SUPPLEMENTAL DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

FOR THE

ALBANY PORT DISTRICT COMMISSION PORT OF ALBANY EXPANSION PROJECT

TOWN OF BETHLEHEM, NEW YORK

PREPARED FOR:

Albany Port District Commission
106 Smith Boulevard
Albany, NY 12202

PREPARED BY:

McFarland Johnson

60 Railroad Place, Suite 402
Saratoga Springs, NY 12866
PH: 518-580-9380
FX: 585-905-0882

MJ Project No. 18437.00

Lead Agency Completeness Declaration: December 17, 2019
Date of Public Meeting: January 6, 2020
Due Date for Comments on SDGEIS: January 17, 2020

TOWN OF BETHLEHEM
PLANNING BOARD

SUPPLEMENTAL DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

For
ALBANY PORT DISTRICT COMMISSION
PORT OF ALBANY EXPANSION PROJECT

Project Name:	Albany Port District Commission (APDC) Port of Albany Expansion Project
Project Location:	East of River Road (NYS Rt. 144) south of Normans Kill and north of PSEG property Town of Bethlehem, Albany County, NY
SEQRA Classification:	Type I
Lead Agency:	Planning Board, Town of Bethlehem Bethlehem Town Hall 445 Delaware Avenue Delmar, NY 12054 (518) 439-4955
Lead Agency Contact:	Robert Leslie, AICP Director of Planning Town of Bethlehem 445 Delaware Avenue Delmar, NY 12054 (518) 439-4955 X 1157 rleslie@townofbethlehem.org
Applicant:	Albany Port District Commission 106 Smith Boulevard Albany, NY 12202

Lead Agency Completeness Declaration: December 17, 2019

Date of Public Meeting: January 6, 2020

Due Date for Comments on SDGEIS: January 17, 2020

Port of Albany Expansion Project

ii. Table of Contents

Port of Albany Expansion Project

List of Tables

Port of Albany Expansion Project

List of Figures

Port of Albany Expansion Project

List of Appendices

iii. SDGEIS Acronyms and Abbreviations

Acronyms and Abbreviations used within DGEIS are as follows:

ALTA: American Land Title Association

AMMP: Avoidance, Minimization, and Mitigation Plan

APDC: Albany Port District Commission

AVE: Area of Visual Effect

BFE: Base Flood Elevations

BMPs: Best Management Practices

C&D: Construction and Demolition Debris

CAA: Clean Air Act

CAMP: Community Air Monitoring Plan

CDTA: Capital District Transportation Authority

CP: Canadian Pacific

CWA: Clean Water Act

CY: Cubic Yard

CZMA: Coastal Zone Management Act

DGEIS: Draft Generic Environmental Impact Statement

DPW: Town of Bethlehem Department of Public Works

EFH: Essential Fish Habitat

EFHA: Essential Fish Habitat Area

ETS: Endangered and Threatened Species

FEMA: Federal Emergency Management Agency

FGEIS: Final Generic Environmental Impact Statement

FMC: Fishery Management Councils

FMP: Fishery Management Plans

GEIS: Generic Environmental Impact Statement

GHG: Greenhouse Gas

GPD: Gallons Per Day

GPM: Gallons Per Minute

HAPC: Habitat Areas of Particular Concern

HSG: Hydrologic Soil Group

HVAC: Heating, ventilation, and air conditioning

ITE: Institute of Transportation Engineer

LCP: License to Collect and Possess

LEED: Leadership in Energy and Environmental Design

LWRP: Local Waterfront Revitalization Plans

MHLC: Mohawk Hudson Land Conservancy

MHT: High Tide Line

MHW: Mean High Water

MSA: Magnuson-Stevens Fishery Conservation and Management Act

MSW: Municipal Solid Waste

NAAQS: National Ambient Air Quality Standards

NFCS: Natural Resources Conservation Service

NFIP: National Flood Insurance Program

NFPA: National Fire Prevention Association

NIMS: National Incident Management System

NMFS: National Marine Fisheries Service

NOAA: National Oceanic and Atmospheric Administration

NYCMP: New York State Coastal Management Program

NYSDEC: New York State Department of Environmental Conservation

NYSDOS: New York State Department of State

NYSDOT: New York State Department of Transportation

NYSOGS: New York State Office of General Services

NYSOPRHP: New York State Office of Parks, Recreation, and Historic Preservation

NYSTA: New York State Thruway Authority

NWI: National Wetlands Inventory

OHW: Ordinary High Water

PEM: Palustrine Emergent Wetlands

PFO: Palustrine Forested Wetlands

PSEG: Public Service Enterprise Group Power New York Power Plant

PTP: Package Treatment Plant

RHA: Rivers and Harbors Act

RRv: Runoff Reduction Volume

S: Specific Reduction Factor

SAV: Submerged Aquatic Vegetation

SCFWH: Significant Coastal Fish and Wildlife Habitat

SDGEIS: Supplemental Draft Generic Impact Statement

SDWA: Safe Drinking Water Act

SEQRA: State Environmental Quality Review Act

SF: Square Feet

SFA: Sustainable Fisheries Act

SFHA: Special Flood Hazard Areas

SHPO: New York State Office of Historic Preservation

SMP: Stormwater Management Practices

SPDES: State Pollutant Discharge Elimination System

SSA: Sole Source Aquifer

SWPPP: Stormwater Pollution Prevention Plan

SWTP: South Wastewater Treatment Plant

TIS: Traffic Impact Study

TMC: Turning Movement Counts

UL: Underwriters Laboratories

USACE: United States Army Corps of Engineers

USEPA: United State Environmental Protection Agency

USFWS: United States Fish and Wildlife Service

USGS: United States Geological Survey

WOUS: Water of the US

WRA: Waterfront Revitalization Area

WQv: Water Quality Volume

iv. Firms/Organizations Involved in the Preparation of the Supplemental DGEIS

The list of firms and organizations involved in the Supplemental DGEIS are as follows:

- McFarland Johnson, Inc.
- Curtin Archaeological Consulting, Inc.
- Camoin Associates, Inc.

1. EXECUTIVE SUMMARY

1.1. SUMMARY DESCRIPTION OF PROJECT

The Albany Port District Commission (APDC) is proposing to develop the 81.62-acre property formerly known as Beacon Island located just east of River Road along the Hudson River. APDC has identified the need to expand their current land holdings in order to accommodate future growth. The Proposed Project is known as the Albany Port Expansion Project and would include the development of the Site with uses permitted by right pursuant to the Town's heavy industrial zoning regulations. In accordance with existing zoning, several hypothetical concept plans have been developed for the Project Site. It should be noted that no specific project(s) have been identified and for the purpose of this SDGEIS, only the full build out is being evaluated. This concept is hereafter referred to as "Concept A". Concept A represents the maximum amount of development permitted under current zoning, and therefore will represent the greatest potential for ecological and environmental impacts. Concept A includes a 1.13 million SF two-story Industrial use facility, with the associated access roads, employee parking, trailer parking, refurbished rail access from the north over Normans Kill Creek, and a bulkhead/wharf along the Hudson River. The two-level warehouse maximizes the development potential of the site and provides the basis for the SEQRA approval process along with the identified site improvements. The expansion will be developed with tenants with uses that are permitted by right as listed in the Town Zoning code which include the following:

- Warehouse
- Manufacturing
- Assembly
- Industrial Park
- Distribution centers
- Packaging facilities
- Business office
- Commercial storage

Proposed private improvements include:

- All structures, buildings and roadways on the Port expansion property
- Sanitary sewer service
- Watermain supply within the Port expansion property
- Vehicle and Railway bridge over Normans Kill Creek
- Gas and Electric service extensions

Proposed public improvements include:

- Off-site Traffic improvements on the surrounding transportation system
- Off-site watermain system (within the public ROW)

The Project Site is located approximately 1.7 miles southeast of the Ezra Prentice community. The Ezra Prentice community is a sixteen building development with approximately 176 units located directly adjacent to South Pearl Street. A map showing the Project Site is provided as Figure 2.1-1.

This Supplemental DGEIS includes a conceptual site plan detailing the layout of all the elements of the Proposed Project, including the access roadways, buildings, parking, stormwater facilities, open space areas, etc. A map showing this concept plan (Concept A) for the Proposed Project is included in the Appendix B.

As background, a comprehensive Draft Generic Environmental Impact Statement (DGEIS) was prepared for the proposed Port expansion project that addresses the cumulative effects on the environment for the entire project. The DGEIS was determined acceptable for public comment by the Town of Bethlehem Planning Board (the Town), acting as Lead Agency, on August 6, 2019. A public hearing was held on September 3, 2019, and the public comment period ended on September 14, 2019.

This Supplemental Draft Generic Environmental Impact Statement (SDGEIS) is prepared to augment the DGEIS for the specific purposes of addressing any potential environmental impact the Proposed Project may have on the Ezra Prentice community. This SDGEIS includes the DGEIS by reference, including all verbal and written comments received during the public hearing and throughout the comment period. The main purpose of this SDGEIS is to implement the public participation plan for the Ezra Prentice community and to respond to all substantive comments.

1.2. PROPOSED ACTION

The proposed action involves a site plan approval for an industrial development on 81.62 acres of land referred to as the Beacon Island site, located at the confluence of the Normans Kill and Hudson River. The applicant (Project Sponsor), Albany Port District Commission (APDC), is proposing to develop a vacant parcel of land (tax parcels 98.00-2-10.23 and 98.01-2-1.0) to expand the existing Port of Albany that will contain a maximum of 1.13 million square feet of industrial uses in the Town of Bethlehem, Albany County, New York, collectively to be known as the Albany Port District Commission Port of Albany Expansion. The Proposed Project could be constructed in one phase (the entire 1.13 million SF) or up to three phases. The phases of the Proposed Project are as follows, phase 1; 300,000 SF, phase 2; 600,000 SF, and phase 3; full build at 1,130,000 SF.

The Proposed Project is a Type 1 Action, as it exceeds the following Type I thresholds listed at 6 NYCRR 617.4(b)(6) for the construction of a non-residential facility that includes the:

1. Physical alteration of 10 acres (i);
2. Parking for 1,000 vehicles (iii); and,
3. More than 100,000 square feet of gross floor area in a town having a population of 150,000 persons or less (iv).

The Town of Bethlehem Planning Board established itself as "Lead Agency" by resolution on December 4, 2018 and adopted a Positive Declaration requiring that the APDC prepare a Draft Generic Environmental Impact Statement (DGEIS) on January 15, 2019, pursuant to the requirements of 6 NYCRR Part 617 State Environmental Quality Review (SEQR). Subsequently, the Town of Bethlehem Planning Board determined that additional outreach is required as it relates to the Ezra Prentice community and therefore adopted an additional Positive Declaration on November 19, 2019 requiring that the APDC prepare a Supplemental Draft Generic Environmental Impact Statement (SDGEIS) for the action as it relates to the Ezra Prentice community. Positive Declaration is included in **Appendix F**. This document and attachments serve as the Supplemental DGEIS for the Proposed Project and by reference incorporates the previous DGEIS.

1.3. POTENTIAL SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS

The potential impacts and proposed mitigation associated only with the Ezra Prentice community are summarized below in **Table 1.3-1**. The complete summary of impacts and mitigation measures associated with the overall project are in the previous DGEIS.

Table 1.3-1: Supplemental DGEIS Potential Impacts and Proposed Mitigation Measures

Supplemental DGEIS Section	Potential Impact	Proposed Mitigation
3.6 Climate and Air Quality	Climate – increased vehicular traffic will increase direct and indirect GHG emissions. Increase considered to be low and will not result in significant increase in GHG emissions. Air – Construction will result in temporary air emissions, GHG emission, and odor impacts. Increased transportation will impact emissions. Potential spray paint booth.	Climate – tenant will be encouraged to use implement LEED practices. Air – Construction impacts will be mitigated with dust suppression and air monitoring by the NYSDEC at the perimeter of the property. Spray paint booth would have air permit in accordance with 6 NYCRR Part 201. Vegetative buffers will remain to mitigate potential odors from vehicles or equipment. Truck traffic to be routed such that they do not to travel through Ezra Prentice community on South Pearl Street.
3.7 Traffic and Transportation	Vehicle – Maximum 465 trips during AM peak hour and 529 trips during PM peak hour. Maximum 151 peak hour truck trips. Maritime – No significant impact on existing Hudson River maritime commercial or recreational traffic. No added maritime traffic to Normans Kill, therefore no impact Rail – No noticeable impact	Truck Traffic- All Truck Traffic from the Proposed Project will be routed through the existing City Roadways through the Port of Albany or via South Port Road however, prohibiting right hand turns. Therefore, no additional truck traffic will travel through Ezra Prentice community. Enforcement includes language in tenant leases, and additional surveillance camera. Vehicle – Signal improvements including traffic signal timing change, construction of left turn lane, construction of right turn lane. Proposed

	Public Transportation – No impacts Pedestrian and Bicycle - No noticeable impacts	southern access drive is stop sign controlled and requires clearing of existing vegetation and signage/lighting improvements.
3.9 Water Service (Potable and Fire Protection)	No impact	None
3.10 Sanitary Sewer	No impact	None
3.11 Historic, Cultural, and Archeological Resources	No impact	None
3.12 Aesthetic and Visual Resources	No impact	None
3.13 Land Use and Zoning	No impacts	None
3.14 Community Character and Compatibility with Comprehensive Plan	No impact	None
3.15 Emergency Services	No Impact	None
3.16 School District	No impact	None
3.17 Fiscal and Economic Impact	No impact	None
3.18 Recreation and Open Space	No impact	None
3.20 Environmental Justice	Potential environmental justice outreach	Public outreach during Supplemental DGEIS, and upon NYSDEC permit application for Proposed Project

1.3.1. Potential Significant Beneficial Impacts

The economic and fiscal impact analysis study has been prepared for the Proposed Project. The analysis examined the local fiscal benefits that will be generated by the Proposed Project, including new property and sales tax revenue. The total annual fiscal benefits of the Proposed Project are estimated to range from between $4.65 million to $14.2 million, depending on the concept plans. The most significant portion of these benefits will be realized by Albany County through new sales tax revenues and property tax revenues (directly from the Proposed Project itself and new tax revenues generated off-site as a result of the economic impact of the Proposed Project). The Ezra Prentice community is located in Albany County.

The Port of Albany Expansion Project has the potential to generate approximately 1,670 new jobs in Albany County with $102 million in new annual earnings for workers in the County from future operations on the property. The total annual potential impact of the Proposed Project to Albany County is approximately $295 million based on the maximum build out of the property of a 1.13 million square-foot industrial facility. The total economic impact includes "spinoff" economic activity that occurs in the County. Approximately one-out-of-three permanent jobs generated in the County as a result of annual operations will exist off-site at other businesses in Albany County.

The Proposed Project will also have a significant one-time construction impact, with the potential to generate a one-time boost of between $48.1 million and $196 million to the local economy.

1.3.2. Potential Significant Adverse Impacts

Adverse environmental impacts that have been identified that cannot be minimized, avoided, or mitigated include the following:

1. Removal of existing vegetation within the project limits; and
2. Reduction of vacant land available for future development.

1.4. PROPOSED MITIGATION MEASURES

The Proposed Project has been outlined such that adverse temporary and permanent environmental impacts as they related to the Ezra Prentice community will be avoided, minimized, or mitigated to degree possible in accordance with local, state and federal guidelines and regulations. A summary of the mitigation measures to be employed by this Proposed Project relating to the Ezra Prentice community are provided above in Table 1.3-1 and further detailed in the following subsections.

1.4.1. Climate and Air Quality

The Proposed Project is not anticipated to result in a significate increase in greenhouse gas (GHG) emissions. However, in an effort to reduce the potential effects of the Proposed Project, future tenant(s) will be encouraged to promote green vehicle purchases and not allow truck traffic to use South Pearl Street. In addition, future tenant(s) will be encouraged to use the following mitigation measures on-site:

- High efficiency heating, a ventilation, and an air-conditioning (HVAC) systems
- Leadership in Energy and Environmental Design (LEED) Certification
- Local building materials, if available
- Recycling program
- Insulation to minimize heat loss
- Use of public transportation, including rail and river access
- Conservation of natural areas, including shoreline and wetlands

Air quality impacts associated with construction will be mitigated by dust suppression techniques including spray of water on dry materials and soils and air monitoring at the perimeter of the property, including a Community Air Monitoring Plan (CAMP) to be completed during construction. Potential impacts associated with operations of facilities at the site would be mitigated through compliance with the conditions of all required air pollution control permits and registrations under 6 NYCRR Part 201. As mentioned above, Truck traffic will be routed through the existing City Streets through the Port or via South Port Road however, prohibiting right hand turns to eliminate adding new truck traffic to South Pearl Street adjacent to Ezra Prentice community.

1.4.2. Traffic and Transportation

A detailed Traffic Impact Study has been completed as part of the previous DGEIS which included a study area of 11 intersections surrounding the Project Site. Based on the study, existing roadway infrastructure within the study area has adequate capacity to accommodate the proposed traffic anticipated under the full build-out of the proposed development with the following improvements and mitigation measures:

- NYS Route 32 at 1st Ave/I-787 Exit 2 Ramp:
  - Traffic signal timing changes (Monitor for all Phases, timing changes assumed for Phase III)
- NYS Route 32 at South Port Road:
  - Monitor signal timings (During Phase I)
  - Follow up traffic study to assess signal operations (Prior to Phase II)
  - Construct a dedicated 200’ long southbound left-turn lane (Prior to Phase III)
  - Construction a dedicated 200’ long westbound right turn lane (Prior to Phase III)
  - Install new traffic signal equipment to provide a permissive/protected southbound left turn phase and a westbound right turn lane overlap phase. Potentially coordinate the controller should a traffic signal be installed at NYS Route 144/NYS Route 32 intersection. (Prior to Phase III)

The truck impact analysis resulted in the recommendation to restrict the project’s truck traffic to access the site from I-787 through the existing Port site via Church Street/Broadway or from the south via South Port Road by prohibiting right hand turns as these routes have negligible impacts to the public and no impact to the Ezra Prentice community.

1.4.3. Environmental Justice

Ezra Prentice community is a nearby community identified as an Environmental Justice area. Some residents of Ezra Prentice community have expressed concerns over air quality, public health, and quality-of-life impacts from existing local businesses. Specifically, concerns are focused on traffic related to the trucks that pass through the neighborhood along South Pearl Street and trains in the adjacent CXS railroad yard to the east.

Once a specific project is identified the Albany Port District Commission will proactively complete the environmental justice review and public outreach process pursuant to the NYSDEC CP 29 policy at the time of site plan application. Since the application and site plan approval resides within the Town of Bethlehem Planning Board jurisdiction, and the CP 29 policy is under the NYSDEC jurisdiction, both the State and the local municipality will ensure that public participation within the Ezra Prentice community neighborhood is provided.

1.5. CONSIDERED ALTERNATIVES

1.5.1. No Build

The "No Build" alternative would consist of the continued use of the property in its current vacant condition. The site would remain zoned as Heavy Industrial, and if remained undeveloped it would not be compatible with the Town of Bethlehem Comprehensive Plan nor would it create any tax benefits for the Town of Bethlehem or Albany County.

1.5.2. Site Development as Allowed by Existing Zoning

The Proposed Project would develop the site with uses permitted by right pursuant to the Town's heavy industrial zoning regulations. In accordance with existing zoning, several concept plans have been developed for the site. A summary of the concepts are discussed below and included in Table 1.5-1.

Table 1.5-1: Proposed Project Design Alternatives

Alternative	Area	Title	Description
Concept A	1,130,000 SF	One building Two-Story Facility	Two-story industrial use facility. Building maximizes development potential of the Site.
Concept B	900,800 SF	Once building Single Story Facility	Optimizes single story development gross floor area Warehouse has 2 story-story administration area and docking length of 1,300 FT
Concept C	2 buildings – 160,000 SF, 2 buildings – 245,000 SF, Total of 810,000 SF	Multiple building 2 lot subdivision	Multiple tenants multiple lots, with building entry plaza connecting all four industrial buildings. All buildings have 2 story administration area facing plaza.

Concept D	160,000 SF	Offshore Wind assembly facility	Light fabrication/assembly facility with outdoor staging for supply chain business associated with offshore wind industry. Maximizes open space for outdoor bulk storage and is served by 160,000 SF building.
Concept D1	508,000 SF	Offshore Wind with Manufacturing	Manufacturing facility for the offshore wind industry. Facility will include outdoor storage / staging .

Concept Plan A – Largest, Two-Level Warehouse

The description for this concept is as previously provided in Section 1.1.

Concept Plan B – One Large Single Level Warehouse

This option maximizes single story development gross floor and laydown area by pushing the railroad as far westward as turning radii allow. The industrial building front with staff parking faces the north primary access way with trailer parking on the back towards the south of the site. The warehouse has a double-story administration area on the front of the building and has a docking length of 1,300 feet with rail on the west side and trucks on the east side facing the laydown and bulkhead area. The building total gross floor area is 900,800 SF.

Concept Plan C – Multiple Warehouses

This option houses multiple tenants and provides an entry plaza amenity connecting all four industrial buildings. The entry plaza is connected to staff parking east and west with access to all buildings. The rail serves all buildings on one side, and a loop road with perimeter trailer parking circles the building cluster. All buildings have a double story administration area facing the entry plaza. The railway is realigned towards the center of the site, in order to make space for buildings, circulation and parking on both sides of the rail, and crosses Normans Kill inside the site property. The two buildings west of the rail have a gross floor area of 160,000 SF each, and the two buildings east of the rail are 245,000 SF, amounting to a total of 810,000 SF.

Concept Plan D – Offshore Wind

This option develops the site in support of light fabrication and staging for the supply chain businesses associated with the offshore wind industry, such as steel foundation structures (jackets) and miscellaneous steel or concrete platforms. It maximizes open space for outside bulk storage of both components and finished products. It is served by a 160,000 SF storage building for equipment and light fabrication and finishing such as spray on coatings, which must be stored in a protected environment. The rail spur is re-aligned to service the west side of the building for delivery of offloading of components. A roadway is also provided through the site to permit truck delivery of components, as well as staff access. Truck access is provided on the east side of the building. Employee parking is provided to the north of the building.

Concept Plan D1 – Offshore Wind with Manufacturing

This option develops the site in support of manufacturing of offshore wind components, such as wind blades or tower structures. It provides a 508,000 SF building for manufacturing. The building features railroad unloading of raw materials and components on the west side by a re-aligned railroad spur. It features truck loading docks on the south side, and staff parking on the north side. A roadway is also provided through the site to permit truck delivery of components, as well as staff access. The design features a large storage yard and laydown area for completed components, which is critical for efficient loading onto ships.

1.6. MATTERS TO BE DECIDED

As Lead Agency, the Town of Bethlehem Planning Board needs to provide SEQRA "Statement of Findings", as well as preliminary site plan approval. The Town of Bethlehem Planning Board will issue a Statement of Findings in accordance with SEQRA upon completion of the FGEIS. Once SEQRA has been completed, the Town of Bethlehem Planning Board will conduct a preliminary site plan review.

