. DATE OF SURVEY:	JUNE 2018 BY CDA ENGINEERING, INC
8. DATUM:	VERTICAL - NAVD 88 HORIZONTAL - COORDINATE SYSTEM AND BASIS OF BEARINGS: DELAWARE STATE PLANE NAD 83/91
9. LOTS:	1 EXISTING, 2 PROPOSED
10. SEWER:	TOWN OF GEORGETOWN
11. SPEED LIMIT:	THE POSTED SPEED LIMIT ON PATRIOTS WAY IS 45 MPH
12. T.I.D.:	THIS PROJECT IS LOCATED APPROXIMATELY 8 MILES SOUTHWEST OF THE HENLOPEN TRANSPORTATION IMPROVEMENT DISTRICT
13. STATE STRATEGIES:	THIS PROJECT IS LOCATED IN A LEVEL 4 INVESTMENT AREA PER THE STATE STRATEGIES MAP

DELDOT NOTES:

1. NO LANDSCAPING SHALL BE ALLOWED WITHIN R/W UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL (DCM).
2. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
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 RE-PAVING 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 SHARED-USE PATH AND/OR SIDEWALK TERMINATION POLICY.
5. 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.
6. 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 3.2.4.2.15 THE DEVELOPMENT COORDINATION MANUAL.



SUBDIVISION PLAN
SCALE 1" = 120'



LOCATION MAP
SCALE: 1"=2,000'

OVERALL PROPERTY PLOT MAP
SCALE 1" = 1,000'

THE GEOMETRY OF THIS OVERALL PROPERTY PLOT MAP IS BASED ON THE SUSSEX COUNTY GIS PARCEL MAP AND DOES NOT CONSTITUTE A BOUNDARY SURVEY.

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 IMPROVEMENT WHICH WILL BE EVALUATED AND REQUIRED AS NECESSARY AT THE TIME OF ENTRANCE CONSTRUCTION PLAN REVIEW OR APPROVAL FOR THE SITE.

LEGEND

- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- ROAD CENTER LINE
- EXISTING FENCE
- EXISTING STREAM
- EXISTING TREE LINE
- CONCRETE MONUMENT FOUND (CMF)
- MONUMENT TO BE SET (CMS)
- IRON PIPE TO BE SET (IPS)

CERTIFICATION OF OWNERSHIP

I, LISA BUNG, HEREBY CERTIFY THAT I AM THE LEGAL REPRESENTATIVE OF THE OWNER OF THE PROPERTY WHICH IS SUBJECT OF THIS PLAN AND THAT THE LAND USE ACTION PROPOSED BY THIS PLAN IS MADE AT MY DIRECTION.

LISA BUNG
DELAWARE HEALTH AND SOCIAL SERVICES
DATE 2/25/19

CERTIFICATION OF PLAN ACCURACY

I, COLLICLE DEASEANES, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER WITH A BACKGROUND IN ENGINEERING IN THE STATE OF DELAWARE AND THAT ALL OF THE INFORMATION SHOWN ON THIS PLAN IN REFERENCE TO THE PROPOSED SUBDIVISION IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED SURVEYING STANDARDS AND DIRECTIVES OF THE STATE OF DELAWARE.

COLLICLE DEASEANES
REGISTRATION #13049
DATE 2/25/19

APPROVED
SUSSEX COUNTY PLANNING & ZONING COMMISSION
DATE 2/25/19

REVISED PER DELDOT COMMENTS	1.30.19

CDA ENGINEERING INC.
CIVIL/SITE ENGINEERING AND LAND PLANNING

6 LARCH AVENUE
SUITE 401
WILMINGTON, DE 19804
Tel: 302 998 9202
Fax: 302 691 1314
cdaengineering.com

DRAWN BY:	ZK
REVIEWED BY:	CD
PROJECT #:	17.136.00
SCALE:	AS SHOWN
DATE:	JANUARY 25, 2019
FILE NAME:	...\DWG\1713600 BASE.DWG