1.6.1. Involved Agencies

Federal Agencies

United States Army Corps of Engineers (USACE)

State Agencies

New York State Department of Environmental Conservation (NYSDEC)

New York Department of Office of General Services (NYSOGS)

New York Department of State (NYSDOS)

New York State Department of Transportation (NYSDOT)

Local Agencies

Town of Bethlehem Planning Board

Town of Bethlehem Town Board

Albany County Health Department

Board of Commissioners of the Albany County Water Purification District

Town of Bethlehem Department of Public Works

Town of Bethlehem Zoning Board of Appeals

1.6.2. Interested Agencies

Federal Agencies

Federal Emergency Management Agency (FEMA)

National Marine Fisheries Service (NMFS)

United State Environmental Protection Agency (EPA)

United States Fish and Wildlife Service (USFWS)

State Agencies

New York State Office of Historic Preservation (SHPO)

New York State Thruway Authority (NYSTA)

State of New York Office of the Attorney General

Local Agencies

Albany County Planning Board

Bethlehem Central School District

City of Albany

Bethlehem Police Department

Selkirk Fire District

Delmar-Bethlehem EMS

Town of East Greenbush

1.6.3. Lists of Required Permits and Approvals

The Proposed Project will require numerous approvals and permits from local, state and federal involved agencies. The following permits and approvals are anticipated for this project:

USACE- Section 404/ Section 10 Individual Permit

NYSDEC- Article 15 Permit, Section 401 Water Quality Certification, General Permit GP-0-15-002. (latest edition) for Stormwater Discharges from Construction Activities, Individual Wastewater Permit, Sediment Sampling and Analysis Plan Approval, and Site Management Plan Approval.

NYSOGS- State Owned Lands Under Water Permit

NYSDOS- Coastal Management Consistency Review

NYSDOT- Highway Work Permit

Albany County Health Department- Application for Approval of Plans for Public Water Supply Improvements Form DOH348, Backflow Prevention Form DOH-347

Board of Commissioners of the Albany County Water Purification District- Wastewater Service Approval

Town of Bethlehem Building Department- Building Permits

Town of Bethlehem Planning Board- SEQR Statement of Finding and Preliminary Site Plan Approval

Town of Bethlehem Department of Public Works- Potable Water Service Approval, MS4 SWPPP Acceptance Form, 5-acre Disturbance Waiver Request

Town of Bethlehem Zoning Board of Appeals- Zoning Variance Approval

Town of Bethlehem Town Board – Acceptance of Map, Plan, & Report for Water District Extension, Acceptance of Water System Infrastructure Improvements

2. DESCRIPTION OF PROPOSED ACTION

2.1. Project Location

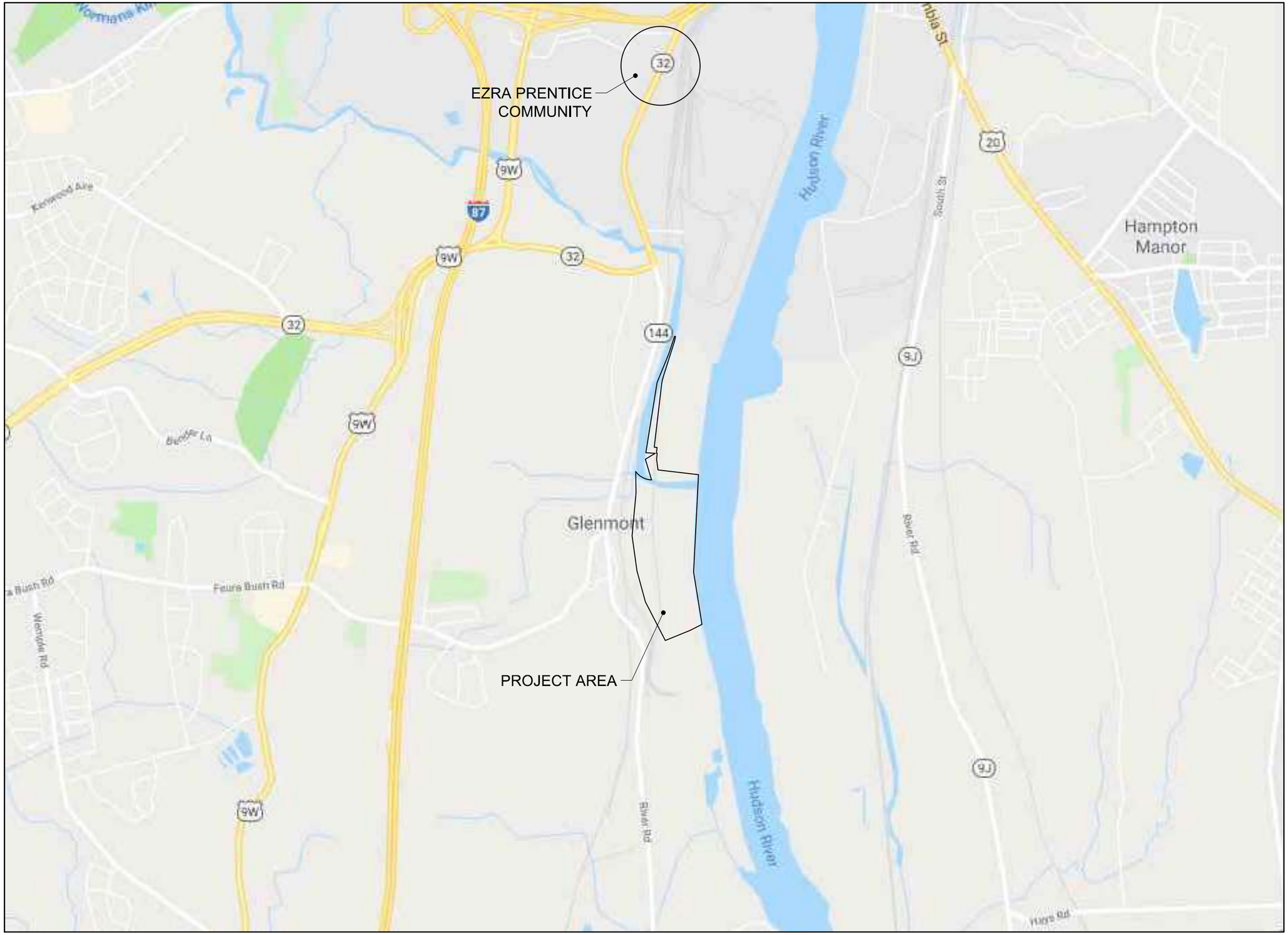
The Project Site is located on the east side of River Road/Route 144 along the Hudson River at approximately Hudson River Mile 142 (HRM 142) and consist of 81.62 acres. The Project Site is located approximately 1.7 miles south east of the Ezra Prentice community. The Project Site is located immediately north and south of the Hudson River's confluence with the Normans Kill within the Town of Bethlehem, Albany County, New York. The Project Site includes a 4.794 acre parcel of land (Tax Map No. 98.01-2-10) along the west side of South Port Road , and a 76.825 acre parcel (Tax Map No. 98.00-2-10.23) south of the Normans Kill. There are three easements, two existing and one proposed. One existing easement approximately 1.3 acres, located at the south west corner of the property provided by National Grid for crossing rights to connect the property to River Road/NYS Route 144. The second existing easement is approximately 0.4 acre and is located along the west side of the property and is provided by National Grid and connects the property to River Road/NYS Route 144 for utility crossings. One proposed easement is approximately 0.05 acre of land located north of the Normans Kill, along the west side of the property line. This easement would be provided by National Grid and would provide area available to build the north access road. See Figure 2.1-1 Site Location Map for the location of the Project Site.

The main parcel (Tax Map No. 98.00-2-10.23), known geographically as "Beacon Island", is bound by the following properties:

- To the North: various industrial and warehouse facilities
- To the South: Public Service Enterprise Group Power New York Power Plant (PSEG)
- To the East: Hudson River
- To the West: National Grid overhead electric and natural gas line transmission corridor

The Project Sponsor, APDC, owns and operates the Port of Albany (Port). The Port is a year-round, 24-hour facility that spans over 400 acres on the Albany and Rensselaer sides of the Hudson River.

This page intentionally left blank.



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
90% DESIGN

NO.	DATE	DESCRIPTION

CLIENT: SARATOGA COUNTY AIRPORT
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	NOVEMBER 2019
PROJECT	18437.00

DRAWING TITLE
SITE LOCATION MAP

DRAWING NUMBER
FIGURE 2.1-1

1 OF 1

This page intentionally left blank.

2.2. Site Description

The Project Site is currently undeveloped and is located in an industrial and rural/suburban area with limited access. The Project Site at one time was used for fly ash and bottom ash disposal. The neighboring land uses to the north and south are industrial. Further to the west of River Road, the area is generally rural in character with sparse minor roads and with low-density residential housing. The Project Site is located approximately 1.7 miles south east of the Ezra Prentice community. The Ezra Prentice community is a sixteen building development with approximately 176 units located directly adjacent to South Pearl Street.

In terms of access, although River Road/Rt. 144 and Port Road South are the closest to the Project Site, neither have a direct connection to the Project Site.

The Project Site is currently vacant and consists primarily of successional forest. Remnants of the former Canadian Pacific Railroad track, ballast and bridge abutments exist on the property. The rail line operated under an easement and was abandoned in the 1980's. In 2009, the bridge over the Normans Kill collapsed causing the entire local service rail line to be abandoned and the bridge to be removed. In addition, several vintage locomotive railcars remain on a small portion of track near the center of the Project Site. Also, a City of Albany watermain traversed the Project Site to supply water to PSEG; the watermain and accompanied easement have since been abandoned.

A detailed American Land Title Association (ALTA) boundary and topographic survey have been prepared and are provided in Appendices A and C, respectively. As shown on the survey, both the watermain and rail easements have been abandoned and no longer exist. Crossing rights easements from National Grid have been granted that provide access from the south and west.

Aerial images and site photographs are provided in the various technical studies that address the ecological and environmental resources of the Project Site.

2.3. Description of Proposed Action

The Proposed Action consists of Site Plan approval for a 1.13 million square foot (SF) industrial development to be built in 1 to 3 phases, see Figure 2.3-1. Phase 1 consists of the construction of site, utility and roadway infrastructure along with up to 300,000 square feet of building space. Phase 2 consists of an additional 300,000 square feet of building for a total of 600,000 square feet, and Phase 3 is an additional 530,000 square feet for a total full buildout of 1,130,000 square feet of industrial space. The impacts associated with each Phase have been provided in each applicable section of this Supplemental DGEIS. It should be noted that since Phase 1 includes site, utility and roadway infrastructure, these impacts are evaluated throughout all sections.

Other concept Site Plans are provided in Appendix C. However, the Project Sponsor has not identified a specific tenant, nor is a specific building or project being proposed, and instead 5 different concept plans are being provided in a generic nature for evaluation. The Proposed Concepts range in size from a 160,000 SF to 1.13 million SF of industrial space.

A potential new access road to River Road is proposed via an existing National Grid easement. Roadway and rail access from the north would require a bridge over the Normans Kill connecting to Port Road South. To provide adequate roadway and rail access, a small area (0.04 acres) to be

acquired from National Grid. The main truck access route to I-787 and I-90 would go through the APDC property or via South Port Road however, prohibiting northbound right hand turns. An additional access road for employees would be provided from the south via the proposed connection to River Road/Rt. 144. See Section 3.7 for detailed information on traffic and transportation impacts.

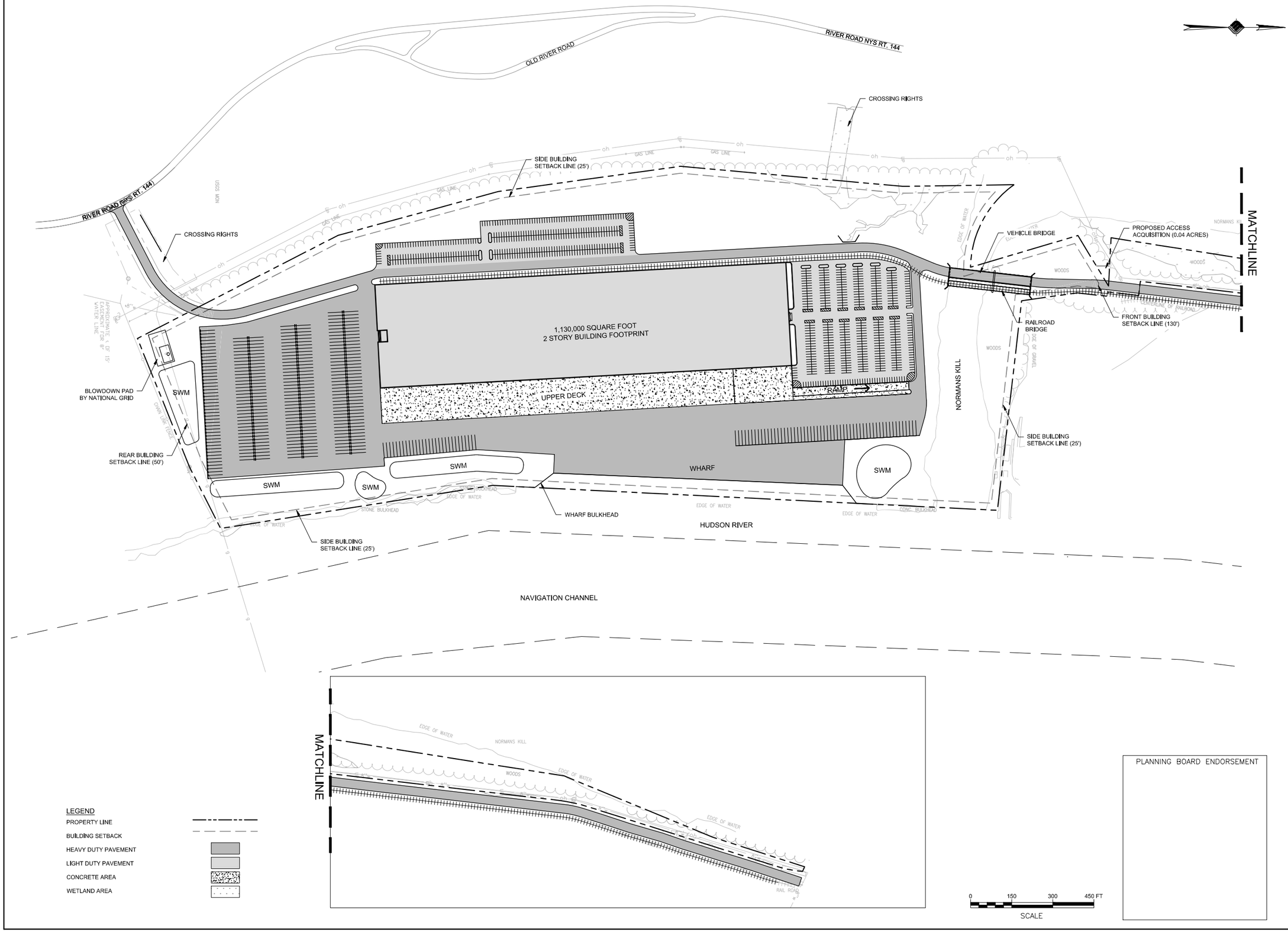
For SEQRA purposes, the Proposed APDC Port of Albany Expansion Project that represents full build out is being evaluated. This full build out represents the maximum amount of development permitted under current zoning, and therefore will represent the greatest potential for ecological and environmental impacts. This full build out is estimated to be a 1.13 million SF two-story Industrial use facility, with the associated access roads and bridge, employee parking, trailer parking, refurbished rail access from the north over Normans Kill, and a bulkhead/wharf along the Hudson River. The construction of the proposed wharf would require dredging of approximately 128,000 cubic yards of sediment along the shoreline of the Hudson River. The two-level warehouse maximizes the development potential of the Project Site and provides the basis for the SEQRA approval process along with the identified Project Site improvements. The existing zoning for the Project Site is Heavy Industrial and shall remain heavy industrial. The Project Site will be developed with uses that are permitted by right as listed in the Town Zoning code which include the following:

- Warehouse
- Manufacturing
- Assembly
- Industrial Park
- Distribution centers
- Packaging facilities
- Business office
- Commercial storage

This DGEIS includes a conceptual Site Plan detailing the layout of the elements of the Proposed Project, including the access roadways and bridge, buildings, parking, stormwater facilities, open space areas, etc. A map showing this concept plan for the Proposed Project is included within Appendix B.

The Port is a significant contributor to the economy of the region. Port operations include tenant functions supported by multi-modal transportation resources. The APDC invests in infrastructure upgrades to ensure their resources provide the maximum value for customers and tenants who choose to grow their business at the Port. The APDC management team currently oversees the maintenance of six marine warehouses and 300,000 SF of covered storage facilities. They service maritime equipment and terminal needs and maintain over 40 pieces of heavy equipment. This management team has the experience and ability to undertake and oversee the Port of Albany Expansion Project.

The APDC will continue to own the land and will enter into long-term ground leases with companies wishing to grow their respective businesses. APDC intends on extending the required infrastructure (road, bridge, and utility services) to the Project Site; however, all buildings would be privately constructed and owned to meet their specific requirements.



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	MAY 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPT A

DRAWING NUMBER
FIGURE 2.3-1

1 OF 1

This page intentionally left blank.

2.4. Purpose and Need for the Proposed Action

The APDC commissioned a market analysis of their business operations, completed in 2016 and updated in 2018. The updated report concluded that the market conditions continue to be positive for additional Port facilities. The report also identified market opportunities with power generation equipment, passenger rail cars, and grid repair equipment. These potential new markets would be in addition to their traditional grain handling, scrap metal, wood pulp, and paper product markets. This region, and specifically the Port, is a transportation hub offering multi-modal services to the growing need for warehouse and storage space. The strong market demand for services that the Port offers coupled with the fact that the Port occupies or leases 92 percent of their current property holdings, generates the purpose and need for this Proposed Project. In order for the Port to continue servicing the region and providing opportunities to business owners who need access to space and transportation options, the Port of Albany acquired the Project Site formerly known geographically as "Beacon Island".

The APDC mission is to generate economic development for the capital region. The specific benefits to the socio-economic condition of the area can be found in Section 3.17.

The Town of Bethlehem and Albany County hold the taxation jurisdiction for the Project Site. As mentioned, it is intended that APDC will retain ownership of the property and enter into long-term ground leases with each tenant who will own their respective building(s). As such, the Town of Bethlehem and Albany County would collect taxes on each building and tax revenue activities.

The Town of Bethlehem's Comprehensive Plan states the specific goals which include a balanced tax base, creation of a business-friendly environment, and the promotion of commercial and industrial growth in specifically designated locations. The plan identifies this Project Site (Beacon Island) as an area to be developed for industrial uses to provide a much-needed raise in tax base for the Town.

The purposes of the Proposed Project align with the Town of Bethlehem's desire to raise their tax base without burdening its school system. The Proposed Development meets the goals and desires of the Town's Comprehensive Plan and Zoning Ordinances.

The 81.62-acre Project Site is previously disturbed, undeveloped waterfront property that is close proximity to the existing Port of Albany operations. The APDC Port of Albany Expansion Project will provide existing industrial users within the Port of Albany or new users opportunities for additional space for their businesses. The Expansion Project will also allow for growth and expansion of waterfront industrial users and would be consistent with the current industrial uses located on the Port property and the lands along Port Road South, immediately north of the Project Site. Similarly, the PSEG Power Plant is located immediately south of the Project Site. The Project Site location allows users to benefit from maritime access as well as rail and vehicle access to the Project Site.

2.5. Construction Activities

At this time there is not a specific user identified for this Project Site. All construction, regardless of users, will be phased in order to break down disturbance of work into smaller, manageable

sections. Cut and fill from each phase would be handled and maintained on-site. Construction sequencing, along with stormwater management and erosion and sediment control plans would be developed for each phase and submitted to the Town for final approval. During phasing, the existing vegetation would be protected with construction fencing, and staging areas would be stabilized and maintained with wood chips, stone, or an approved alternative.

The Proposed Project could be constructed in one phase (the entire 1.13 million SF) or up to three phases. When broken into phases, the Proposed Project is assumed to be completed at 300,000 SF, 600,000 SF, and full build at 1,130,000 SF. Phase one is anticipated to include both access roadways, the vehicle bridge over Normans Kill, and the off-site water and on site wastewater infrastructure. The final bridge design will be in accordance with NYSDEC and USACE permitting requirements, including consideration of navigation requirements. Phase one on-site construction is anticipated to include grading and stormwater improvement facilities for the overall Project Site, as well as the parking and utility services associated with the 300,000 SF building.

Project Site ingress and egress during construction and for emergency response would be via the proposed southern Proposed Project driveway, connecting the Project Site to River Road, and South Port Road for the bridge construction. The southern access point will be established at the beginning of construction and designed to accommodate construction and emergency vehicles. The duration of construction for phase one is anticipated to be 12-14 months. The balance of the phases could take 6-9 months each.

Construction of paved areas, stormwater facilities, lawn areas, and buildings will result in an alteration of the existing ground and Project Site characteristics. Approximately 67 acres will be disturbed during construction. The Proposed Development will require fill material (e.g. driveway and parking crushed stone sub-base) to be imported to the Project Site to achieve structural integrity and proposed grades.

It is estimated that approximately 316,000 cubic yards (CY) of on-site soil will need to be moved to create a balanced earthwork for the Proposed Project. Bedrock was encountered along the southern driveway and therefore blasting maybe necessary to excavate the material to proper grade. From the total cubic yards to be moved, approximately 128,000 CY of material will be dredged from the Hudson River for the proposed wharf. We anticipate that approximately 5,600 CY of clean, suitable fill material will need to be imported to provide a 1-2 foot earthen cap over existing soils in proposed areas of lawn, including stormwater management areas. A soil management plan will be prepared and approved by the NYSDEC in accordance with 6 NYCRR Part 375-6.7(d).

During construction, erosion control measures such as silt fences, diversion swales/berms, and sediment traps/basins will be installed to mitigate the potential for erosion of soils and downstream siltation. All erosion and sediment control measures will be constructed in accordance with the latest edition of the New York State Standards and Specifications for Erosion and Sediment Controls. Particular attention and additional measures such as double lined silt fence, and installation of turbidity curtains will be used to protect the waters of the Normans Kill and Hudson River.

Common industry practices, such as the spraying of water to control dust, and confining construction work periods to those permitted by the Town, will further mitigate the normal unavoidable short-term impacts associated with construction such as dust and noise.

Construction activities will abide by the Town of Bethlehem's Town Code § 81-5 regarding construction noise and time. Construction hours will be limited to 6:00 am to 10:00 pm. Rock removal for the construction of driveways and utilities is expected. Blasting as a method of removing rock is not anticipated; however, if conditions are such that the contractor determines that blasting is a more efficient method of removal, the appropriate permits may be sought by the contractor.

This Proposed Project will be required to comply with the State Pollutant Discharge Elimination System (SPDES) Phase II General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002). As part of these requirements a Stormwater Pollution Prevention Plan (SWPPP) will be prepared describing erosion and sedimentation control measures. In accordance with 6 NYCRR Part 608.8, it is understood that the basis for the issuance of an Article 15 permit will be based on the determination that the proposal is in the public interest, in that:

(a) the proposal is reasonable and necessary;

(b) the proposal will not endanger the health, safety or welfare of the people of the State of New York;

(c) the proposal will not cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the State, including soil, forests, water, fish, shellfish, crustaceans and aquatic and land-related environment; and

(d) the Proposed Project will also comply with all required seasonal restrictions incorporated into future permits.

The Town of Bethlehem is an MS4 community and therefore this Proposed Project will comply with the NYSDEC Phase II stormwater regulations and will incorporate Best Management Practices (BMP's) to ensure that water quality on site will be protected. BMP's to be employed will, at a minimum, include:

- Silt fencing placed around construction areas prior to grading activities;
- Diversion channels to prevent runoff from leaving the Project Site;
- Land clearing activities shall be done only in areas where earthwork will be performed and shall progress as earthwork is needed;
- Permanent seeding and planting of all unpaved areas using the hydro-mulching grass seeding technique;
- Mulching exposed areas, where specified;
- Temporary seeding and planting of unpaved areas using the hydro-mulching grass seeding technique within 14 days of disturbance;
- Frequent watering on exposed surfaces to minimize wind erosion during construction; and
- Rock check dams, as necessary.

A request to disturb more than five (5) acres at a time will be submitted to the Town of Bethlehem DPW for review and approval. To obtain the five acres waiver, at least two site inspections will need to be performed during construction, by a qualified professional, every seven days, for as long as the disturbed area exceeds five acres. This increased frequency of inspection will ensure that the erosion and sediment control facilities are functioning as designed and that there are no additional impacts to wetlands or the waters of the U.S during construction activities.

2.6. Required Approvals

The Proposed Project will require federal, state, and local agency permits and board actions. Implementation of the Proposed Project involves several approvals including the following:

1. Coordinated SEQRA review by the Town of Bethlehem Planning Board (Lead Agency), as the action is considered to be a "Type I" action.
2. Site Plan review and approval by the Town of Bethlehem Planning Board.
3. Bethlehem Town Board approval for the extension of the existing water districts to cover the Project Site.
4. New York State Department of Environmental Conservation and Albany County Department of Health approvals for extension of the water mains to the Project Site.
5. New York State Department of Transportation review and approval of the Traffic Impact Study.
6. Town of Bethlehem work permits for connection to the Town water main.
7. Town of Bethlehem (MS4) approval and acceptance of the Stormwater Pollution Prevention Plan (SWPPP), which is to be prepared in compliance with the NYSDEC General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002), as well as approval for disturbing more than five (5) acres of land at one time.

The following review agencies may be included in the necessary Proposed Project review process:

1. Town of Bethlehem Planning Board
    a. SEQRA Review - Lead Agency
    b. Site Plan review/approval
2. Town of Bethlehem Town Board
    a. SEQRA Review - Involved Agency
    b. Extension of water districts to the Proposed Project.
    c. Acceptance of dedication of new water mains, as necessary.
3. Town of Bethlehem Department of Public Works
    a. Permits for water service connections
    b. MS4 SWPPP Acceptance Form
    c. 5-acre Disturbance Waiver Request
4. Town of Bethlehem Floodplain Administrator
    a. Development Permit for construction within a FEMA regulated floodplain per Town Code
5. Town of Bethlehem Zoning Board of Appeals

   a. Review and grant building height variance
6. Albany County Planning Board
   a. SEQRA review - Interested Agency
   b. State 239 M and N referral
7. Albany County Health Department
   a. SEQRA review - Involved Agency
   b. Approval of water main extensions
8. New York State Department of Environmental Conservation
   a. SEQRA Review - Involved Agency
   b. Protection of Waters permit approval for proposed shoreline features
   c. General Permit for Stormwater Discharges
   d. Approval of water district extensions
   e. Article 15 Protection of Waters Permit
   f. Section 401 Water Quality Certification
   g. Protection of Waters Permits (for Hudson River work and the proposed bridge over the Normans Kill)
   h. Water Quality Certification
   i. Approval of the cap over the remediations area/site
   j. Water district extensions/approvals
   k. Town Water District extension and subsequent water supply application
9. New York State Department of Transportation
   a. SEQRA Review - Involved Agency
   b. Approval of Traffic Impact Study
10. New York State Office of Parks, Recreation and Historic Preservation
   a. SEQRA Review - Involved Agency
   b. Sign-off on Archaeological and Historic Impacts
      i. Received "Letter of No Adverse Effect" – Dated March 14, 2019
11. U. S. Army Corps of Engineers
   a. Section 404 Permit
   b. Section 10 Permit

2.7. Purpose and Process of SEQRA

By way of background, a comprehensive Draft Generic Environmental Impact Statement (DGEIS) was prepared for the proposed Port expansion project that address the cumulative effects on the environment for the entire project. The DGEIS was determined acceptable for public comment by the Town of Bethlehem Planning Board (the Town), acting as Lead Agency, on August 6, 2019. A public hearing was held on September 3, 2019, and the public comment period ended on September 14, 2019.

This Supplemental Draft Generic Environmental Impact Statement (SDGEIS) is prepared to augment the DGEIS for the specific purposes of addressing any potential environmental impact the Proposed Project may have on the Ezra Prentice community. This SDGEIS includes the DGEIS by reference, including all verbal and written comments received during the public hearing and throughout the comment period. The main purpose of this SDGEIS is to implement the public

participation plan for the Ezra Prentice community and to respond to all substantive comments. The final step in the SEQRA process is the adoption of a SEQRA Findings Statement by the Lead Agency.

According to SEQRA, a Generic Impact Statement can be used to assess the environmental effects of a sequence of actions, contemplated by a single agency or project sponsor. As mentioned in the DGEIS this project has no specific building or project being proposed. As a result, subsequent site plan review for each specific Proposed Project will be required by the lead agent, to ensure that the specific project complies with the environmental thresholds and mitigation measures established by this Generic SEQRA process. This Supplemental Draft Generic Environmental Impact Statement was prepared in compliance with Article 7 of the New York Environmental Conservation law, the State Environmental Quality Review Act (SEQRA), and the implementing regulations of the New York State Department of Environmental Conservation (6NYCRR Part 617). The Supplemental Draft Generic Environmental Impact Statement was completed on behalf of the APDC as requested by the Town of Bethlehem Planning Board.

Article 8 of the New York State Environmental Conservation Law requires that an Environmental Review is conducted for any action that may have a significant impact on the environment. This statute and the New York State Department of Environmental Conservation implementing regulations provide the procedures for compliance with SEQRA. They are intended to incorporate the considerations of the environmental factors into the planning, review, and decision-making processes of agencies at the earliest feasible time.

The Proposed Action is a Type I Action as it exceeds the following thresholds listed at 6 NYCRR 617.4(b)(6) for the construction of a non-residential facility that includes the:

1. Physical alteration of 10 acres (i);
2. Parking for 1,000 vehicles (iii); and,
3. More than 100,000 SF of gross floor area in a town having a population of 150,000 persons or less (iv).

According to SEQRA, a Supplemental DGEIS can be used to assess the environmental effects of a sequence of actions, contemplated by a single agency or Project Sponsor. As mentioned, this Proposed Project has no specific building or project being proposed. Therefore, this Supplemental Draft Generic Environmental Impact Statement will address the generic impacts of the Proposed Project on the Ezra Prentice community in general and conceptual terms, and the cumulative effects on the Ezra Prentice community for all phases of the total Proposed Project. As a result, subsequent Site Plan review for each specific Proposed Project will be required by the lead agent, to ensure that the specific Proposed Project complies with the environmental thresholds and mitigation measures identified by this Supplemental Draft Generic Environmental Impact Statement.

The purpose of this Supplemental DGEIS is to serve as a guide to demonstrate that the Proposed Project is in compliance with SEQRA regulations and specifically address potential impacts to the Ezra Prentice community and can be used as needed for preparing a findings statement and establishing a SEQRA determination.

The step by step SEQRA process can be found on the NYSEDC website (https://www.dec.ny.gov/permits/6189.html). The total timeframe to complete the supplemental DGEIS process is anticipated to be approximately 2 months.

The summary of process steps for the Proposed Project are as follows:

- Preparation of EAF: October 22, 2018
- Establish Lead Agency: December 4, 2018
- Determine Significance: January 15, 2019
- Public Scoping Session: March 19, 2019
- End of Comment Period for Scoping: March 26, 2019
- Scoping Adopted: April 2, 2019
- Completion and Acceptance of DGEIS: August 6, 2019
- Public Hearing on DGEIS: September 3, 2019
- Public Review and Comment Period End: September 14, 2019
- Determine Ezra Prentice Significance: November 19, 2019
- Completion and Acceptance of Supplemental DGEIS: December 17, 2019

3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

The Town of Bethlehem Planning Board determined the potential environmental issues specifically related to the Ezra Prentice community that would be addressed by APDC during the preparation of this SDGEIS. This document is intended to act as a means of identification of all potentially significant adverse impacts the Proposed Project may have only on the Ezra Prentice community, and the necessary and appropriate mitigation measures. The document is also intended to eliminate consideration of any impacts that are irrelevant or determined to be not significant relating to the Ezra Prentice community.

As such, the previous completed DGEIS addressed a comprehensive list of environmental issues from which a portion were determined by the Planning Board to not relate to the Ezra Prentice community, and therefore are not specifically addressed in this SDGEIS. As a result, the following represents a discussion of the relevant environmental issues determined as having a potential impact on Ezra Prentice community. As mentioned, the previous DGEIS is incorporated by refence, and as such, from a consistency stand point, this SDGEIS follows the same outline format and section numbers as the previous DGEIS and is not in numerical order.

All sections not discussed within this SDGEIS can be reviewed in the DGEIS.

3.6. Climate and Air Quality

3.6.1. Environmental Setting

The Project Site is 81.62 acres of vacant land located in the northeastern portion of the Town of Bethlehem along the Hudson River and currently zoned as heavy industrial. The neighboring land uses to the north and south are also zoned heavy industrial, with the existing Port of Albany facility including multiple warehouses, wharf, and other industrial uses to the north and the Public Service Enterprise Group Power New York Power Plant (PSEG) site to the south. An abandoned railroad track borders the Project Site to the west. The Project Site is located approximately 1.7 miles southeast of the Ezra Prentice community which is located in the City of Albany.

Climate change is a global phenomenon that has been attributed to increasing concentrations of greenhouse gases (GHGs) in the atmosphere. GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Under 6 NYCRR §617.9(b)(5)(iii)(i), the NYSDEC SEQR rules, a DGEIS should specify and discuss "measures to avoid or reduce both an action's environmental impacts and vulnerability from the effects of climate change such as sea level rise and flooding." Sea level rise and flooding are discussed in the **DGEIS Section 3.4- Floodplains and Floodways**. The majority of the Project Site and surrounding area is located in the 100-year floodplain.

Under the Clean Air Act Amendments of 1990 (CAA), the United States Environmental Protection Agency (EPA) monitors the nation's ambient air quality parameters as detailed in the National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The EPA specify NAAQS for six "criteria" air pollutants, which include ozone (O_3), nitrogen dioxide (NO_2), lead (Pb), particulate matter ($PM_{2.5}$ and PM_{10}), and sulfur dioxide (SO_2). Ambient air monitoring stations located throughout New York State, monitor certain pollutants as part of the EPA monitoring network. Areas that do not exceed the NAAQS are designated attainment and areas that do exceed are designated nonattainment. The Project Site and the Ezra Prentice community are both located in Albany County, which is classified as an attainment area for all NAAQS pollutants.

As required by the EPA, the NYSDEC operates an ambient air monitoring network for numerous pollutants throughout the state overseen by the Bureau of Air Quality Surveillance. The data from each monitoring station is recorded and summarized in the *New York State Air Quality Report, Air Monitoring System.* The EPA establishes what pollutants are required to be monitored at different locations based on the characteristics of each region. A monitoring station located approximately 10 miles from the site, in Loudonville, Albany County, monitors carbon monoxide, inhalable particulates ($PM_{2.5}$), ozone, and sulfur dioxide. The last five years of data (2014-2018) were reviewed. The 2018 *New York State Ambient Air Quality Report*, as part of the New York State Ambient Air Monitoring Program, has air quality data for three (3) sites within the NYSDEC Region 4 study which include Loudonville, Albany, and South Albany. The Loudonville site measures sulfur dioxide, inhalable particles ($PM_{2.5}$), carbon monoxide, and ozone. The Albany County HD measures inhalable particulates ($PM_{2.5}$) and there are no reported results for the South Albany site. Since the Loudonville site had four air toxin measurements available within the latest report, the Loudonville site monitor was discussed as the nearest representative site for the NYSDEC ambient air monitoring network.

According to the NYSDEC *New York State Ambient Air Quality Report for 2018*, the Loudonville station was in compliance with the New York State and NAAQS for all four pollutants monitored for the following: carbon monoxide one-hour and eight-hour averages, the ozone eight-hour averages, the $PM_{2.5}$ 3-year average of the 98th percentile and average annual means, and the sulfur dioxide 3-year average of the 99th percentile of the yearly distribution of 1-hour daily maximum concentrations. The Loudonville monitoring station did not have any noncompliance over the past five years.

In addition to ambient air monitoring required by the EPA, the NYSDEC has an Albany South End Neighborhood Air Quality Initiative started after residents expressed concern about air quality in their neighborhood. The South End neighborhood and study area is immediately north of the Project Site in the vicinity of the Ezra Prentice neighborhood. The area's air is impacted by trucks, trains, marine vessels, cargo handling equipment, oil and gas storage, and industrial activities including petroleum product handling. More information on the initiative can be found at https://www.dec.ny.gov/chemical/108978.html. Reports, presentations, and information provided by the NYSDEC on the Albany South End air monitoring include:

- *Albany South End Community Air Quality Screening*, August 14, 2014
  - https://www.dec.ny.gov/docs/air_pdf/albsouthendrpt.pdf
  - Analyzed VOCs, light weight alkanes
- *Albany South End – Benzene Results* webpage
  - https://www.dec.ny.gov/chemical/107858.html
  - Discusses Benzene annual averages 2000-2017
- *Odors & Hydrogen Sulfide* webpage
  - https://www.dec.ny.gov/chemical/108989.html
  - Discusses reviewing sources for odors including hydrogen sulfide with 2015 - 2017 data
- *DEC's Air Toxics Monitor – Albany South End* webpage
  - https://www.dec.ny.gov/chemical/108991.html
  - Discusses air toxics and risk in perspective of air monitoring from 2015 - 2017
- *South End Study Progress Update* presentation, January 10 and 18, 2018
  - https://www.dec.ny.gov/docs/air_pdf/albsouthend011018.pdf
  - Update on air monitoring completed to date. Discussion of particulate matter from vehicles vs Port and benzene sampling
- *Albany South End Community Air Quality Study*, October 2019
  - https://www.dec.ny.gov/docs/air_pdf/albanysouthendreport.pdf
  - Discusses results of monitoring including large particulate matter, fine particulate matter, black carbon, ultrafine particles, and gases including nitrogen dioxide and benzene

The Albany South End Community Air Quality Screening (August 2014) was an air screening plan created for the neighborhood to evaluate the level of air contaminants in the community and the potential sources. The NYSDEC and the community selected three monitoring locations to represent the South End neighborhood: the Ezra Prentice playground, corner of Gansevoort and Franklin, and Krank Park. Samples were collected and analyzed for VOCs with a focus on benzene. The samples showed no unusual results in the air quality within the Albany South End. Specifically, benzene levels were found to be lower than state averages. Following the study, the NYSDEC

would monitor formaldehyde and hydrogen sulfide based on community requests. Results for the formaldehyde and hydrogen sulfide monitoring is included under *Odors & Hydrogen Sulfide* below.

The *Albany South End – Benzene Results* webpage provides information on benzene results in the Albany South End from 2000-2017. This analysis showed that benzene levels found in the Albany South End are consistent with monitoring results throughout the state, and concluded that all monitors, even rural locations such as at Whiteface Mountain and Pinnacle State Park, are above annual guideline concentration (AGC). The NYSDEC goes on to emphasize that the guideline concentrations are "not bright lines between air concentrations that cause health effects and those that do not".

The *Odors & Hydrogen Sulfide* webpage details how the NYSDEC conducted screening to evaluate sources of odors in the existing Port of Albany property, specifically hydrogen sulfide which is a common odorous chemical related to industrial activities in the Port. During the study, of 80,000 ten-minute observations, only 172 observations (0.22%) were above instrument detection limits for hydrogen sulfide. All measurements that were above the NYSDEC's one hour standard for hydrogen sulfide were from the location near Buckeye Terminal.

The *DEC's Air Toxics Monitor – Albany South End* webpage reviews what air toxics have been monitored in the Albany South End neighborhood from 2015 to 2017. Samples were collected and analyzed for VOCs (including benzene) and carbonyls (such as formaldehyde). The NYSDEC focused on results for air toxics released from burning petroleum fuels in vehicles, space heating, and transport and movement of gasoline and crude oil. The NYSDEC results reported that concentrations in Albany South End are similar to average found at other monitors in the State's network for 2017. From the 2017 results, all air toxins, including benzene, were characterized as low risk, with an exception of formaldehyde being classified as a moderate risk.

In an effort to keep the community informed of the air monitoring being completed, the NYSDEC held the *South End Study Progress Update* presentation in January 2018. The presentation discusses the NYSDEC's goal to evaluate the difference of particulate matter coming from motor vehicles vs the Port activities and the level of benzene coming from the Port vs vehicular traffic. The monitoring included the installation of fixed monitors at Ezra Prentice community and Third Avenue near Hawk Street as well as portable instruments. Results show short spikes of particulate matter ($PM_{2.5}$) at Ezra Prentice are likely due to nearby sources such as trucks on South Pearl Street related to existing weekday traffic. The Ezra Prentice monitor is located 20 yards from South Pearl Street meeting EPA recommendations for near road locations. It is concluded that vehicular emissions on South Pearl Street strongly influence the air quality at Ezra Prentice. The presentation noted that other vehicle related pollutants are lower at Ezra Prentice than at most of the EPA near road sites. PM_{10} levels could be considered a nuisance for residents in the area and could be reduced with frequent street cleaning, paving gravel roads, and covering truck loads and securing tailgates. High emitters are the largest contributor to traffic-related air pollution at Ezra Prentice. Approximately 10% of vehicles contribute to the highest 25% of the total concentration.

The presentation further elaborated on the benzene results collected from 34 months of benzene data collection, from March 2015 to December 2017. The study included over 100 sample locations from a large area as far south as Glenmont, as far north as central Albany, as far East as

Highway 87, and as far west as Hampton Manor. At the time of the presentation in January 2018, they had collected fall "warm weather" samples, and were currently collecting cold weather samples. Readings from residential sites collected during the Fall "warm months" ranged in concentration from 0.12 to 0.30 ppb and all sites ranged from 0.10 to 0.32 ppb with the exception of 3 samples that were higher than 0.50 ppb collected near an industrial area.

Most recently, the NYSDEC Division of Air Resources released the *Albany South End Community Air Quality Study* on Monday October 21, 2019. The NYSDEC report aimed to evaluate particulate matter emissions from vehicular traffic compared to existing port activities, understand the distance particulate matter travels from the road to the surrounding neighborhood, determine how benzene concentrations in the area are related to port and vehicle activities, and create methods for the community to understand air quality as it relates to health concerns.

The study included fixed monitoring points at Ezra Prentice, on Third Avenue, at the Albany County Health Department (ACHD), and at a site called the South Albany monitor as shown within the *Albany South End Community Air Quality Study* report as Figure 2. The monitors measured large particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), black carbon (BC), ultrafine particles (UFPs), and gases including nitrogen dioxide (NO_2) and benzene. In addition to the fixed monitoring points, the study utilized portable instruments to measure UFP and BC as related to traffic-related air pollution (TRAP). In connection with the air monitoring efforts, the NYSDOT recorded an average of 9,086 vehicles where 960 of those vehicles were larger trucks as part of the study.

Monitoring showed that large and fine particulate matter concentrations were higher at Ezra Prentice than at the ACHD or Third Avenue (note particulate matter was not measured at South Albany site). The NYSDEC concluded this was due to the higher volume of truck traffic that goes through Ezra Prentice and concluded that there was therefore more particulate matter coming from motor vehicles than existing port activities. In addition, the report determined that TRAP (UFP and BC) measured at the Ezra Prentice community site are higher than the rest of the South End due to High Emitting Vehicles (HEVs) from vehicles including public busses and large trucks. Less than 10% of all vehicles contribute to more than 25% of the total TRAP.

Portable monitoring at Ezra Prentice showed UFP and BC peaks that were characteristic of high-emitting vehicles along South Pearl Street near Ezra Prentice. DEC reported that it is unlikely that the measured peaks are from trains or marine vessels which move slower and less frequently. Monitors close to the train tracks did not report repeated peak measurements compared to the results from the monitors adjacent to the roadway. The NYSDEC therefore concluded that particulate emissions from locomotives and port shipping transport are minimal compared to local traffic.

The study evaluated the sources of benzene, with a specific focus on areas located downwind of petroleum storage and distribution facilities, and they were found to have a higher and more variable concentration of benzene. Lower and more consistent levels were measured in residential areas.

Based on the results of the October 2019 *Albany South End Community Air Quality Study,* the NYSDEC determined the following actions to reduce air pollution and exposure to those in the Albany South End which includes the Ezra Prentice community:

1. Provide funding and other resources for clean trucks throughout New York State, with a focus on environmental justice communities such as the South End.
2. The NYSDEC will conduct enforcement checks and impose fines on trucks with high emissions on South Pearl Street.
3. The NYSDEC will conduct frequent leak detection inspection on petroleum handling facilities.
4. NYSDOT has reclassified four (4) roads within the Port of Albany to create a potential rerouted route for trucks away from Ezra Prentice community.
5. The NYSDOT will provide technical support to the City of Albany to continue assessment of South Pearl Street and provide potential alternative routes for truck traffic.
6. The Mayor's Office is coordinating voluntary rerouting with commercial entities near the South End.
7. The City of Albany Department of General Services (DGS) will prohibit vehicle trips from South Pearl Street other than scheduled solid waste pickup and street cleaning. DGS will clean the street daily to reduce particle resuspension.
8. The NYSDEC will continue to monitor traffic related pollutants at Ezra Prentice.
9. The Albany Housing Authority (AHA) will minimize indoor exposure to traffic pollutants by providing professionally installed air conditioners and will evaluate other strategies for reducing pollution from entering the apartments.
10. The NYSDEC, Mayor's Office, and AHA will have a workgroup to develop mitigation methods and ensure implementation.