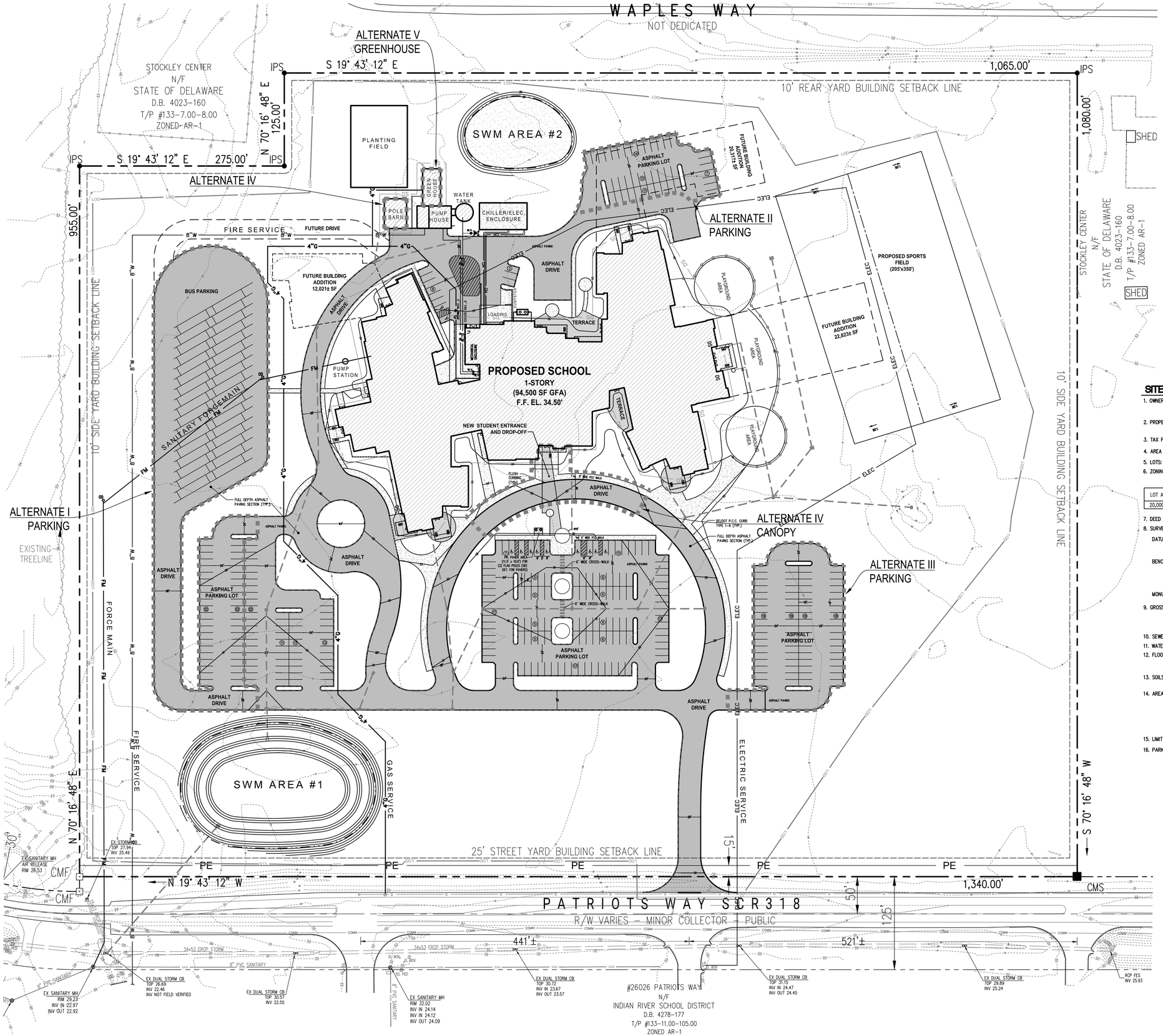
0' 60' 120' 240' 360'
1" = 120'

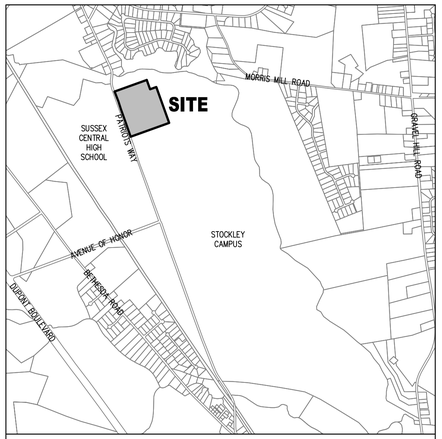
RECORD MINOR SUBDIVISION PLAN
PREPARED FOR
INDIAN RIVER SCHOOL DISTRICT
FOR PROPERTY KNOWN AS
TAX PARCEL #133-7.00-8.00
ALSO KNOWN AS
STOCKLEY CENTER

DAGSBORO HUNDRED SUSSEX COUNTY DELAWARE

RECORD PLAN

SHEET NUMBER: REC 1 of 1





LOCATION MAP SCALE: 1"=2,000'