3.6.2. Potential Impacts

Operation of the Site will likely include the use of fleet vehicles, fleet equipment (such as fork lifts), employee, supplier, maritime vehicles, user vehicles, and generators. As discussed in Section 3.7 – Traffic and Transportation, trucks will travel through the existing City Streets through the Port property or through South Port Road with the addition of prohibiting exiting (westbound) right hand turns, and therefore would not affect the Ezra Prentice community. The recommended truck route is shown in Figure 3.7-2.

The Proposed Project may also include the use of rail cars for deliveries, shipments, and overall movement to and from the site including product deliveries. These activities are not anticipated to affect the air quality by adding significant direct or indirect emissions. As discussed in Section 3.7- Traffic and Transportation, the Proposed Project could add up to 4-5 rail cars per day and up to 2 trains per month. The additional 1-2 trains per month is a slight increase to the 30-35 trains that already pass through the area; and therefore, they do not pose a significant environmental impact to the area. The Proposed Project would have no significant impact on the existing air quality from rail traffic.

The effect of automobile traffic operations on air quality was assessed using NYSDEC publication Air Guide-23, "Indirect Sources of Air Contamination," dated June 29, 1989. This publication contains a three-level process for evaluating air quality impacts. If the criteria set

forth in the first level (Level I) are violated, then a second level (Level II) is required. If the criteria set forth in the second level are violated, then a third level is required. Each air quality evaluation level is more detailed and sophisticated than the previous level. The results of the air quality evaluation demonstrate if the proposed development may cause violation of State or Federal NAAQS.

The Air Guide-23 Level I analysis guidelines state that all major intersections located within a distance of up to one mile from the project and influenced by at least 50 peak-hour vehicles of site-generated traffic should be considered for analysis, and that Level I analysis on Air Guide-23 requires no further air quality evaluation if overall levels of service (LOS) at major intersections within one mile of the proposed development are C or better. As stated in the Traffic Impact Study, all intersections analyzed for this project will operate at an overall levels of service (LOS) of C or better after this project is fully operational with mitigation. See **Section 3.7- Traffic and Transportation** for further discussion on traffic impacts and mitigation measures.

Using the NYSDEC's *Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements* standards there will be direct and indirect GHG emissions including construction equipment, fleet vehicles, heaters, and other construction machinery during construction. Indirect GHG emissions during construction will include manufacture and transport of construction materials, employee vehicle commutes, energy generated for the project work, and waste generation from construction activities. Indirect GHG emissions for deliveries would potentially include rail cars, marine vessels and maritime uses, and vehicular emissions.

It is not anticipated that the future use of the Site would release odors in any rate different than the existing Port operations as discussed in the NYSDEC *Odors & Hydrogen Sulfide* webpage. The Project Site will have vehicles on-site for employees, deliveries, and potentially fleet vehicles and equipment that could release odors from vehicle emissions. Potential manufacturing uses of the Project Site have not yet been determined; however, there is a potential that on-site operations could involve the use of an indoor spray paint booth. The Spray paint booth would have an exhaust that could release odors and would require an air permit in accordance with 6 NYCRR Part 201. The Tenant would complete and maintain the proper air permit during operations of the spray booth. The spray booth will be located more than 1.5 miles from the Ezra Prentice community; any odors associated with spray booths will dissipate and not reach the community.

Construction Impacts

Short-term impacts to air quality would occur within and in the vicinity of the Project Site during construction. Airborne particulates will increase as dust is raised by construction vehicles in motion. The site construction activities would also potentially result in temporary odors associated with construction activities. Construction odors could potentially include exhaust fumes from construction vehicles and equipment. As discussed in **Section 3.7 – Traffic and Transportation**, all trucks including construction vehicles will travel on the existing City Streets through the Port property or via South Port Road by prohibiting exiting

(westbound) right hand turns, and therefore would not affect the Ezra Prentice community. The recommended truck route is shown in Figure 3.7-2.

Odors and airborne particulates associated with construction are considered temporary and would cease upon completion of construction of the Project Site.

3.6.3. Mitigation Measures

Since initial application, the Proposed Project's mitigation measures related to potential traffic, climate and air impacts include the establishment of a truck route that will utilize the existing Port roadway system. In addition, the project will require that truck traffic ingress and egress travel through the existing Port to the Church Street entrance to the Port of Albany or via the South Port Road with the addition of prohibiting exiting (westbound) right hand turns. There will be no added truck traffic to South Pearl Street through Ezra Prentice community as a result of this project. Therefore, the project will not adversely impact the Ezra Prentice community via truck traffic. The recommended truck route is shown in Figure 3.7-2. Enforcement measures include that the APDC intends on adding a truck route clause in each tenant's lease as well as installing a surveillance camera near the intersection of South Port Road and Port Road.

The proposed Port of Albany Project will not significantly increase rail traffic and therefore will have no significant impacts associated with the air quality in the vicinity of the Project Site or Ezra Prentice community. It must be noted again, that the NYSDEC *Albany South End Community Air Quality Study* concluded that particulate emissions from locomotives transport are minimal compared to local traffic.

The project will meet and comply with the action items detailed in the NYSDEC's *Albany South End Community Air Quality Study*. The Project will not be in opposition to any action items detailed in the report, and will be in conformance with the following:

- The Port is actively working with the NYSDOT to reclassify roads within the Port of Albany to create a new route for truck traffic, and
- The Project is voluntarily routing trucks and commercial entities near the south end through the Port or via South Port Road by prohibiting exiting (westbound) right hand turns, to alleviate truck traffic on South Pearl Street through the Ezra Prentice community.

In addition, tenants will be encouraged to promote green vehicle purchases and not allow truck idling to prevent over exhaust. The tenant(s) will be encouraged to use the following mitigation measures on-site:

- High efficiency HVAC
- LEED Certification
- Local building materials if available
- Recycling program
- Insulation to minimize heat loss
- Window glazing
- Use of public transportation, including rail and river access
- Conservation of natural areas, including shoreline and wetlands

Odor releases from the site are unlikely; however, additional potential odor mitigation could also include vegetative buffers between the property and adjacent properties.

Any air emissions from potential future manufacturing activities are regulated by the NYSDEC and the USEPA. The NYSDEC requires that entities operating within New York obtain air permits prior to constructing or operating a source of air emissions, unless the activity or source of emissions has been specifically exempted. All sources of air emissions are either exempt or regulated under one of three (3) permitting criteria, as follows:

- Title V Facility Permit;
- State Facility Permit; and
- Air Facility Registration.

It should be noted that the actual permitting requirements will be determined at the time a specific tenant and use is identified during the site plan approval process. All required air emission permits will be obtained by the operator of the facility.

Construction

Construction activities will result in air emissions and odor impacts at the Project Site. Construction impacts are temporary and short-term and would only occur during the extent of construction, estimated to be a maximum of 12-14 months at any time. Construction impacts will be mitigated by dust suppression techniques including spray of water on dry materials and soils. Air monitoring will be conducted at the perimeter of the property. In addition, a Community Air Monitoring Plan (CAMP) will be completed prior to construction.

3.7. Traffic and Transportation

A Traffic Impact Study (TIS) was performed for the Proposed Project and is included in **Appendix D**. The TIS reviewed potential traffic impacts resulting from a single 1,130,000 SF, two-level warehouse/industrial facility with associated internal driveways and parking areas. In addition, since the project could be built in phases, the TIS analyzed three-phases of development, with Phase I consisting of 300,000 SF of building space, Phase II consisting of 600,000 SF and Phase III representing the Full Build scenario of 1,130,000 SF. Two access points to the site were considered in the study. A 2-lane entrance driveway to the site from River Road for employees and car traffic as well as car/truck and rail access from the north via South Port Road with two proposed bridges (one vehicle and one rail) crossing the Normans Kill.

Scope of the Traffic and Transportation Study

The purpose of the TIS is to evaluate existing and worst-case scenario future traffic and transportation operations within the study area. The analysis completed by MJ evaluated traffic operations within the Study Area during weekday morning and evening peak hours for 2019 Existing Conditions as well as the 2029 Build and Background Conditions.

Build Conditions were analyzed to evaluate the impacts, if any, associated with the proposed development. Based on the project scoping process completed with the Town of Bethlehem Planning Board, the New York State Department of Transportation and input from the public, the traffic study area includes the following intersections. However, the two bolded intersections are adjacent to the Ezra Prentice community and is the focus of this Supplemental DGEIS:

- **NYS Route 32 (South Pearl St.) at First Avenue/I-787 Exit 2 Ramp (Signalized)**
- NYS Route 32 at US Route 9W (Signalized)
- **NYS Route 32 (South Pearl St.) at South Port Road (Signalized)**
- NYS Route 144 at I-87 Exit 22 Ramp (Un-Signalized)
- NYS Route 144 at Glenmont Road (Un-Signalized)
- NYS Route 144 at NYS Route 32 (Un-Signalized)
- Church Street at Broadway (Un-signalized)
- Glenmont/Feura Bush Road at US Route 9W (Signalized)
- Clapper Road at NYS Route 144 (Un-signalized)
- I-787/I-87 Exit 23 Interchange at US Route 9W (Signalized)
- Wemple Road at NYS Route 144 (Unsignalized)

South Pearl Street runs through the Ezra Prentice community and is the source of potential traffic and transportation impacts associated with the Proposed Project. In the Ezra Prentice community area, South Pearl Street is a two lane, city-owned and maintained urban minor arterial (NYS Route 32) providing north-south access from the City of Albany to land parcels along the west side of the Hudson River. Land use immediately south and east of the Ezra Prentice community is industrial; while there is a mix of residential and commercial/retail/light industrial uses to the north. Based on NYSDOT traffic data collected in 2016, there is an average daily traffic volume of approximately 9,300 vehicles (3,800 NB, 5,500 SB). Northbound heavy vehicle volume is 15.2% of ADT, 4.1% of which are tractor trailers, while southbound heavy vehicle volume is 14.3% of ADT, 4.6% of which are tractor trailers. Within the Ezra Prentice community, curb to curb pavement width is 40 feet

with 20 foot wide lane widths to accommodate a single shared vehicle/bicycle travel lane and unstriped on-street parking. There is a concrete sidewalk that varies in width on both sides of the road and a mix of sidewalk with and without a tree lawn strip. There are six striped crosswalks crossing South Pearl Street within the Ezra Prentice community. The South End Bikeway Connector is currently under construction which will install a divided cycle track on the east side of the roadway corridor in place of the existing on-street parking and is described further in the pedestrian and bicycle section. The posted speed limit is 30 mph with an 85th percentile speed of 36 mph between the Ezra Prentice community and South Port Road.

3.7.1. Vehicle

Traffic Data Collection

Existing traffic volumes for the study area intersections were evaluated for this project by performing manual turning movement counts (TMC). Traffic counts were video recorded from 7:00 to 9:00 AM and 4:00 to 6:00 PM on Tuesday, February 5, 2019. Additional data was recorded during the same time frames on Tuesday, February 26, 2019. The counting timeframes were based on the peak traffic periods for intersections in the area. The TMC data shows that the weekday traffic peaks within the study area range between 7:00 and 8:30 AM in the morning while the evening traffic peak range was between 4:15 and 5:45 PM. These volumes were used to compute the 2019 Existing Conditions for the traffic study and the TMC summary data sheets are included in Appendix A of the TIS.

2019 Existing Traffic Volumes

The 2019 traffic volumes in the study area were established, verified for accuracy, and were seasonally adjusted. The study area for this proposed development is classified as urban and a factor of 0.944 was used to adjust the data collected in February to represent an average day for both the AM and PM peak hours, resulting in a 6% increase in the counted traffic. Traffic data collected in August, September and October was not seasonally adjusted. Available historic count data from NYSDOT and previously completed traffic studies in the area were reviewed to confirm that this seasonal adjustment was appropriate.

No Build Conditions

The 2019 existing traffic volumes were increased by an annual background growth rate of 0.5% per year for a total growth of 5.0% to create the 2029 Background traffic volumes. The growth rate was established by regression analysis and comparing average annual daily traffic data published by NYSDOT for various years within the project study area. This analysis showed that the area's traffic volumes have been relatively flat with 0-0.5% annual growth over the past 10-15 years; therefore, a 0.5% annual growth rate was applied that would accurately model future traffic in the area. The regression analysis calculations are included in Appendix B of the TIS and the background growth rate was approved the NYSDOT. The Capital District Transportation Committee (CDTC) was contacted and the CDTC STEP Model outputs for the study corridors for the 2029 background year were provided, which ranged from 0.6% to 1.2% for the roadways in the study area. When accounting for the fact that specific background developments were also

added to the TIS background conditions, the 0.5% growth rate is consistent with the CDTC STEP model results.

The Town of Bethlehem and NYSDOT were contacted to determine if additional background traffic from other developments and/or roadway projects within the study area currently under review or recently approved should be included in the study. The town noted the following potential future developments in the area: the Gateway Commerce Center, the Beacon Heights Senior Community, a convenience store/gas station to be built at 194 River Road, the Wiggand/Grady Conservation Subdivision, Kenwood Commons along Route 9W, and a commercial shopping plaza across from the NYS Thruway Authority Building. Of these, only the Gateway Commerce Center has had a traffic study completed and received site plan approval from the town. As such, the 2029 Background traffic volumes include existing traffic data, the proposed traffic volumes from the Gateway Commerce Center and annual background traffic growth. These background traffic volumes are used as a base upon which to add the proposed development's traffic.

Trip Distribution

The projected trip distribution model for this Proposed Project was established for all vehicles based on distributions from the existing Port of Albany site and taking into consideration the proposed new southern driveway onto NYS Route 144. This distribution was reviewed by the Town's Consultant Engineer, MJ Engineering and Land Surveying, P.C., and with the previous study completed for the site (Beacon Harbor TIS 2009) to compare the proposed traffic distributions, which were relatively consistent. CDTC was also provided the TIS and did not provide any comments on the proposed traffic distributions. As a result, these trip distribution percentages were used to assign the trips generated by the Proposed Project.

Trip Generation

The proposed development is scheduled to be completed by 2029 over three phases. For analysis purposes, site generated traffic was based on the current Port of Albany's traffic generation. A traffic generation rate was calculated for the existing port on a peak hour trip per building square foot basis. The number of vehicles entering/exiting the Port driveways from the TMC data during the peak hour was used to develop the existing site's trip generation rate. This site-specific rate was applied to the proposed build-out of the site for the Phase I, II and III scenarios. The proposed trip generation volumes are comparable to the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition established rates for an Industrial Park land use, at 463 morning and 452 evening trips, higher than the Warehousing land use, at 249 morning and 271 evening trips, and less than the Manufacturing land use, at 915 morning and 893 evening trips. Therefore, utilizing the current traffic generation for the Port of Albany is the most accurate representation of proposed land use and potential tenants for the new development site. Based on the nature of the development no multi-use trips or pass-by trips were assumed in this study as proposed traffic is directly related to the Port expansion with proposed commercial/industrial/manufacturing land use.

For all three redevelopment phases, the 2029 Background traffic volumes were used as the base volume for consistency and to simulate the highest potential traffic.

Shown in the table below are the resulting trip generation volumes calculated for the Proposed Project.

Trip Generation Table

Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase I	NA	300 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			77	46	124	46	95	141
Total Projected Trips			**77**	**46**	**124**	**46**	**95**	**141**
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase II	NA	600 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			154	93	247	92	189	281
Total Projected Trips			**154**	**93**	**247**	**92**	**189**	**281**
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase III	NA	1,130 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			291	175	465	173	355	529
Total Projected Trips			**291**	**175**	**465**	**173**	**355**	**529**

2029 Build Traffic Volumes

Proposed weekday morning and evening peak hour traffic volumes associated with the 2029 Build conditions for build Phases I, II and III were developed in the TIS. These volumes represent the 2019 Existing volumes combined with the 2029 Background annual traffic growth and the addition of the estimated trips generated by the Proposed Project for each respective build phase.

Traffic Operations Analysis – Intersection Capacity Analysis

Presented in the table below are the results of the analysis for the 2019 Existing, 2029 Background and 2029 Build Phases I, II, and III scenarios for the intersections located within the study area that are adjacent to the Ezra Prentice community. The traffic modeling software Synchro (Version 10.0), which utilizes the methodologies of the 2010 Highway Capacity Manual for unsignalized and signalized intersection, was used for the analysis portion of this study. The analysis results for the rest of the study area is located in the TIS. The full analysis results printouts from the Synchro software are available in Appendix C of the TIS.

The proposed development will not have any noticeable effects on the traffic operations within the intersections adjacent to the Ezra Prentice community when the recommended mitigation is implemented. Described below is a detailed breakdown of the impacts, if any, on the intersections' operations as a result of traffic from the proposed development.

INTERSECTION LEVEL OF SERVICE TABLE - MORNING PEAK HOUR

Study Intersection	Approach and Movement		2019 Existing	2029 Background	2029 Build Phase I	2029 Build Phase II	2029 Build Phase III	2029 Build Phase III w/ Mitigation
			LOS	LOS	LOS	LOS	LOS	LOS
NYS Route 32 at First Avenue/I-787 Exit 2 Ramp (*Signalized*)	Eastbound	L-T-R	A	A	A	A	A	A
	Westbound	L	A	A	B	B	B	B
		T-R	A	A	A	A	A	A
	Northbound	L-T	D	D	D	D	D	C
	Southbound	T-R	D	D	D	D	D	D
	OVERALL		**B**	**B**	**B**	**B**	**C**	**B**
NYS Route 32 at South Port Road *(Un-Signalized)*	Westbound	L	C	C	C	C	C	D
		R						B
	Northbound	T-R	A	A	A	B	B	B
	Southbound	L	A	A	A	B	F	B
		T						A
	OVERALL		**A**	**A**	**A**	**B**	**E**	**B**

INTERSECTION LEVEL OF SERVICE TABLE - EVENING PEAK HOUR

Study Intersection	Approach and Movement		2019 Existing	2029 Background	2029 Build Phase I	2029 Build Phase II	2029 Build Phase III	2029 Build Phase III w/ Mitigation
			LOS	LOS	LOS	LOS	LOS	LOS
NYS Route 32 at First Avenue/I-787 Exit 2 Ramp (*Signalized*)	Eastbound	L-T-R	B	B	B	B	B	C
	Westbound	L	C	C	C	D	D	C
		T-R	A	A	A	A	A	A
	Northbound	L-T	D	D	D	D	D	D
	Southbound	T-R	D	D	D	D	D	D
	OVERALL		**C**	**C**	**C**	**D**	**D**	**C**
NYS Route 32 at South Port Road *(Signalized)*	Westbound	L	C	C	C	C	C	C
		R						A
	Northbound	T-R	A	A	A	A	A	A
	Southbound	L	A	B	B	C	E	A
		T						B
	OVERALL		**A**	**B**	**B**	**C**	**D**	**B**

No. 1 – NYS Route 32 (South Pearl Street) at 1st Avenue/I-787 Exit 2 Ramp

This signalized intersection is currently operating at an overall Level of Service (LOS) 'B' for the morning peak hour and an overall LOS 'C' for the evening peak hour. During the Phase III Build scenario, the intersection will see an increase in delay resulting in the overall LOS to degrade to 'C' during the morning peak hour and 'D' during the evening peak hour. With minor signal timing modifications, the background LOS can be maintained for the Phase III full build scenario. These timing modifications include shifting time to the off-ramp phase in the morning peak hour and shifting time to the NYS Route 32 phase during the evening peak hour. The traffic signal cycle length was changed from 105 seconds to 75 seconds in the morning and 95 seconds in the evening to optimize the LOS for the intersection. It is recommended that the signal timings at this intersection be monitored through coordination between the applicant and NYSDOT as

development occurs in the area to ensure the timings are optimized for the current traffic volumes.

No. 3 – NYS Route 32 (South Pearl Street) at South Port Road

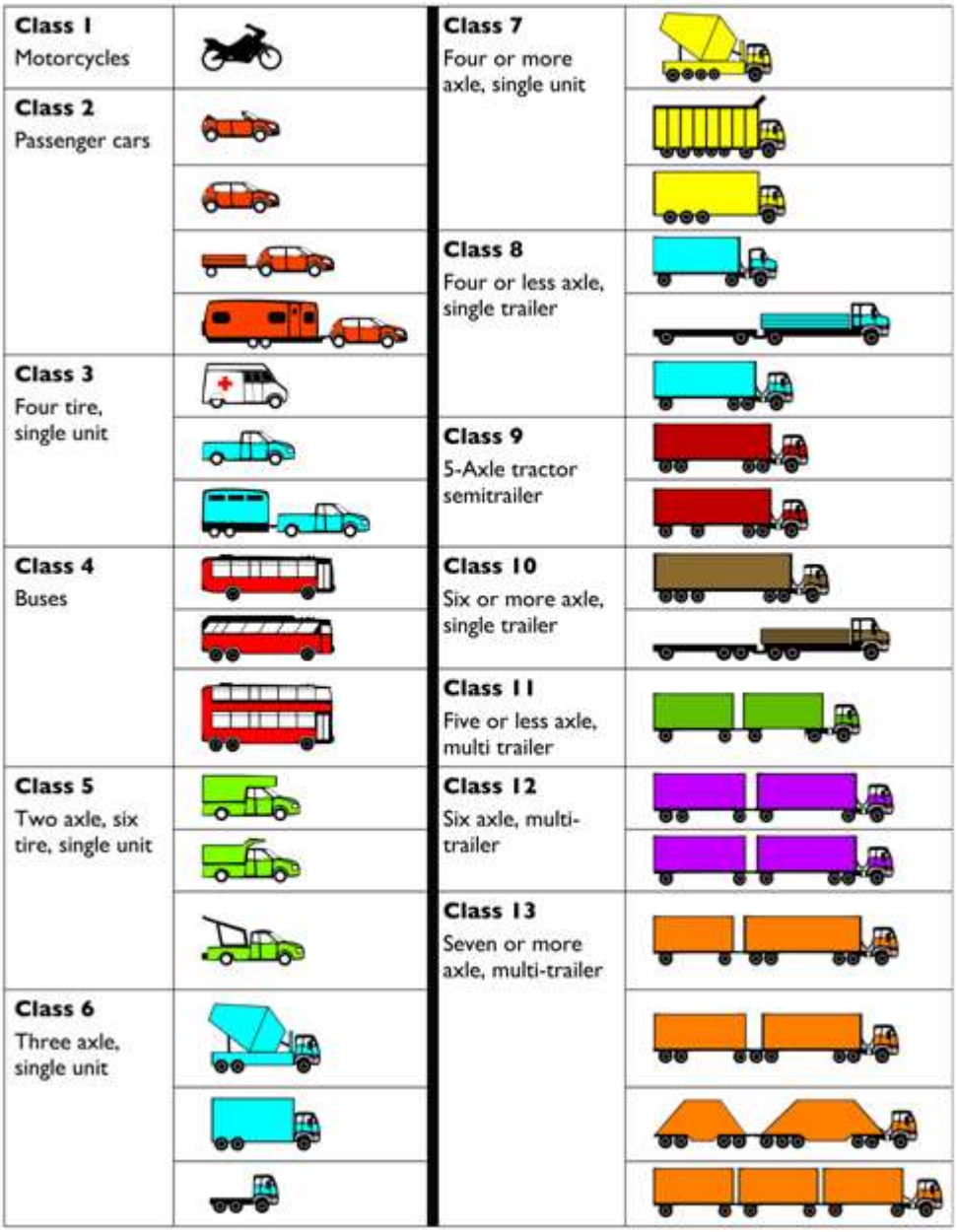
This 3-way signalized intersection operates efficiently today with an overall LOS 'A' during the morning and evening peak hour. However, the southbound left operation for the morning peak hour will start to degrade from a LOS 'B' during the Phase II Build scenario to LOS 'F' for Phase III and degrade from a LOS 'B' during the Phase I build scenario to LOS 'C' and 'E' for Phases II and III, respectively for the evening peak hour. This movement will be a point of entry for a high volume of traffic entering the proposed development including proposed truck traffic; therefore, it is recommended that a dedicated left turn lane for the southbound approach be installed. A new right turn lane pocket for the westbound approach is also recommended to split the traffic exiting the port to allow better use of the westbound green time from the signal. These roadway improvements along with upgrading the existing traffic signal system to provide a protected southbound left turn movement with a right turn overlap phase for the new travel lanes will allow the intersection to maintain adequate levels of service through the Phase III (Full Build) conditions.

With the recommended improvements, the westbound South Port Road approach will have a LOS 'D' during the morning peak hour and a LOS 'C' for the evening peak hour from the 2029 Background to 2029 Phase III conditions. The overall intersection operations indicate that these improvements will spread delay to all approaches in order to maximize intersection efficiency and improve the overall delay during both peak hours. Prior to site plan approval for the development, an updated traffic analysis would be completed based on the actual proposed site plan under review by the Town of Bethlehem Planning Board and NYSDOT as a part of the site plan approval process.

Truck Impact Analysis

Due to the nature of the proposed development, a separate review of the proposed truck traffic was completed. The definition of a truck used in the TIS are consistent with the Federal Highway Administration (FHWA) heavy vehicles classifications F4 through F13 as shown below in Figure 3.7-1. These classifications have also been adopted by the NYSDOT. Truck traffic in the area was analyzed separately from the total traffic volumes as the truck peak period in the study area is relatively consistent between the hours of 9:00 AM and 1:00 PM which does not coincide with the overall peak hour volumes on the roadway network. This truck Impact Analysis is also useful for the anticipated temporary construction truck traffic as that would also peak during the midday hours; however, the variability of the final proposed development site plan could have different volumes and classifications of construction vehicles.

Figure 3.7-1: FHWA Vehicle Classification Chart



Consistent with the total traffic, the number of site-generated trucks was based on the current Port of Albany's truck generation. A truck generation rate was calculated for the existing Port on a peak hour trip per building square foot basis and was analyzed for the Phase III (Full Build) scenario to assess the overall projects impact on truck traffic volumes.

To determine the truck route with the least impact on the surrounding residential areas and roadway network, a truck impact sensitivity analysis was performed which assumed that 100% of the trucks entering and exiting the proposed site would utilize a single route. Three truck routes were identified and evaluated as follows: a north/eastbound route via I-787 at Broadway, a westbound route via I-87 Interchange 23, and a southbound route, traveling via NYS Route 144 to I-87 Interchange 22. These routes were modeled in the traffic software Synchro Ver. 10.0, and

their LOS compared against the 2029 Phase III LOS, assuming all recommended mitigation efforts were in place. The results table is included in Appendix B of the TIS and the Synchro printouts of this analysis are included in Appendix C of the TIS.

The sensitivity analysis revealed that the northbound/eastbound route traveling along City Streets through the existing Port site to access I-787 via Church/Broadway and the southbound route traveling via River Road (Route 144) had the least impact to the public including the Ezra Prentice community and the residential area along Corning Hill Road (Route 32). The City Streets throughout the Port of Albany is an established industrial area with no residential uses along the entire truck route. The southern truck route along River Road is also an established industrial / commercial corridor that includes PSEG power plant and several industrial /commercial businesses. This southern truck route will prohibit right turns at the intersection of South Port Road and S. Pearl Street (Route 32) and at River Road (Route 144) and Corning Hill Road (Route 32). By prohibiting these right turns the truck route will avoid Ezra Prentice community and the Town residential area along Corning Hill Road. Figure 3.7-2 illustrates the proposed recommended truck routes for the tenants who will reside on the Port Expansion property.

There is a slight degradation of service at the I-787 at Church / Broadway Street intersection as well as the intersection of South Port Road and S. Pearl Street (Route 32) during the morning peak hour, dropping from a LOS 'A' to LOS 'B', while all other approaches and timeframes will experience negligible increases in delay when trucks are limited to the proposed recommended truck route.

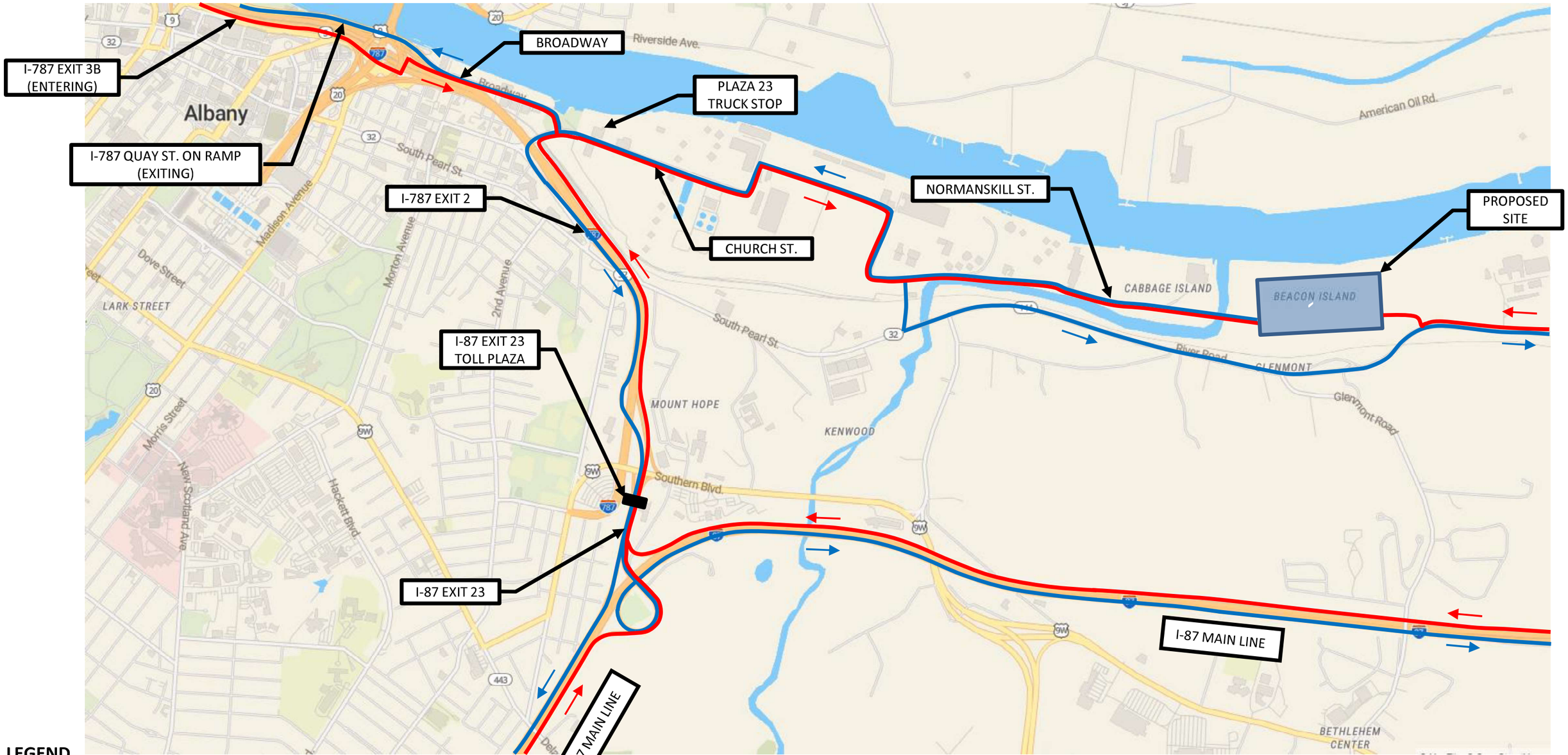
In order to minimize truck noise along these routes, it is recommended that signage be installed restricting the use of compression braking. Other signage clarifying the intended truck routes would be installed to prevent heavy vehicles from accidentally or intentionally using neighborhood streets to access the site, as outlined in the Albany County Commercial Transportation Access Study, completed by Creighton Manning dated April 5, 2002. To further reduce truck impacts on the traveling public, oversized load transports should follow the procedures outlined in the Traffic Control Plan for Superload Transport, prepared by CHA, Inc. Any oversized loads destined for the Port of Albany will require a separate traffic control plan for the intended route, coordinated with and approved by both NYSDOT and the Town.

Additional detail of the measures that APDC will implement to ensure truck traffic follows the truck route can be found in Appendix G. In summary, APDC will include a clause in each new tenant's lease that will describe the truck route to be followed. The lease will outline the consequences if tenants violate the terms of the lease and includes an additional surveillance camera to be installed at the intersection of South Port Road and Normanskill Street (Port Road South). This surveillance camera will be added to the Port's extensive security system that is monitored by the City of Albany Police Department as well as the Port's security team.

Appendix G further describes the future improvements to the City streets that traverse throughout the Port property such as the improvements to Smith Boulevard planned for the 2020 / 2021 construction season. This work is intended to contribute to the comprehensive improvement of the City Streets that run through the Port District that could serve as a future alternative truck route as envisioned and articulated in the 2018 CDTC report "City of Albany: S. Pearl St. Heavy Vehicle Travel Pattern Study". The CDTC study also outlines the long-term strategy for the

reconstruction of the balance of the City Streets throughout the Port to create a by-pass route as follows:

Step 1 – Determine ownership of the roadway system. This has been completed and determined that the City owns the roads throughout the Port.
Step 2 – Designate the roadways along the Truck route to Federal – Aid eligible. This has been completed.
Step 3 – Seek available funding to design and construct the Truck Route. This responsibility resides with City of Albany. As mentioned above, a portion this step has been completed with the scheduled improvements to Smith Boulevard.
Step 4 – when implemented, consider revising NYSDOT Access Highway and CDTC Freight Priority Network designations. The responsibility to complete step 4 resides with City of Albany, FHWA, NYSDOT and CDTC.



Recommended Truck Routes To/From Proposed Site

Not to Scale

McFarland Johnson

FIGURE 3.7-2

This page intentionally left blank

3.7.2. Rail

The rails lines immediately adjacent to the Ezra Prentice community are not owned by the Port of Albany; nor does the Port have any control over the trains that run along those tracks. The existing railroad track is owned by CSX and runs north/south from the Port of Albany along the east side of NYS Route 32/144 and terminates at the Albany Port Railroad, a separate, short-line entity co-owned and operated by CSX and Canadian Pacific. As noted in the previous DGEIS from 2010, a railroad track and bridge had previously run through the proposed site, over and across the Normans Kill, connecting the proposed site with the Port of Albany Railroad. The track and bridge were used to transport coal through the Port but have not been in operation since 1975., The bridge has since collapsed and was in a state of disrepair. The track has been abandoned and any rights, easements, or ownership have been abandoned with it. A new rail bridge if necessary, will be constructed to again connect the proposed site to the existing rail line.

The bulk of the daily rail activity at the existing Port of Albany site occurs within the confines of the Port on private property, thus limiting its impact on the general public. Over the last 5 years, approximately 11,000 railroad cars annually passed through the Albany Port Railroad, with 80% continuing past the Town of Bethlehem to CSX's Selkirk Yard, located approximately 8 miles south of the City of Albany. Currently, the only impact to the public is through CSX trains that run to and from the Port on a secondary line connected to Selkirk Yard. The CSX operations to the Port conservatively consist of one train per day that arrives at the Port sometime between midnight and 6:00 AM and leaves between 6:00 AM and noon. The Port also gets unit trains on a random, as needed basis about 4 times a month, consisting of approximately one-unit train per week, that run on the same schedule. When a unit train is scheduled to come to the Port, that day could include two trains traveling to the Port from Selkirk. When the unit train is unloaded, two trains could be leaving the Port back to Selkirk that day. These unit trains follow the same time schedule as the daily trains, arriving sometime between midnight and 6:00 AM and leaving between 6:00 AM and noon. The proposed development's impact on rail operation will be dependent on the tenant/end user. Regardless of the tenant, the only impact to the public will continue to be through the CSX train running on the secondary line to the Selkirk Rail Yard. The projected worst-case scenario operations consist of the current one train-per-day arriving at the Port with an additional 4-5 cars, assuming a multi-tenant makeup of the proposed additional 1.3 million SF and/or the number of unit trains could potentially increase to 6 times per month should a single large material-producing tenant occupy the new developable area. These worst-case scenarios will not result in an increase in idling trains in the study area.

The additional 4-5 rail cars are projected to be added to the existing trains that currently pass through the rail yard and therefore will not add any noise or diesel emissions impact to the Ezra Prentice neighborhood. The additional 1-2 trains per month is a slight increase to the roughly 30-35 trains that already pass through the area. Noticeable impacts to the Ezra Prentice community from slight increase in rail operations will not occur as a result of the proposed development.

3.7.3. Public Transportation

Transit service available to the proposed site and the Ezra Prentice community is provided by the Capital District Transportation Authority (CDTA). One CDTA line (Glenmont #7) currently travels past the Project Site as well as Ezra Prentice on NYS Route 144 and Mt. Hope Drive. There are

stops at the NYS Route 144/NYS Route 32 intersection (near the Port Entrance) and along the Ezra Prentice frontage on South Pearl Street and Mt. Hope Drive with a shelter on the corner of Mt. Hope Drive and South Pearl Street. The Glenmont Line (#7) starts from Broadway in the City of Albany and travels past the site on NYS Route 144 to the Walmart located on US Route 9W. The available public transit service in the immediate project area is shown on Figure 17 within the TIS. The Port estimates that roughly 5-7% of their employees commute to work via transportation methods other than personal passenger cars. As a result, there is not expected to be any noticeable changes to the public transportation operations at the Ezra Prentice community as ridership of the #7 line is not at capacity, and a similar high utilization of passenger cars is anticipated for the employees of the proposed expansion project with a negligible increase in CDTA ridership.

3.7.4. Pedestrian and Bicycle

A review of the existing road network in the South Pearl Street corridor near the Ezra Prentice community shows crosswalks with pedestrian push buttons and countdown timers provided at the NY Route 32 (South Pearl St.)/1st Avenue/I-787 Exit 2 Ramp intersection. Sidewalks are provided on both sides of the South Pearl Street beginning just south of the Ezra Prentice community at the City of Albany limits and extending into the City, with six existing crosswalks connecting the Ezra Prentice Buildings on both sides of Pearl Street. Bike shared lane chevrons aka "sharrows" are striped on South Pearl St. in both directions through the Ezra Prentice community. There are no pedestrian accommodations provided at the remaining intersections in the TIS study area including South Pearl Street south of the City limits.

The Hudson Mohawk Bike Hike Trail system's cycle track ends at the intersection of Broadway and Quay Street and is outside the project area. The Albany County Helderberg Hudson Rail trail currently terminates at South Pearl Street north of South Port Road with a bridge over South Pearl Street. At that point there is a parking lot where riders can then drive, or they can utilize the street network to continue their riding. Currently under construction is the South End Bikeway Connector which will connect these two existing trails/bikeways by constructing a separated cycle track to replace the on-street parking on the east side of South Pearl Street through the Ezra Prentice community. This connection will increase safety for pedestrians and bicyclists by providing a physical separation while also serving as a traffic calming improvement in this section of South Pearl St. Based on the number of pedestrians counted during the peak hours, the traffic generated by the Proposed Project will have a negligible impact on the Bike Pedestrian Priority Network. A summary of the peak hour pedestrian and bicycle activity observed during the traffic data collection is provided in the TIS.

Based on the number of pedestrians and bicycles recorded during the peak hour at the NYS Route 32 /South Port Road and Church Street/Broadway intersections during the AM and PM peak hours, it can be assumed that few, if any, Albany Port employees currently walk and/or ride a bicycle to get to work. The Port estimates that roughly 5-7% of their employees commute to work via transportation methods other than passenger cars. As a result, there is not expected to be any noticeable increases to pedestrian and bicycle activity in the Ezra Prentice area as a similar high utilization of passenger cars is anticipated for the employees of the proposed expansion project and no additional pedestrian accommodations are planned.

3.7.5. Conclusions and Recommendations

Results from the 2029 Build conditions indicate that the Proposed Project will have negligible impacts with no noticeable increase in delay to the traveling public within the existing study area intersections including the intersections adjacent to the Ezra Prentice community for the proposed build phases once the recommended mitigation measures are implemented.

Based on the traffic analysis results, MJ offers the following conclusion and recommendations specifically related to the Ezra Prentice community; however, a full list is included in the TIS:

All truck traffic associated with the proposed expansion project be restricted from making right turns onto S. Pearl Street (NYS Route 144) at the South Port Road intersection to eliminate any additional trucks passing through the Ezra Prentice community. This route will also be implemented for all anticipated temporary truck traffic associated with construction activities. Additional measures to ensure truck traffic follows the truck route, APDC intends on adding a truck route clause in each tenant's lease as well as installing a surveillance camera near the intersection of South Port Road and Port Road.

The capacity analysis indicates that the following study area intersections adjacent to Ezra Prentice will operate adequately with the improvements outlined for the full build-out of the proposed development as follows:

- NYS Route 32 (South Pearl St.) at 1st Ave/I-787 Exit 2 Ramp:
  - Traffic signal timing changes *(Monitor for all Phases, timing changes assumed for Phase III thresholds)*
- NYS Route 32 at South Port Road:
  - Monitor signal timings (During Phase I)
  - Follow up traffic study to assess signal operations *(Prior to Phase II thresholds)*
  - Construct a dedicated 200' long southbound left-turn lane *(Prior to Phase III thresholds)*
  - Construction a dedicated 200' long westbound right turn lane *(Prior to Phase III thresholds)*
  - Install new traffic signal equipment to provide a permissive/protected southbound left turn phase and a westbound right turn lane overlap phase. Potentially coordinate the controller should a traffic signal be installed at NYS Route 144/NYS Route 32 intersection. *(Prior to Phase III thresholds)*

The owner/applicant is responsible for the mitigation recommended within this report. Implementation of the recommended mitigation would be required during the site plan approval process when a definitive site layout is proposed to establish the mitigation measures required.

- The project's proposed impacts to the rail operations will have a negligible, if any, impact to the Ezra Prentice community compared to the current conditions.

- The Proposed Project will not have any noticeable impacts to the existing pedestrian and bicycle activities in the Ezra Prentice community.

3.9. Water Service (Potable and Fire Protection)

3.9.1. Environmental Setting

The APDC proposes to service the Project Site with water by connecting to the existing water infrastructure owned by the Town of Bethlehem and maintained by the Department of Public Works (DPW) Water District No. 1 within Route 144/River Road. The Ezra Prentice community is located within the City of Albany limits and is served by the Albany Water Department

3.9.2. Potential Impacts

The Project Site will be served through a different Municipal water district than the Ezra Prentice community. Therefore, the Project water usage will not affect the Ezra Prentice community and will have no impact on their water usage or availability.

3.9.3. Mitigation Measures

Based on the Project Site being in a separate Municipal water district than the Ezra Prentice community with different water sources, no impacts will occur and as such no mitigation measures are proposed.

3.10. Sanitary Sewer

3.10.1. Environmental Setting

The Ezra Prentice community are serviced through the South Wastewater Treatment Plant (hereinafter the SWTP), owned and operated by the Albany County Water Purification District.

The Proposed Project will be serviced with a private onsite package treatment system. A pre-engineered manufactured package treatment system capable of treating up to 20,000 gallons/day (projected demand is 16,960) of wastewater will be installed on site and discharged directly to the Hudson River; as such the system applicant will obtain a State Pollution Discharge Elimination System (SPDES) permit from the NYSDEC as part of the Site Plan approval when an actual project is proposed. The Port has coordinated with the NYSDEC Region 4 Water Engineer to confirm the requirements of the proposed system and the SPDES permit. The system will be designed to comply with the New York State Design Standards for Intermediate Sized Wastewater Treatment Facilities (March 5, 2014) specifically table B-4A, Typical Effluent Limits for Non-Intermittent Streams.

3.10.2. Potential Impacts

The onsite wastewater treatment package would not impact the Ezra Prentice community since they are not within the same sewer district.

3.10.3. Mitigation Measures

The Project will not cause any impacts; therefore, no mitigation is proposed.

3.11. Historic, Cultural, and Archeological Resources

3.11.1. Environmental Setting

As discussed in the DGEIS Section 3.11 Historic, Cultural, and Archeological Resources, the Site lies within a natural, industrial, and rural/suburban context with limited access and at one time was used for fly ash and bottom ash disposal.

A Phase 1A Cultural Resource Survey, a Phase 1B Study, an Additional Phase 1B Survey, and an Additional Archaeological Evaluation were completed for the Site. Additional efforts and considerations for Papscanee Island Historic District included a summary table detailing proposed elevations for construction work, a map showing depth of fill for borings and trenches, and visibility of the Site from the nearest public right-of-way to Papscanee Island Historic District including photo simulations of an 85 foot tall building were all provided to the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP).

Based on all submitted information to the NYSOPRHP for review, the NYSOPRHP provided an updated No Adverse Effect letter for the Project.

3.11.2. Potential Impacts

The NYSOPRHP indicated in a letter, dated September 13, 2019, no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be adversely affected by the Proposed Project as currently proposed.

3.11.3. Mitigation Measures

Based on current consultations with the NYSOPRHP, no mitigation measures are being proposed.

3.12. Aesthetic and Visual Resources

3.12.1. Environmental Setting

The Proposed Project includes an 85 foot high 1.13 million SF warehouse/industrial use building, associated truck and employee parking, and a wharf as represented in Appendix B Concept A. The 85-foot building will exceed the allowable 60-foot height permissible by local area, yard, and bulk requirements. A Visual Impact Assessment Report was completed according to the NYSDEC Program Policy - Assessing and Mitigating Visual Impacts (Issued 7/31/2000, latest date revised: draft 10/30/2018) and the Federal Highway Administration's, Guidelines for the Visual Impact Assessment of the Highway Projects (January 2015), specifically Chapters 4 through 7.

Photo-simulations of the project were created as part of the viewshed analysis and six sensitive receptors were identified within a 1-mile radius of the site, with sensitive receptors being cultural, historic, and recreational resources. The Ezra Prentice community located approximately 1.7 miles northwest of the Project Site and is therefore outside of the 1-mile radius. Additionally, as it is not a cultural, historic, or recreational resource, it would not be considered a sensitive receptor according to the NYSDEC criteria.