SITE DATA

1. OWNER ADDRESS:	INDIAN RIVER SCHOOL DISTRICT 31 WEST HOSIER STREET SELBYVILLE, DELAWARE 19975
2. PROPERTY ADDRESS:	26351 PATRIOTS WAY GEORGETOWN, DELAWARE 19947
3. TAX PARCEL NUMBER:	#133-7.00-8.01
4. AREA OF PARCEL:	32.43± ACRES
5. LOTS:	1 EXISTING; 1 PROPOSED
6. ZONING:	AR-1 – AGRICULTURAL REGIONAL EXISTING USE: INSTITUTIONAL **PROPOSED USE: INSTITUTIONAL**

LOT AREA	LOT WIDTH	STREET YARD	SIDE YARD	REAR YARD	BUILDING HEIGHT
20,000 SF	100'	25'	10'	10'	42'

7. DEED REFERENCE:	DEED BOOK 5076, PAGE 301
8. SURVEY:	JUNE 2018 BY CDA ENGINEERING, INC.
DATUM:	VERTICAL – NAVD 88 HORIZONTAL – COORDINATE SYSTEM AND BASIS OF BEARINGS; DELAWARE STATE PLANE NAD 83/91
BENCHMARK:	CAPPED REBAR POINT NO. 1 NORTHING: 229,158.8873 EASTING: 682,806.6949 ELEVATION: 31.85
MONUMENTATION:	EXISTING: 2 FOUND PROPOSED: 0
9. GROSS FLOOR AREA:	EXISTING: 0± SF PROPOSED: 94,500± SF (PER THIS PLAN) 55,161± SF (FUTURE ADDITIONS/EXPANSION) **TOTAL PROPOSED: 149,661± SF**
10. SEWER:	TOWN OF GEORGETOWN
11. WATER:	ON-SITE WELL
12. FLOOD ZONE:	THIS PROPERTY LIES ENTIRELY WITHIN ZONE "X" AREA OF MINIMAL FLOOD HAZARD ACCORDING TO FEMA FLOOD INSURANCE RATE MAP #10005C0452K WITH AN EFFECTIVE DATE OF JUNE 20, 2018.
13. SOILS:	FhA – FORT MOTT–HENLOPEN COMPLEX, 0 TO 2 PERCENT SLOPES FhB – FORT MOTT–HENLOPEN COMPLEX, 2 TO 5 PERCENT SLOPES PsA – PEPPERBOX–ROSEDALE COMPLEX, 0 TO 2 PERCENT SLOPES

14. AREA BREAKDOWN:

	EXISTING	PROPOSED
BUILDING COVERAGE:	0 AC. (0%)	3.44± AC. (10.6%)
OTHER IMPERVIOUS SURFACES:	0 AC. (0%)	7.29± AC. (22.5%)
OPEN SPACE:	32.43± AC. (100%)	21.70± AC. (66.9%)
TOTAL:	32.43± AC. (100%)	32.43± AC. (100.0%)

15. LIMIT OF DISTURBANCE:	25.7± ACRES
16. PARKING:	
REQUIRED:	72 SPACES = 3 SPACES/ADMIN ROOM x 24 ADMIN ROOMS 34 SPACES = 1 SPACE/CLASSROOM x 34 CLASSROOMS + 96 SPACES = 1 SPACE/5 SEATS x 480 SEATS 202 SPACES TOTAL
PROVIDED:	352 PARKING SPACES (INCLUDING 11 A.D.A. SPACES) 34 BUS PARKING SPACES

CDA ENGINEERING INC.

CIVIL/SITE ENGINEERING AND LAND PLANNING

6 LARCH AVENUE
SUITE 401
WILMINGTON, DE 19804

Tel: 302 998 9202
Fax: 302 691 1314
cdaengineering.com

REVISION

DRAWN BY:	ZK
CHECKED BY:	CD
PROJECT No.:	19.106.00
SCALE:	1" = 60'
DATE:	NOVEMBER 19, 2019
CAD FILE:	...\DWG\1910600 BASE.DWG

0' 30' 60' 120' 180'
1" = 60'

CONDITIONAL USE APPLICATION
PRELIMINARY SITE PLAN
OF

HOWARD T. ENNIS SCHOOL

TAX PARCEL NO 133-7.00-8.01
#26531 PATRIOTS WAY
GEORGETOWN, DELAWARE 19947

DAGSBORO HUNDRED SUSSEX COUNTY DELAWARE

DRAWING TITLE:	PRELIMINARY SITE PLAN
DRAWING NUMBER:	PRE 1 of 1