3.12.2. Potential Impacts

Based on existing barriers including buildings and vegetation within the 1.7 miles between Ezra Prentice community and the Project Site, it is not anticipated that the Project Site will be visible from the Ezra Prentice community. As such, no impacts to the aesthetic and visual resources of the Ezra Prentice community are expected.

3.12.3. Mitigation Measures

The project Is not visible to the Ezra Prentice visual landscape and as such no mitigation measures are proposed. The building colors have been chosen to blend into the existing surroundings. All lighting on the project will be full cut off, dark sky compliant and will not spill onto neighboring properties.

3.13. Land Use and Zoning

3.13.1. Environmental Setting

Ezra Prentice community is located approximately 1.7 miles northwest of the Project Site in the City of Albany. The Project Site lies within the Town of Bethlehem and is an undeveloped, industrial, and rural/suburban context with limited access. The site is undeveloped with scrub and forested vegetation throughout. A portion of the site at one time was used for fly ash disposal. The Site is currently zoned as Heavy Industrial (I). The Proposed Project will alter the current vacant land use to heavy industrial uses permitted by right per the Town Code.

The neighboring land uses to the north (Boat storage and repair shop) and south (PSEG Power Plant) are industrial, to the west are the NYSEG high voltage transmission lines, with rural light industrial uses along River Road. Immediately to the east is the Hudson River.

3.13.2. Potential Impacts

The Project Site will be developed with uses permitted by right pursuant to the Town of Bethlehem's heavy industrial zoning regulations. The project will be developed with all Town of Bethlehem development area, yard, and bulk storage requirements, with the exception of building height. The Project included a proposed maximum building height threshold of 85 feet which exceeds the maximum allowable height of 60 feet. However, the proposed building height will be compatible with the adjacent properties which have buildings or accessory buildings that range in height from 85 feet to 230 feet tall. As such the Proposed Project will not pose an adverse environmental impact to the surrounding uses and will comply with the existing Heavy Industrial Zoning District.

3.13.3. Mitigation Measures

The Project Site will be developed in accordance with Town of Bethlehem land use and zoning regulations. One exception, the proposed building height would not comply with Town code, but the building would be similar in height to those building heights on adjacent properties. The property has also been determined to not be visible from the Ezra Prentice community. As such, no mitigation measures are proposed.

3.14. Community Character and Compatibility with Comprehensive Plan

3.14.1. Environmental Setting

The Project Site is located within the Town of Bethlehem approximately 1.7 miles southeast of the Ezra Prentice community which is located in the City of Albany. The City of Albany has a different Comprehensive Plan than the Town of Bethlehem.

3.14.2. Potential Impacts

The Proposed Project is in compliance with the Town of Bethlehem's Comprehensive Plan and their Draft Local Waterfront Revitalization Plan (LWRP). The project will have no potential impacts to the Ezra Prentice community.

3.14.3. Mitigation Measures

The site will be developed in accordance with the Town's comprehensive plan and the Draft LWRP, and therefore will not require any mitigation measures.

3.15. Emergency Services

3.15.1. Environmental Setting

The Project Site will be served by the Town of Bethlehem Police Department, Selkirk Fire District, and Delmar-Bethlehem EMS departments for police, fire, and emergency health care services. These districts serve the entire or portions of the Town of Bethlehem.

The Ezra Prentice community is located in the City of Albany and is serviced through different emergency service districts than the Project Site. Ezra Prentice is serviced by the Albany Police Department and Albany Fire Department for fire and emergency health care services.

3.15.2. Potential Impacts

The Project Site will be serviced with different emergency services than Ezra Prentice community, and therefore there would be no potential impacts to the Ezra Prentice community.

3.15.3. Mitigation Measures

The Project will not cause any impacts to the Ezra Prentice community and no mitigation measures are proposed.

3.16. School District

3.16.1. Environmental Setting

The Project Site is within the Bethlehem Central School District. The Ezra Prentice community is within the City School District of Albany.

3.16.2. Potential Impacts

No impacts are anticipated since the Project Site is in a different school district than Ezra Prentice community.

3.16.3. Mitigation Measures

No mitigation measures are necessary due to the finding of no potential effect on the school district serving the Ezra Prentice community.

3.17. Fiscal and Economic Impact

3.17.1. Environmental Setting

Both the Project Site and Ezra Prentice community are located in Albany County. The Proposed Project has the potential to effect Albany County sales tax, Albany County property tax, Bethlehem Central School District property tax, and Town of Bethlehem and other local property tax. The Albany County taxes, the sales and property tax, could effect Ezra Prentice community.

Potential Fiscal Impacts and Taxation Implications

The fiscal analysis examined the local fiscal benefits that will be generated by the Project, including new property and sales tax revenue. The total annual fiscal benefits of the Project are estimated to range from between $4.65 million to $14.2 million, depending on the development concept. The most significant portion of these benefits will be realized by Albany County through new sales tax revenues and property tax revenues (directly from the project itself and new tax revenues generated off-site as a result of the economic impact of the project). Table 3.17-1 is a summary of the fiscal benefits from the Proposed Project.

Table 3.17-1: Summary of Annual Fiscal Benefits

Summary of Annual Fiscal Benefits					
	Concept A	Concept B	Concept C	Concept D	Concept D.1
County Sales Tax Revenue	$ 711,000	$ 566,000	$ 509,000	$ 337,000	$ 1,070,000
County Property Tax Revenue	$ 6,540,000	$ 5,210,000	$ 4,690,000	$ 3,210,000	$ 10,200,000
Bethlehem Central School District Property Tax Revenue	$ 1,570,000	$ 1,330,000	$ 1,310,000	$ 303,000	$ 808,000
Town of Bethlehem and Other Local Property Tax Revenue	$ 4,190,000	$ 3,540,000	$ 3,490,000	$ 806,000	$ 2,150,000
Total Tax Revenues	**$ 13,000,000**	**$ 10,700,000**	**$ 10,000,000**	**$ 4,650,000**	**$ 14,200,000**

Source: Camoin 310

It is anticipated that the Port will retain ownership of the land which will remain tax exempt, but any new building construction will be privately owned and subject to local property taxes. Below examines an alternative fiscal scenario in the case of the entire property being tax-exempt. In this scenario, the property itself would not generate any property tax revenue; however, new fiscal revenues would still be generated as a result of the "off-site" economic impact of the Project that occurs within Albany County. The estimated fiscal benefit to Albany County tax revenue benefit is approximately $2.8 million to $9.0 million annually. See Table 3.17-2 for details. This revenue would occur even if the entire project remains tax-exempt.

Table 3.17-2: Potential Increase in Annual Property Tax Revenue (Off-Site)

Potential Increase in Annual Property Tax Revenue (Off-Site)					
Property Tax Type	Concept A	Concept B	Concept C	Concept D	Concept D.1
Off-Site (Countywide) Property Tax Revenue Benefit	$ 4,315,194	$ 3,331,146	$ 2,834,421	$ 2,779,528	$ 9,042,103
Estimated Benefit to Town of Bethlehem Taxing Jurisdictions	$ 3,883,674	$ 2,998,031	$ 2,550,979	$ 2,501,575	$ 8,137,893

Source: Town of Bethlehem; Camoin 310

Ongoing Economic Output

The Port of Albany Expansion Project has the potential to generate approximately 1,670 new permanent (ongoing) jobs in Albany County with $102 million in new annual (ongoing) wages (earnings) for workers in the County from future operations (tenants) on the property.

The total annual (ongoing) potential impact of the Project to Albany County is approximately $295 million in sales based on the maximum build out of the property of a 1.13 million square-foot industrial facility. The total economic impact includes "spinoff" economic activity that occurs in the County. Approximately one-out-of-three permanent (ongoing) jobs generated in the County as a result of annual (ongoing) operations will exist off-site at other businesses in Albany County.

One-Time Economic Output

The Proposed Project will also have a significant one-time construction impact, with the potential to generate a one-time boost of between $48.1 million and $196 million to the local economy. The total job impact from construction of the project is estimated to range from approximately 470 up to 1,100, including construction jobs and others generated in the local economy during the construction phase.

Summary: Annual (Ongoing) and One-Time Economic Output

The following **Table 3.17-3** details the annual (ongoing) and one-time economic output, including new jobs, earnings (wages), and sales.

Table 3.17-3: Port of Albany Expansion Project Economic Impact to Albany County

Port of Albany Expansion Project Economic Impact to Albany County					
	Concept A	Concept B	Concept C	Concept D	Concept D.1
Total One-Time Economic Impact from Construction					
Jobs	1,100	770	715	468	605
Earnings (Wages)	$ 40,800,000	$ 28,600,000	$ 26,600,000	$ 17,400,000	$ 22,500,000
Sales	$ 113,000,000	$ 79,200,000	$ 73,500,000	$ 48,100,000	$ 62,200,000
Total Annual Economic Impact From Operations					
Jobs	1,670	1,330	1,200	522	1,660
Earnings (Wages)	$102,000,000	$80,900,000	$72,800,000	$48,100,000	$153,000,000
Sales	$295,000,000	$235,000,000	$211,000,000	$145,000,000	$459,000,000

Source: Camoin 310

3.17.2. Potential Impacts

Albany County will have benefits from tax revenue as well as job creation based on the Project. The Project would not cause any costs or impacts for the Ezra Prentice community.

3.17.3. Mitigation Measures

No mitigation measures are required as a result of the economic and fiscal impacts of the Project.

3.18. Recreation and Open Space

3.18.1. Environmental Setting

The Project Site is located approximately 1.7 miles from the Ezra Prentice community. The nearest parks to the Ezra Prentice community are the Elsmere Ball Park, the Albany Victory Gardens, and the Albany County Helderberg-Hudson Rail Trail.

The surrounding area around the Project Site is mainly characterized as industrial facilities. In the greater Town of Bethlehem and adjacent City of Albany there are multiple recreation activities people of the community enjoy, including parks that include swimming, hiking, sports pavilions, dog parks, bike trails, playgrounds, and other activities for community members. The areas include biking, pedestrian walking, and water sports.

A popular bike trail, the Albany County Helderberg Hudson Rail Trail, attracts many visitors and stretches 9 miles from the City of Albany to the Village of Voorheesville. The trail, at the closest location to the Project Site, is located approximately one mile from the nearest corner of the property or 1.7 miles from project center.

Popular water boat launch points, including the Henry Hudson Park, offer access the Hudson for recreational purposes. Nearest launch points to the Project Site include the Town's Henry Hudson Park and the City of Albany Corning Preserve Boat Launch which are both approximately 4 miles from the Site.

3.18.2. Potential Impacts

The project could add an additional 21 ships/barges per year to the Hudson River. Let in or launch locations would not be effected as the additional boat traffic would not alter their access to the river, as they would only continue to follow River practices that allow both recreational and commercial use of the river area. Due to the limited number of additional ships/barges no significant impact on existing Hudson River maritime commercial or recreational boat traffic will occur.

The Project will not alter current recreation activities access including the bike trail or boat launches, as it will not alter access to these points, add to additional users, or hinder those activities.

The project would have no impacts on recreation and open spaces in the vicinity of the Site or the Ezra Prentice community.

3.18.3. Mitigation Measures

The Proposed Project will not impact recreation and open space for Ezra Prentice community, no mitigation measures are required for the project.

3.20. Environmental Justice

3.20.1. Environmental Setting

The Project Site is located 1.7 miles south east of the Ezra Prentice community, a NYSDEC mapped Potential Environmental Justice (EJ) Area, see **Figure 3.20-1**. The Ezra Prentice community has been designated an Environmental Justice Community by the NYSDEC.

NYSDEC is the governing agency that has complete jurisdiction and responsibility to administer the environmental justice process that is meant to allow the fair treatment of all people regardless of race, income, national origin, or color with development, implementation, and enforcement of environmental laws, regulations, and policies. Under the Commissioner Policy 29 (CP 29), Environmental Justice and Permitting provides guidance for incorporating environmental justice concerns into the NYSDEC permit review process. The policy identifies potential environmental justice areas, provides information on environmental justice to applicants with proposed projects in those communities, enhances public participation requirements for proposed projects in those communities, establishes requirements for projects in potential environmental justice areas with the potential for at least one significant adverse environmental impact, and provides alternative dispute resolution opportunities to help resolve issues or concerns at the community.

CP 29 is initiated when a permit application is made to the NYSDEC. The Port Expansion project will require at a minimum the following DEC permits: SWPPP permit; Article 15 and Water Quality Certification. Additionally, once a specific project is identified, the Albany Port District Commission will proactively complete the environmental justice review and public outreach process pursuant to the NYSDEC CP 29 policy at the time of a site plan application to the Town of Bethlehem.

Upon application submittal for a permit(s), the NYSDEC Division of Environmental Permits will conduct a preliminary screen to identify if potential adverse environmental impacts are associated by the Proposed Project. If there is a potential impact, the NYSDEC will provide the applicant with the relevant information on environmental justice. This could include a copy of the CP-29 policy, methodology for identifying potential environmental justice areas, guidance to implement policy, information on the dispute resolution process, and other information as applicable.

The NYSDEC would then ensure public participation by requiring the applicant to actively seek public participation throughout the permit review process. This would be completed by following a written Public Participation Plan prepared by the applicant. A draft Public Participation Plan is included at the end of this section to serve as an example of what would be completed. The plan must include: stakeholders to the Project, including local elected officials, community-based organizations, and residents located in the potential environmental justice area; distribution of information on the Project and permit process; public information meetings; and easily accessible document repositories near the potential environmental justice area. Part of the Public Participation Plan submission shall include a report that details progress updates of implementing the Plan, concerns raised, resolved and outstanding issues, components of the Plan yet to be completed, and an expected time line for completion of the Plan. Once the Public Participation Plan is completed, the applicant shall complete and submit written verification that the Plan was completed as detailed. The applicant shall submit a revised report detailing all activity that occurred since the initial submission of the report. A certification shall be signed by the applicant

of all completed activities and submitted to the NYSDEC prior to a final decision being made on the permit application.

Upon completion of all activities a permit would be issued by the NYSDEC.

See Section 2.0 of the Supplemental DGEIS for an explanation of the SEQR Generic Review process and when a project will be applying for such permits.

3.20.2. Potential Impacts

Ezra Prentice community is a nearby community occupied by low-income predominately minority public housing. Some residents of Ezra Prentice community have expressed concerns over air quality, public health, and quality-of-life impacts from existing local commercial operations and traffic related to the trucks that pass through the neighborhood along South Pearl Street and trains in the adjacent CXS railroad yard to the east.

If the permit applicant did not plan to mitigate some of the possible environmental concerns, then the Project would have the potential to impact air quality due to the projected additional truck and rail car traffic. See the Supplemental DGEIS Section 3.6 Climate and Air Quality and Section 3.7 Traffic and Transportation for a detailed analysis. Where truck traffic is anticipated, all truck traffic will be routed through the existing Port, utilizing the Church Street entrance or through the South Port Road entrance, and as such would not be traveling through the Ezra Prentice community.

3.20.3. Mitigation Measures

To date, the Albany Port District Commission (Port of Albany) has regularly worked with the adjacent communities, including outreach to the Ezra Prentice community and community stakeholders. Specifically, when community concern rose in 2016 due to a neighboring business seeking a DEC permit. At that point the Port undertook an independent traffic assessment and made numerous outreach and engagement efforts. The Port Communication and outreach with South End Stakeholders efforts to date include the following:

- 9/12/16 - Port of Albany (POA) staff met with Ezra Prentice and AVillage representatives regarding truck traffic on S. Pearl St. and in the Port and to implement a study of truck counts and routes.
- 12/7/16 – POA staff met with NYSDEC and NYSDOT regarding developing a truck traffic study for the Port.
- 12/14/16 – The Albany Port District Commission Board and POA staff met with Ezra Prentice and AVillage representatives during a public Board meeting regarding environmental issues in the South End of Albany, truck traffic on S. Pearl St. and in the Port District and to discuss the truck traffic study that was occurring.
- 1/26/17 – POA met with Albany's South End stakeholders, including state and local elected officials, Ezra Prentice representatives and AVillage representatives to discuss traffic impacts on the South End.
- 2/5/17 – POA released the report of the Port's truck study. Copies were forwarded to state and local elected officials, Ezra Prentice representatives, AVillage, DEC, DOT, the Capital District Transportation Committee (CDTC) and the Albany Housing Authority.

- 2/10/17 – POA hosted the South End Working to Achieve Gainful Employment (WAGE) Center along with all port tenants to discuss South End hiring and training needs and opportunities. Port staff also advised tenants of the South End traffic study that was completed by the Port and the impacts. Port staff and tenants discussed recommended truck routes to avoid further impact on the Ezra Prentice community.
- 6/15/17 – Port Industry Day. The public is invited to hear what is going on at the Port and to take tours of the terminal. The US Maritime Administration highlighted the challenges and virtues of major maritime investments, as well as the potential for the Port's impact on the region and upstate New York. The Port proudly touted its sponsorship of the Hudson River Trading Game & Navigating the Seas school program that enables all fifth graders in the Albany City School District to participate.
- 4/27/18 – AVillage executive director Willie White sends letter of support to NYSDOT regarding the POA's grant request under the Passenger & Freight Rail Assistance Program for funding to improve the Port's internal roadways and signage to help alleviate truck traffic on S. Pearl St.
- 5/31/18 – CDTC held a public meeting at Ezra Prentice to release the results of the traffic study it conducted in the South End of Albany. Those who attended the meeting included the POA, Ezra Prentice residents, AVillage, DEC, DOT and state and local elected officials. The public review and comment period was open from 5/31/18 to 7/2/18.
- 6/15/18 – POA sent a letter of support to DEC's Office of Environmental Justice on behalf of the Radix Ecological Sustainability Center and AVillage's application for an Environmental Justice Community Impact grant. The requested grant funds were to be used to purchase soil testing equipment and to support research into environmental conditions in the South End and outreach and education for residents.
- 6/17/18 – Port Industry Day. The public is invited to hear what is going on at the Port and to take tours of the terminal. Port District and maritime terminal development were highlighted.
- 12/6/18 – CDTC Policy Board meeting. Attended by state and local officials and open to the public. The Board approved the POA's request to change the road classification of the Port's internal roadways so that funding for upgrades could be requested. The General Counsel discussed the acquisition of the property in Bethlehem.
- 3/7/19 – CDTC Policy Board meeting. Attended by state and local officials and open to the public. The General Counsel discussed moving forward with environmental due diligence studies on the Bethlehem expansion site. POA committed to working to upgrade roadways in order to relieve truck traffic in the South End of Albany.
- 4/11/19 – The POA CEO and General Counsel met with Executive Director and Executive Advisor of AVillage to discuss the Port in general, including development, traffic and workforce development for residents of the South End.
- 5/16/19 – South End Community Collaborative - Community Development Forum at the Albany Housing Authority at 200 S. Pearl St. in Albany. Those who attended the forum included local elected officials, the POA, City of Albany, Albany County, Albany Housing Authority, CDTA, AVillage, Ezra Prentice residents, and local stakeholders. The POA was invited to give a PowerPoint presentation to show the Port's current expansion projects and to discuss future plans and answer questions from the public. The CEO and General Counsel responded to inquiries regarding truck traffic and workforce development from those in attendance, including the South End representative City Councilman Johnson.

- 6/6/19 – CDTC Policy Board meeting. Attended by state and local officials and open to the public. The General Counsel reported on the planned infrastructure upgrades that should lead to more ships calling on the Port and better use of the current roadways for traffic. All in attendance were invited to Port Industry Day to hear and see first-hand the construction projects in the Port.
- 6/12/19 – POA sent a letter of support to DEC's Office of Environmental Justice on behalf of the Radix Ecological Sustainability Center and AVillage's application for an Environmental Justice Community Impact grant. The grant funding was for the construction of an Environmental Justice Classroom at the Radix Center. Radix and AVillage would also be able to use the funding to expand upon their environmental harms and benefits mapping of the South End by analyzing soil for elemental contamination with their new X-ray Fluorescence Spectrometer. This screening would be offered free of charge to residents and will be used to identify potential new garden locations and guide remediation work.
- 6/13/19 – Port Industry Day. The public is invited to hear what is going on at the Port and to take tours of the terminal. The event highlighted the expansion efforts in Albany and Bethlehem and the future plans for development in the Port.
- 7/24/2019 – POA hosts Capital Region BOCES, the new manager of the Capital South Campus, along with all port tenants to discuss South End hiring and training needs and opportunities. Port expansion plans were also discussed and reviewed.
- 9/5/19 – CDTC Policy Board meeting. Attended by state and local officials and open to the public. The General Counsel reiterated its commitment to the City of Albany administration regarding working together to move truck traffic off of S. Pearl St. and through the Port to bypass Ezra Prentice.
- 9/9/19 – POA CEO met with Executive Director of AVillage to discuss Port of Albany and South End economic development. The Port's expansion plans, work performed, and future investments were discussed in detail.
- 9/27/19 – POA staff met with Executive staff of AVillage to look at the Port's environmental and economic impacts on the South End. Truck traffic, new trucking routes, workforce development and the Port's expansion plans were discussed in detail.

Since initial application, the project's mitigation measures related to potential traffic impacts and climate and air impacts include avoiding routing trucks through the Ezra Prentice neighborhood by establishing a truck route that will utilize the existing and a new Port roadway system. The project will include a recommendation that all truck traffic ingress and egress travel through the existing Port roadways to the Church Street entrance to the Port of Albany or through the South Port Road entrance. With trucks using this route, there will be no added truck traffic to South Pearl Street through Ezra Prentice as a result of this project. Therefore, the project will not adversely impact the Ezra Prentice neighborhood via truck traffic.

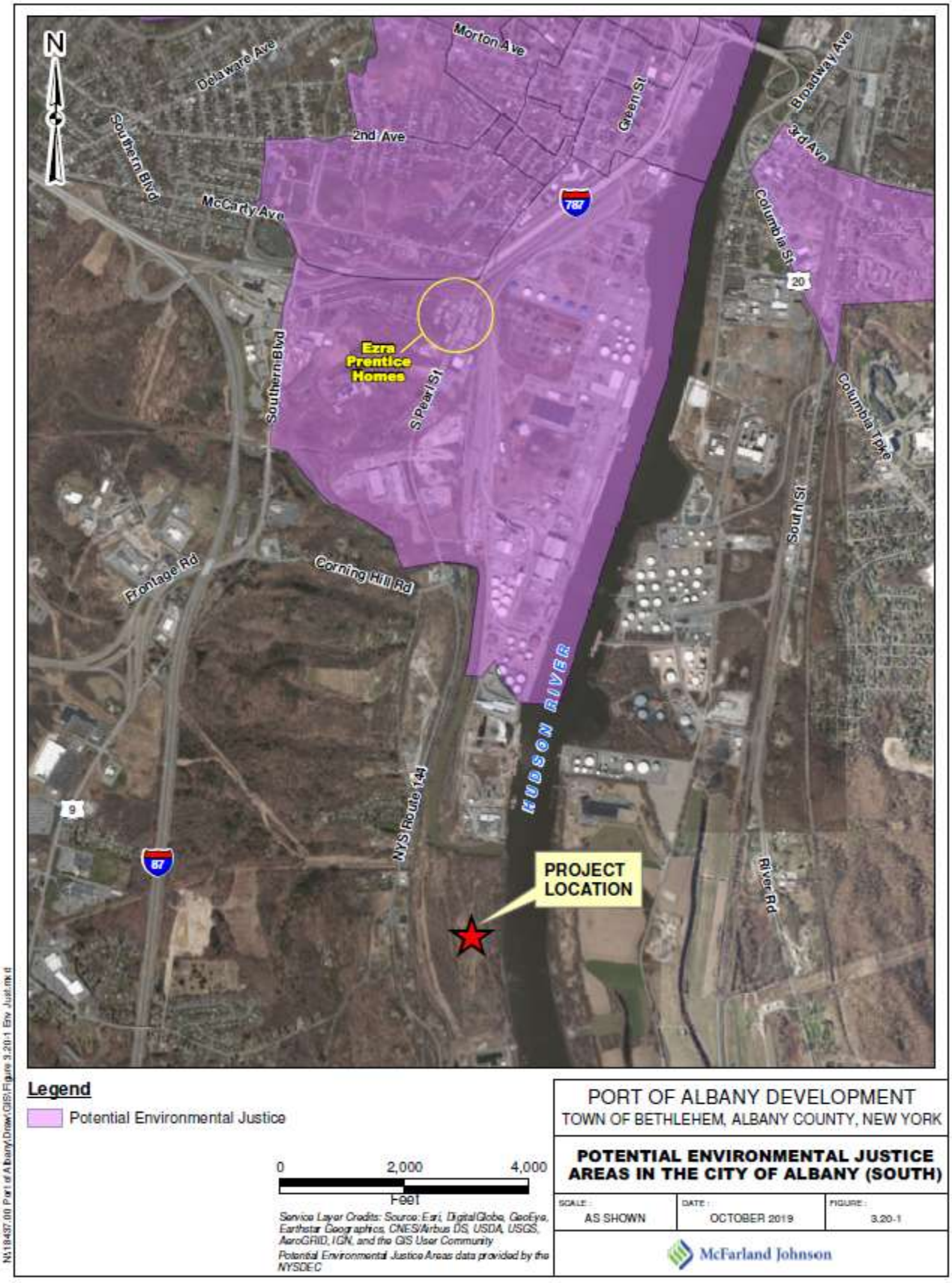
The project could potentially add up to 4 – 5 rail cars per day and up to 2 trains per month. Currently, approximately 11,000 rail cars per year (approximately 900 per month) and 30 – 35 trains per month pass through the adjacent rail yard, that serves but is not owned or controlled by the Port of Albany. The additional 4-5 rail cars are projected to be added to the existing trains that currently pass through the rail yard and therefore will not add any noise or diesel emissions impact to the Ezra Prentice neighborhood. The additional 1-2 trains per month is a slight increase

to the 30 -35 trains that already pass through the area, and therefore do not pose a significant environmental impact to the area.

To further mitigate any potential impacts, once a specific project is identified the Albany Port District Commission will proactively complete the environmental justice review and public outreach process pursuant to the NYSDEC CP 29 policy at the time of site plan application. Since the application and site plan approval resides within the Town of Bethlehem Planning Board jurisdiction, and the CP 29 policy is under the NYSDEC jurisdiction, both the State and the local municipality will ensure that public participation within the Ezra Prentice neighborhood is provided.

Therefore, the CP 29 procedures will occur during the Town of Bethlehem Site Plan approval process concurrently with the NYSDEC permitting process. This will give ample and redundant public education and comment periods on proposed projects. When the public participation process is complete, the Port will submit written certification that all requirements have been completed. The certification will include a report detailing the activities which occurred during the process. This certification will be considered by the NYSDEC and the Town of Bethlehem Planning Board in making their final decision on the application.

A Public Participation Plan relating to this SDGEIS is included in Appendix E. A Public Meeting for the SDGEIS will be held on Monday January 6, 2020 at 5:30pm at the Albany Housing Authority, located at 200 South Pearl Street, Albany, NY. This time and location was determined through coordination with the Albany Housing Authority and observations from attending the latest NYSDEC public presentations held for the Ezra Prentice community. It was observed that all or the majority of residents attended the early evening presentation. The location was chosen due its ability to accommodate a large audience, its proximity to the Ezra Prentice community (approximately 1 mile north of Ezra Prentice), is ADA accessible and has pedestrians, motor vehicles, and public transportation accommodations as it is on a CDTA bus route. In addition, as mentioned above the facility has housed previous public meetings for the Ezra Prentice community.


N
Delaware Ave
Morton Ave
Broadway Ave
Southern Blvd
2nd Ave
Green St
3rd Ave
McCarty Ave
787
Columbia St
20
Ezra Prentice Homes
Southern Blvd
S Pearl St
Columbia Tpke
South St
Frontage Rd
Corning Hill Rd
HUDSON RIVER
9
NYS Route 144
87
PROJECT LOCATION
River Rd
Legend
Potential Environmental Justice
0
2,000
4,000
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Potential Environmental Justice Areas data provided by the NYSDEC
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
POTENTIAL ENVIRONMENTAL JUSTICE AREAS IN THE CITY OF ALBANY (SOUTH)
SCALE: AS SHOWN
DATE: OCTOBER 2019
FIGURE: 3.20-1
McFarland Johnson
N:\18437.00 Port of Albany\Draw\GIS\Figure 3.20-1 Env Just.mxd

4. REASONABLE ALTERNATIVES TO BE CONSIDERED

4.1. No Build

The "No Build" alternative would consist of the continued use of the property in its current vacant condition. The Project Site would remain zoned as Heavy Industrial, and if remained undeveloped it would not be compatible with the Town of Bethlehem Comprehensive Plan nor would it create any tax benefits for the Town of Bethlehem or Albany County. The Town of Bethlehem's Comprehensive Plan states the specific goals which include a balanced tax base, creation of a business-friendly environment, and the promotion of commercial and industrial growth in specifically designated locations. The plan specifically identifies this Project Site (Beacon Island) as an area to be developed for industrial uses to provide a much-needed raise in tax base for the Town.

4.2. Site Development as Allowed by Existing Zoning

The Proposed Project includes the development of the Project Site with uses permitted by right pursuant to the Town's heavy industrial zoning regulations. In accordance with existing zoning, several alternative concept plans have been developed for the Project Site. It should be noted that no specific project has been identified and for the purpose of this Supplemental DGEIS, only the full build out and corresponding phases of Concept A are being evaluated. As described in detail in Section 2.3, Concept A represents the maximum amount of development permitted under current zoning, and therefore represents the concept plan that has the greatest potential for ecological and environmental impacts.

However, the Proposed Project could be built in phases with various building layouts and site configurations. For the purposes of this SDGEIS, Phase 1 consists of the construction of the site, utility and roadway infrastructure along with up to 300,000 square feet of building space. Phase 2 consists of an additional 300,000 square feet of building for a total of 600,000 square feet, and Phase 3 is an additional 530,000 square feet for a total full buildout of 1,130,000 square feet of industrial space. The impacts associated with each Phase have been provided in each applicable section of this Supplemental DGEIS. It should be noted that since Phase 1 includes site, utility and roadway infrastructure, these impacts are evaluated throughout all sections.

The Supplemental DGEIS summarizes each alternative impact all of which are less than the impacts associated with Concept A and therefore, Concept A represents the maximum level of mitigation as outlined in Table 1.3-1.

Descriptions of each of the concepts allowed by existing zoning and their associated mitigation measures include the following:

Concept Plan A – Largest, Two-Level Warehouse

The detailed description for this concept and the corresponding phasing plan is provided in Section 2.3.

Since this concept is a single building, this worst-case alternative will be built in one phase and represents the full buildout equivalent of Phase 3. As a result, all impacts associated this concept have been provided within all sections of this Supplemental DGEIS.

Impacts and mitigation measures for Concept A were detailed throughout the DGEIS and are summarized in Table 1.3-1.

Concept Plan B – One Large Single Level Warehouse

This option maximizes single story development gross floor and laydown area by relocating the railroad as far westward as turning radii allow. The industrial building front with staff parking to the north primary access way and trailer parking on the back towards the south of the Project Site. The warehouse will include a double-story administration area on the front of the building and has a docking length of 1,300 feet with rail on the west side and trucks on the east side facing the laydown and bulkhead area. The building total gross floor area is 900,800 SF.

Similar to concept A, this is a single building that will be built in one phase. Since the total building size is smaller than the worst-case scenario (concept A) all impacts are less than the impacts associated with concept A, and therefore do not represent a greater impact on the environment.

Impacts and mitigation measures for Concept B would match those associated with Concept A since the building is over the 600,000 SF phase II threshold and would therefore follow the mitigation outlined in Table 1.3-1.

Concept Plan C – Multiple Warehouses

This option houses multiple tenants and provides an entry plaza amenity connecting all four industrial buildings. The entry plaza is connected to staff parking east and west with access to all buildings. The rail serves all buildings on one side, and a loop road with perimeter trailer parking circles the building cluster. All buildings have a double story administration area facing the entry plaza. The railway is realigned towards the center of the Project Site, in order to make space for buildings, circulation and parking on both sides of the rail, and crosses Normans Kill inside the Project Site property. The two buildings west of the rail have a gross floor area of 160,000 SF each, and the two buildings east of the rail are 245,000 SF, amounting to a total of 810,000 SF.

This alternative could be built in three phases as outlined above. However, since each phase and the total size of the Proposed Project is less than the worst-case scenario (concept A), this alternative does not represent a greater impact on environment.

Impacts and mitigation measures for Concept C would match those associated with Concept A since the building is over the 600,000 SF phase II threshold and would therefore follow the mitigation outlined in Table 1.3-1.

Concept Plan D – Offshore Wind

This option includes the development of the Project Site in support of light fabrication and staging for the supply chain businesses associated with the offshore wind industry, such as steel foundation structures (jackets) and miscellaneous steel or concrete platforms. It maximizes open space for outside bulk storage of both components and finished products. It is served by a 160,000 SF storage building for equipment and light fabrication and finishing such as spray on coatings, which must be stored in a protected environment. The rail spur is re-aligned to service the west side of the building for delivery of offloading of components. A roadway is also provided through the Project Site to permit truck delivery of components, as well as staff access. Truck access is provided on the east side of the building. Employee parking is provided to the north of the building.

Similar to concept A, this is a single building that will be built in one phase. Since the total building size is smaller than the worst-case scenario (concept A) all impacts are less than the impacts associated with concept A, and therefore do not represent a greater impact on the environment.

Impacts and mitigation measures for Concept D would match those associated with Concept A, except for those relating to the traffic impact and mitigation measures. Traffic impacts and mitigation for Concept D would match the phase I traffic impact and mitigation measures outlined in the TIS as follows:

- Conduct a signal timing/operations analysis at the NYS Route 32 at South Port Road intersection to adjust signal timings to maximize the signal operation.
- Conduct a traffic signal warrant analysis based on the proposed site plan at the NYS Route 144 at NYS Route 32 intersection, install a signal if warranted
- Conduct a traffic signal warrant analysis at the NYS Route 144 at Glenmont Road intersection, install a signal if warranted.

Concept Plan D1 – Offshore Wind with Manufacturing

This option includes the development of the Project Site in support of manufacturing of offshore wind components, such as wind blades or tower structures and a 508,000 SF building for manufacturing. The building features railroad unloading of raw materials and components on the west side by a re-aligned railroad spur. It features truck loading docks on the south side, and staff parking on the north side. A roadway is also provided through the Project Site to permit truck delivery of components, as well as staff access. The design features a large storage yard and laydown area for completed components, which is critical for efficient loading onto ships.

Similar to concept A, this is a single building that will be built in one phase. Since the total building size is smaller than the worst-case scenario (concept A) all impacts are less than the impacts associated with concept A, and therefore do not represent a greater impact on the environment.

Impacts and mitigation measures for Concept D1 would match those associated with Concept A, except for the traffic impacts and mitigation measures. The traffic impacts and mitigation for Concept D1 would match the second phase of impacts and mitigation outlined in the TIS for phase II since Concept D1 is below the 600,000 SF threshold. Concept D1 traffic mitigation is as follows:

- Conduct a signal timings/operations analysis at NYS Route 32 at South Port Road intersection and adjust the signal timing to maximize signal operations
- Conduct a traffic signal warrant analysis at the NYS Route 144 at NYS Route 32 intersection and install a signal if warranted.
- Conduct a traffic signal warrant analysis at NYS Route 144 at Glenmont Road intersection and install a signal if warranted.

5. ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED

The Proposed Project has been outlined such that adverse temporary and permanent environmental impacts to the Ezra Prentice community will be avoided or mitigated to the degree possible in accordance with local, state and federal guidelines and regulations.

Temporary, normal, unavoidable short-term impacts from construction will be mitigated using common industry practices. Dust will be mitigated utilizing methods such as spraying water. Noise will be mitigated by confining construction to work periods permitted by the Town and that all equipment is has operational exhaust and muffler systems. All truck traffic, including construction vehicles, will be routed through the existing City Streets through the Port property to avoid traveling on South Pearl Street through the Ezra Prentice community.

Adverse environmental impacts that have been identified that can not be minimized, avoided, or mitigated include the following:

1. Removal of existing vegetation within the project limits; and
2. Reduction of vacant land available for future development.

Additional minimization, avoidance and mitigation measures will be implemented based on the final design project and in coordination with local, state, and federal regulatory agencies.

Overall, the use of a previously abandoned heavy industrial site, with existing infrastructure (roads and rail) and utilities (water, sewer, natural gas, and electric) already in place, is considered to be far more less likely to result in adverse environmental impacts as compared to the development of less disturbed, more natural lands along the Hudson River.

6. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Project will result in the development of currently vacant, and previously disturbed lands for industrial use. Once constructed, the lands would be unavailable for other potential uses for as far in the future as can be determined, based on what is currently known.

During construction natural and human resources will be consumed, converted, or made unavailable for future use. This would include building materials, fossil fuels, natural gas, and manpower. At this time, such resources are considered to be readily available and should not present a burden upon scarce materials or resources. Future manpower commitments would include required emergency personnel services (police, fire, and medical services) in the event of an emergency. However, these services are provided by different EMS districts than those that serve the Ezra Prentice community. In addition, significant additional tax revenue would go to the Town of Bethlehem and Albany County after completion of the Proposed Project, as is discussed in Section 3.17. The Project Sponsor has received notice from the police, fire, and ambulance services that they have the resources to serve the Proposed Project.

The Proposed Project will not cause any irreversible and irretrievable commitment of resources as it relates to the Ezra Prentice community.

7. GROWTH-INDUCING ASPECTS OF THE PROPOSED PROJECT

The Proposed Project is not anticipated to create a significant increase in the populations of local communities such that additional private or public services are required. The Proposed Project will connect to existing utilities (water, natural gas, and electric) already in place, and lies in a separate municipality and school district than the Ezra Prentice community. As a result, the Proposed Project will not preempt additional development due to more readily available access to these private or public services or utilities. Therefore, the Proposed Project will not affect the Ezra Prentice community by any growth inducing aspects.

The Proposed Project will provide significant additional tax revenue to the Town of Bethlehem and Albany County upon completion of the Proposed Project, as is discussed in Section 3.17. This additional tax revenue provided to these governmental agencies could be utilized to provide new, or improve, or expand on existing public services. How these additional tax revenues would be specifically utilized would be determined by each respective agency.

8. CUMULATIVE IMPACTS

As reported by the Town of Bethlehem Planning Department, recent development trends include projects submitted to the Bethlehem Planning Board for review and approval which consist of a warehouse development; an assisted living facility; convenience store; and single-family homes and condominium subdivisions. A description of these projects are as follows:

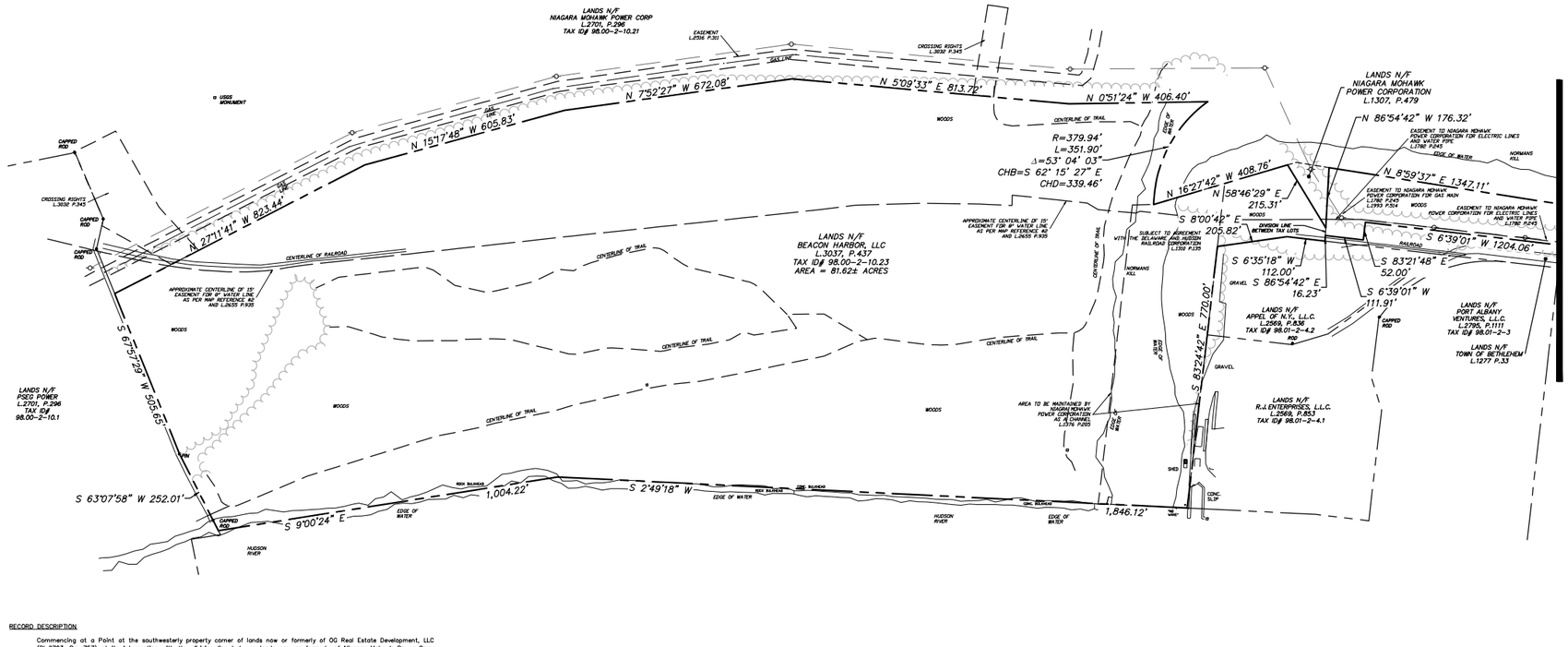
- Gateway Commerce Center – 169,050 SF of space within three buildings for light industrial use
- Beacon Heights Senior Community – construction includes a two-story 89,000 SF, 72 unit assisted living facility with parking. The project also includes a 20,000 SF two-story building for commercial use
- 194 River Road Convenience Store/Gas Station – 2,358 SF convenience store on first floor and 2,212 SF office on second floor. 4 gas pumps (8 dispensers)
- Wiggand/Grady Conservation Subdivision – 99 units including 79 single family homes and 20 condominium units

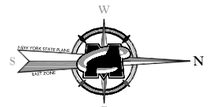
The Proposed Project will not affect the future land use in the Project vicinity since no off-site infrastructure adjacent to vacant lands is being proposed. The Proposed Project will connect to existing utilities (water, natural gas, and electric) already in place. As a result, the Proposed Project should not preempt additional development due to more readily available access to these utilities. In addition, the Proposed Project will not alter adjacent lands or accessibility from its current setting.

The Proposed Project, when taking into consideration of past, present and reasonably foreseeable future actions in the vicinity of the Project Area, should not result in significant cumulative impacts to the same resource(s) or to the Ezra Prentice community.

APPENDIX A

SITE SURVEY





RECORD DESCRIPTION

Commencing at a Point at the southwesterly property corner of lands now or formerly of OG Real Estate Development, LLC (Bk.2703, Pg. 757) at its intersection with the division line between lands now or formerly of Niagara Mohawk Power Corp. (Bk.1265 Pg.75) on the west and lands now or formerly of PSEG Power New York, Inc. (Bk. 2655, Pg. 935) on the south; thence along said division line between the aforementioned OG Real Estate Development, LLC on the east and the aforementioned Niagara Mohawk Power Corp. on the west the following five (5) courses and distances:

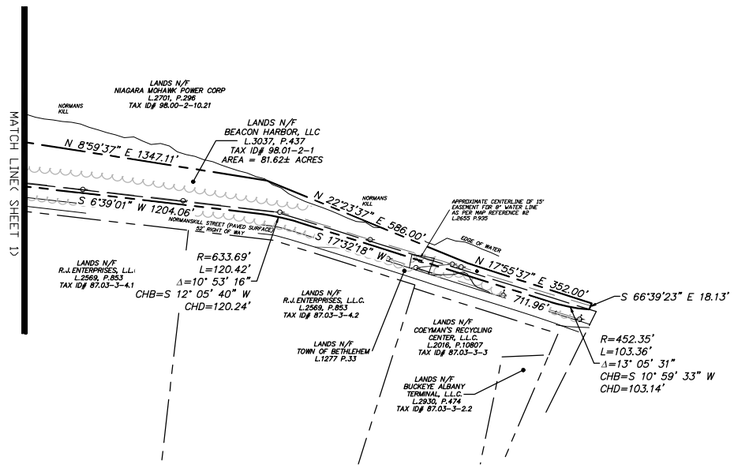
1. North 27°13'40" West, 823.44 feet to a point; thence
2. North15°19'47"West, 605.83feettoapoint; thence
3. North 07°54'26" West, 672.08 feet to a point; thence
4. North 05°07'34" East, 813.72 feet to a point; thence
5. North 00°53'23" West, 406.40 feet to a point in the division line between lands of the State of New York (Normans Kill) and lands of the aforementioned OG Real Estate Development, LLC; thence along said division line the following two (2) courses and distances:
   1. along an arc to the left having a central angle of 53°03'33", a radius of 380.00 feet and an arc length of 351.90 feet, chord bearing South 62°17'26" East, 339.46 feet to a point; thence
   2. North 16°29'41" West, 408.76 feet to a point in the common division line between ether lands now or formerly of Niagara Mohawk Power Corp. on the west and lands of the aforementioned OG Real Estate Development, LLC on the east; thence along said division line the following two (2) courses and distances:
      1. North 58°44'30" East, 215.31 feet to a point; thence
      2. North 86°56'41" West, 176.32 feet to a point in the common division line between lands of the aforementioned State of New York (Normans Kill) on the west and other lands now or formerly of OG Real Estate Development, LLC (Bk. 2905, Pg. 204) on the east; thence along said common division line the following three (3) courses and distances:
         1. North 08°57'38" East, 1347.11 feet to a point; thence
         2. North 22°21'38" East, 586.00 feet to a point; thence
         3. North 17°53'38" East, 352.00 feet to a point in the westerly road boundary of South Port Road; thence along said westerly and also southerly road boundary the following five (5) courses and distances:
            1. along an arc to the right having a central angle of 13°05'31", a radius of 452.35 feet and an arc length of 103.36 feet to a point; thence
            2. South 17°30'19" West, 711.96 feet to a point of curvature; thence
            3. along an arc to the left having a central angle of 10°53'17", a radius of 633.69 feet and an arc length of 120.42 feet to a point; thence
            4. South 06°37'02" West, 1204.06 feet to a point; thence
            5. South 83°22'47" East, 52.00 feet to a point in the westerly boundary of the D & H Railroad; thence along said westerly boundary and also the southerly boundary of said D & H Railroad the following two (2) courses and distances:
               1. South 06°37'02" West, 111.91 feet to a point; thence
               2. South 86°56'41" East, 16.23 feet to a point in the easterly boundary line of lands of the aforementioned OG Real Estate Development, LLC (Bk. 2703, Pg. 757); thence along said easterly boundary line the following three (3) courses and distances:
                  1. South 06°33'19" West, 112.00 feet to a point; thence
                  2. South 08°02'41" East, 205.82 feet to a point; thence
                  3. South 83°26'41" East, 770.00 feet to a point along the Hudson River; thence along said Hudson River the following two (2) courses and distances:
                     1. South 02°47'19" West, 1846.12 feet to a point; thence
                     2. South 09°02'23" East, 1004.22 feet to a point in the common division line between lands of the aforementioned PSEG Power New York, Inc. on the south and lands of the aforementioned OG Real Estate Development, LLC on the north; thence along said common division line the following two (2) courses and distances:
                        1. South 63°05'59" West, 252.01 feet to a point; thence
                        2. South 67°55'30" West, 505.65 feet to the Point or Place of Beginning.

MAP REFERENCES:

1. MAP ENTITLED "ALTA/ACSM LAND TITLE SUREY (URBAN CLASS) FOR ALBANY STEAM STATION, LANDS TO BE CONVEED TO PSEG POWER NEW YORK INC." PREPARED BY NIAGARA MOHAWK POWER CORPORATION, DATED DECEMBER 06, 1999, LAST REVISED MARCH 13, 2000.
2. MAP ENTITLED "ALBANY STEAM STATION SERVICE WATER LINE GENERAL PLAN AND PROFILE" BY PREPARED BY NIAGARA MOHAWK POWER CORPORATION, DATED MAY 15, 1952 AND LAST REVISED JUNE 27, 1989.
3. MAP ENTITLED "BOUNDARY SURVEY SHOWING LANDS N/F OF OG REAL ESTATE DEVELOPMENT, LLC" BY WSP SELLS, DATED SEPTEMBER 16, 2009.

GENERAL NOTES:

1. UNDERGROUND UTILITIES SHOWN HEREON BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND RECORD DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
2. THE OFFSETS OR DIMENSIONS SHOWN HEREON, FROM THE PROPERTY LINES TO THE STRUCTURES, ARE FOR A SPECIFIC PURPOSE AND USE; THEREFORE, THEY ARE NOT INTENDED TO MONUMENT THE PROPERTY LINES OR TO GUIDE THE ERECTION OF FENCES, ADDITIONAL STRUCTURES OR ANY OTHER IMPROVEMENTS.
3. EASEMENTS AND/OR SUBSURFACE STRUCTURES RECORDED OR UNRECORDED ARE NOT GUARANTEED UNLESS PHYSICALLY EVIDENT ON THE PREMISES AT THE TIME OF THE SURVEY.
4. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS AND RESTRICTIONS OF RECORD.
5. BASIS OF BEARING IS NEW YORK STATE PLANE COORDINATE SYSTEM EAST ZONE. CONTROL WAS ESTABLISHED USING NYSNET VRS SYSTEM. THE HORIZONTAL DATUM IS RELATIVE TO NAD83
6. THE VERTICAL POSITION OF THE HEREIN SURVEY IS BASED ON THE STATIC GPS OBSERVATIONS AND IS SUBJECT TO FURTHER ADJUSTMENT TO ANY LOCAL NGS BENCHMARKS. THE VERTICAL DATUM IS RELATIVE TO NAVD 1988 VIA THE APPLICATION OF GEOID MODEL 12B.
7. NO EVIDENCE OF RECENT EARTH MOVING WORK BUILDING CONSTRUCTION, OR BUILDING ADDITIONS WERE OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.
8. NO WETLAND DELINEATION OBSERVED IN THE PROCESS OF CONDUCTING FIELDWORK.



SCALE : 1" = 150'

LEGEND

- TRAVERSE LINE, CENTER LINE OR BASELINE
- RIGHT OF WAY LINE
- PROPERTY LINE
- EDGE OF PAVEMENT
- CURB LINE
- DEPRESSED CURB
- CHAIN FENCE
- WETLAND LINE
- MUNICIPAL BOUNDARY
- TREELINE
- ELECTRICAL MANHOLE
- WATER MANHOLE
- TELEPHONE MANHOLE
- UNMARKED MANHOLE
- SANITARY MANHOLE
- DRAINAGE MANHOLE
- MAJOR CONTOUR
- MINOR CONTOUR
- SPOT ELEVATION
- TOP OF CURB ELEV.
- BOTTOM OF CURB ELEV.
- U/G CABLE TV LINE
- U/G FIBER OPTIC LINE
- U/G TELEPHONE LINE
- U/G ELECTRIC LINE
- OVERHEAD WIRE
- WATER MAIN
- GAS MAIN
- SAN. SEWER LATERAL
- SAN. SEWER MAIN
- STORM PIPE
- WETLAND MARKER
- TREE
- ROADWAY SIGNS
- TRAFFIC FLOW
- MAILBOX
- TRAFFIC SIGNAL POLE
- POLE MOUNTED LIGHT
- UTILITY POLE
- GUY WIRE
- TRANSFORMER
- FIRE DEPT. CONNECTION
- FIRE HYDRANT
- WATER VALVE
- GAS VALVE
- SANITARY CLEANOUT
- CONCRETE MONUMENT
- CAPPED REBAR/IRON PIPE
- STORM INLET TYPE 'A'
- STORM INLET TYPE 'B'
- STM. DBL. INLET TYPE 'B'
- STORM INLET TYPE 'E'
- STM. DBL. INLET TYPE 'E'
- FLARED END SECTION
- HEADWALL

ABBREVIATIONS

D.C. = DEPRESSED CURB
BC = BOTTOM OF CURB
TC = TOP OF CURB
BOL = BOLLARD
GRT = GRATE
MB = MAILBOX
FF = FINISH FLOOR
UV = UNKNOWN VALVE
MH = MANHOLE
DEP. = DEPRESSED
CL = CENTERLINE
PM = PARKING METER
MHWL = MEAN HIGH WATERLINE
MLWL = MEAN LOW WATERLINE
TW = TOP OF WALL
BW = BOTTOM WALL

MASER CONSULTING P.A.
Customer Loyalty through Client Satisfaction
www.maserconsulting.com
Engineers ■ Planners ■ Surveyors
Landscape Architects ■ Environmental Scientists
Office Locations:
■ Red Bank, NJ ■ Lehigh Valley, PA
■ Clinton, NJ ■ Exton, PA
■ Cherry Hill, NJ ■ Philadelphia, PA
■ Egg Harbor, NJ ■ Pittsburgh, PA
■ Montvale, NJ ■ Toronto, ON
■ Mt. Arlington, NJ ■ Orlando, FL
■ Liberty, NJ ■ Tampa, FL
■ Albany, NY ■ Jacksonville, FL
■ New Windsor, NY ■ Sterling, VA
■ Westchester, NY ■ Norfolk, VA
■ Charlotte, NC ■ Albuquerque, NM
■ Raleigh, NC ■ Cleveland, OH
State of N.Y. Certificate of Authorization: 0008611 | 0008813

811 PROTECT YOURSELF
ALL UTILITIES REQUIRE NOTIFICATION OF EXCAVATION, DEMOLITION, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE, BOTH WITHIN AND OUTSIDE OF THE STREET.
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	2/26/19	BAS	UPDATE AS PER TITLE INFORMATION

NEW YORK STATE OF OPPORTUNITY. DEPARTMENT OF STATE
PAUL T. VANHAVERBEKE
049893
LICENSED LAND SURVEYOR

PAT T. VANHAVERBEKE
NEW YORK LICENSED
LAND SURVEYOR - LICENSE NUMBER: 049893

BOUNDARY SURVEY OF LANDS NOW OR FORMERLY OF
BEACON HARBOR, LLC

TAX ID # 98.00-2-10.23
TAX ID# 98.01-2-1

TOWN OF BETHLEHEM
ALBANY COUNTY
STATE OF NEW YORK

ALBANY OFFICE
21 Computer Drive East
Suite 203
Albany, NY 12205
Phone: 518.459.3252
Fax: 518.459.3284

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	07/31/18	BAS	PTV
PROJECT NUMBER:	DRAWING NAME:		
18001376A	V:\SURVEY\MASER		

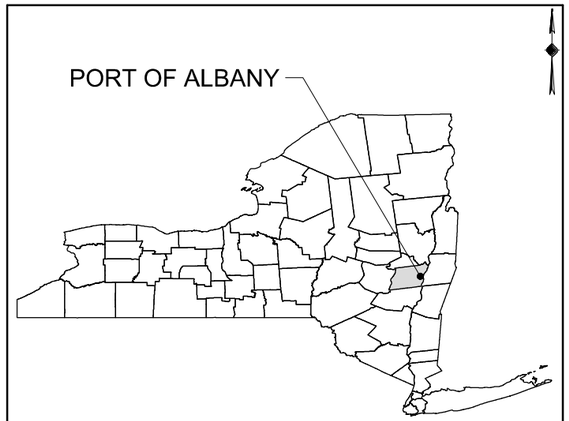
SHEET TITLE:
BOUNDARY SURVEY

SHEET NUMBER:
01 of 01

APPENDIX B

CONCEPT PLAN A

ALBANY PORT DISTRICT COMMISSION
PORT OF ALBANY EXPANSION

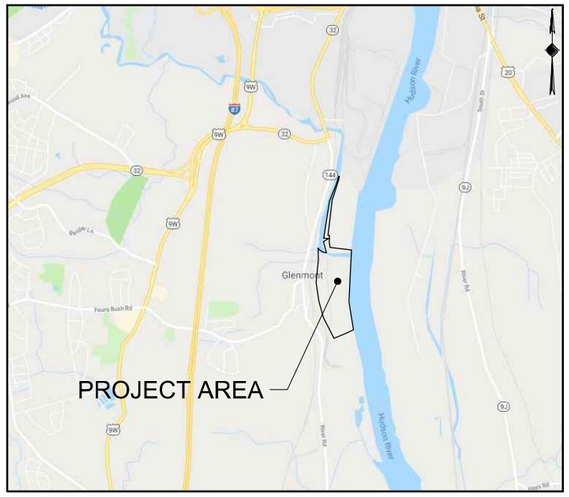


LOCATION MAP

JUNE 2019

TOWN OF BETHLEHEM
COUNTY OF ALBANY
NEW YORK

CONCEPT A SITE PLANS



VICINITY MAP

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
--	COVER SHEET
SURV-01	BOUNDARY SURVEY
SURV-02	TOPOGRAPHY
C-00	OVERALL CONCEPTUAL SITE LAYOUT
C-01	PARTIAL SITE LAYOUT PLAN 1
C-02	PARTIAL SITE LAYOUT PLAN 2
C-03	PARTIAL SITE LAYOUT PLAN 3
C-04	PARTIAL SITE LAYOUT PLAN 4
C-05	PARTIAL SITE LAYOUT PLAN 5
C-06	PARTIAL SITE LAYOUT PLAN 6
C-07	PARTIAL SITE LAYOUT PLAN 7
C-08	PARTIAL SITE LAYOUT PLAN 8
GR-00	OVERALL CONCEPTUAL GRADING PLAN
GR-01	PARTIAL GRADING PLAN 1
GR-02	PARTIAL GRADING PLAN 2
GR-03	PARTIAL GRADING PLAN 3
GR-04	PARTIAL GRADING PLAN 4
GR-05	PARTIAL GRADING PLAN 5
GR-06	PARTIAL GRADING PLAN 6
GR-07	PARTIAL GRADING PLAN 7
GR-08	PARTIAL GRADING PLAN 8
UT-01	UTILITY LAYOUT

PREPARED FOR:

PORT OF ALBANY

ALBANY PORT DISTRICT COMMISSION
106 SMITH BOULEVARD
ALBANY, NEW YORK
(518) 463-1568
WWW.PORTOFALBANY.US

PREPARED BY:

McFarland Johnson

60 RAILROAD PLACE, SUITE 402
SARATOGA SPRINGS, NEW YORK 12866

18437.00

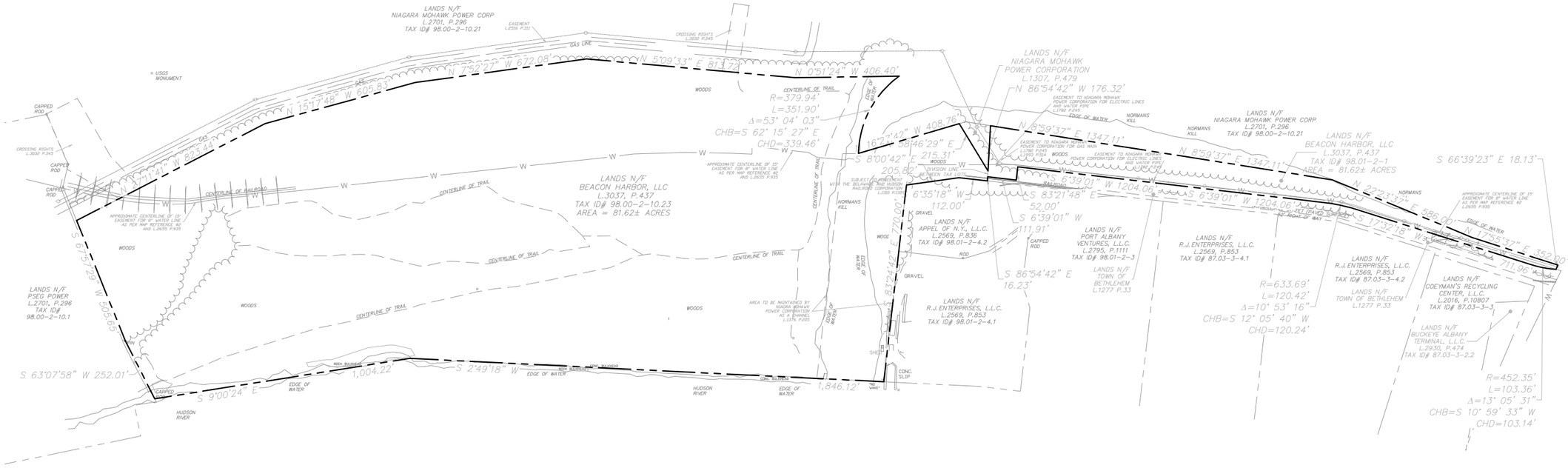
UTILITY CONTACTS

WATER/ SEWER/ STORM/ ROADS
TOWN OF BETHLEHEM DEPARTMENT OF PUBLIC WORKS
GEORGE S. KANSAS, P.E., COMMISSIONER
445 DELAWARE AVENUE
DELMAR, NY 12054
(518) 439-4955

NYSDOT REGION 1
MARK PYSKADIO, P.E. , REGIONAL TRAFFIC ENGINEER
50 WOLF ROAD
ALBANY, NY 12232
(518) 457-5283

FIRE DEPARTMENT
CHARLES WICKHAM JR.,
CHAIRMAN - BOARD OF FIRE COMMISSIONERS
PO BOX 5
SELKIRK, NY 12158
(518) 767-0010

NATIONAL GRID
CAROLYN J. O'DONNELL,
CONSUMER REPRESENTATIVE
1125 BROADWAY
ALBANY, NY 12204
(518) 433-3357



GENERAL NOTES:

1. THE UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM A SURVEY PREPARED BY MASER CONSULTING P.A. 18 COMPUTER DRIVE EAST SUITE 203, ALBANY, NY 12205. DATED SEPTEMBER 28, 2018 AND AVAILABLE SURVEYS AND RECORD MAPS BY OTHERS. MCFARLAND JOHNSON DOES NOT CERTIFY TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

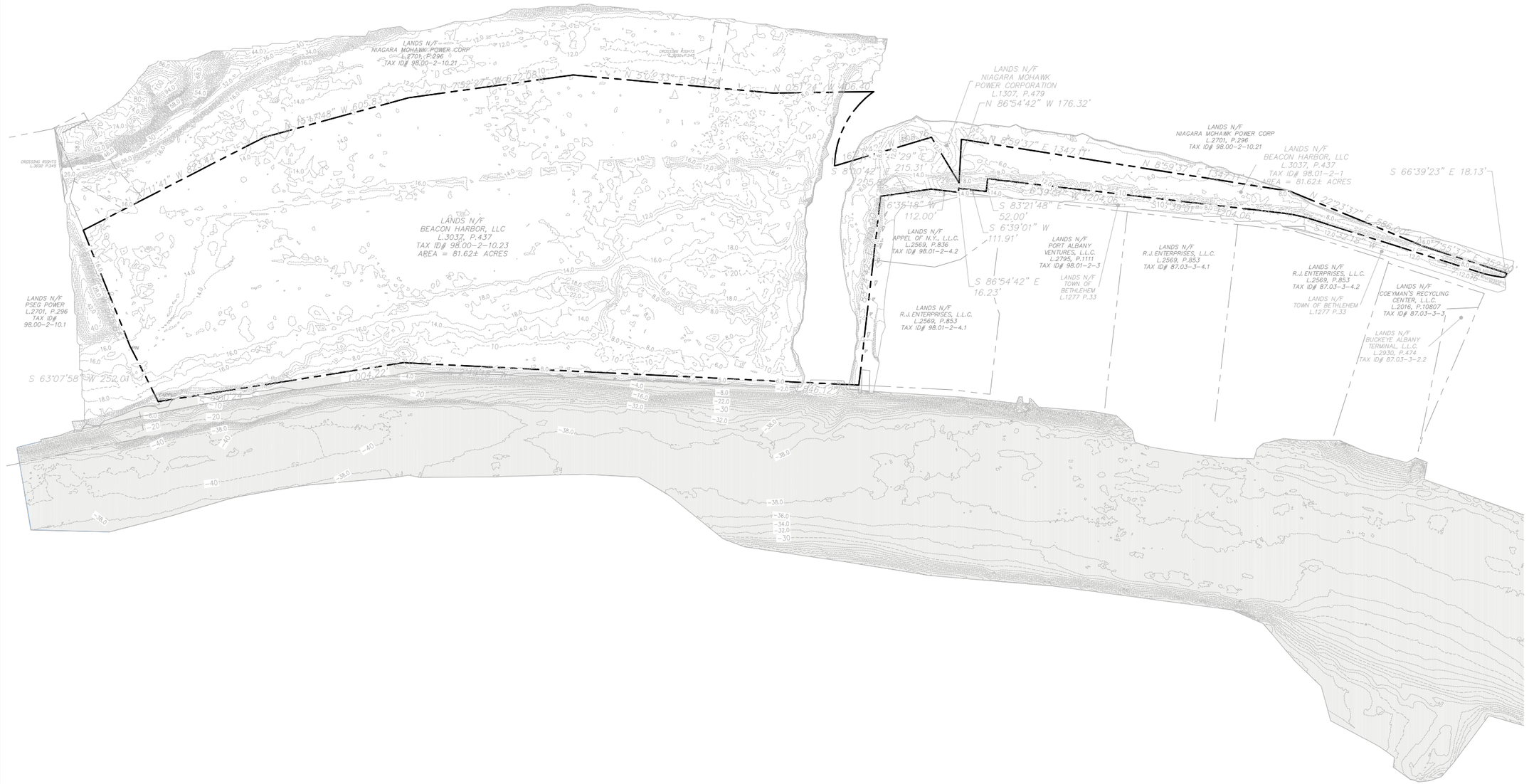
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=200'
DATE	MAY 2019
PROJECT	18437.00

DRAWING TITLE
BOUNDARY SURVEY

DRAWING NUMBER
SURV-01



LEGEND

PROPERTY LINE

HUDSON RIVER BATHYMETRY

GENERAL NOTES:

1. THE UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM A SURVEY PREPARED BY MASER CONSULTING P.A. 18 COMPUTER DRIVE EAST SUITE 203, ALBANY, NY 12205. DATED SEPTEMBER 28, 2018 AND AVAILABLE SURVEYS AND RECORD MAPS BY OTHERS. MCFARLAND JOHNSON DOES NOT CERTIFY TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.

0 200 400 600 FT

SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE

CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=200'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE

TOPOGRAPHY

DRAWING NUMBER

SURV-02

PROJECT DATA

1. APPLICANT / LAND OWNER:
   ALBANY PORT DISTRICT COMMISSION
   106 SMITH BOULEVARDS
   ALBANY, NEW YORK 12205
2. EXISTING ZONING: HEAVY INDUSTRIAL
3. LOT AREA: 81,62 ACRES (3,555,289 SF)
4. BUILDING HEIGHT: 85 FT

SITE DATA		
FEATURE	REQUIRED	PROPOSED
MINIMUM LOT SIZE, NONRESIDENTIAL	5 ACRES	81,62 ACRES
MINIMUM FRONT YARD, FROM RIGHT-OF-WAY	100 FEET	N/A
MINIMUM FRONT YARD, FROM CENTER LINE	125 FEET	308 FEET
MINIMUM SIDE YARD	25 FEET	308 FET
MINIMUM REAR YARD	50 FEET	753 FFET
MINIMUM HIGHWAY FRONTAGE	150 FEET	2140 FEET
MAXIMUM HEIGHT	LESSER OF 4 STORIES OR 60 FFET	85 FEET*
MINIMUM LOT DEPTH	200 FEET	2850 FEET
MINIMUM LOT WIDTH	150 FEET	757 FEET
MAXIMUM LOT COVERAGE	30%	15,9%**

* WILL REQUEST A VARIANCE
** 1,130,000 SF TWO-STORY BUILDING HAS A FOOTPRINT OF 565,000 SF

ZONING:

EXISTING: ±81,62 ACRES HEAVY INDUSTRIAL

PROPOSED: ±81,62 ACRES HEAVY INDUSTRIAL

TAX ACCOUNT NUMBERS: 98,00-2-10,23
98,01-2-1

PARKING:

1 SPACE FOR EACH 1,0000 SQUARE FEET OF GROSS FLOOR AREA

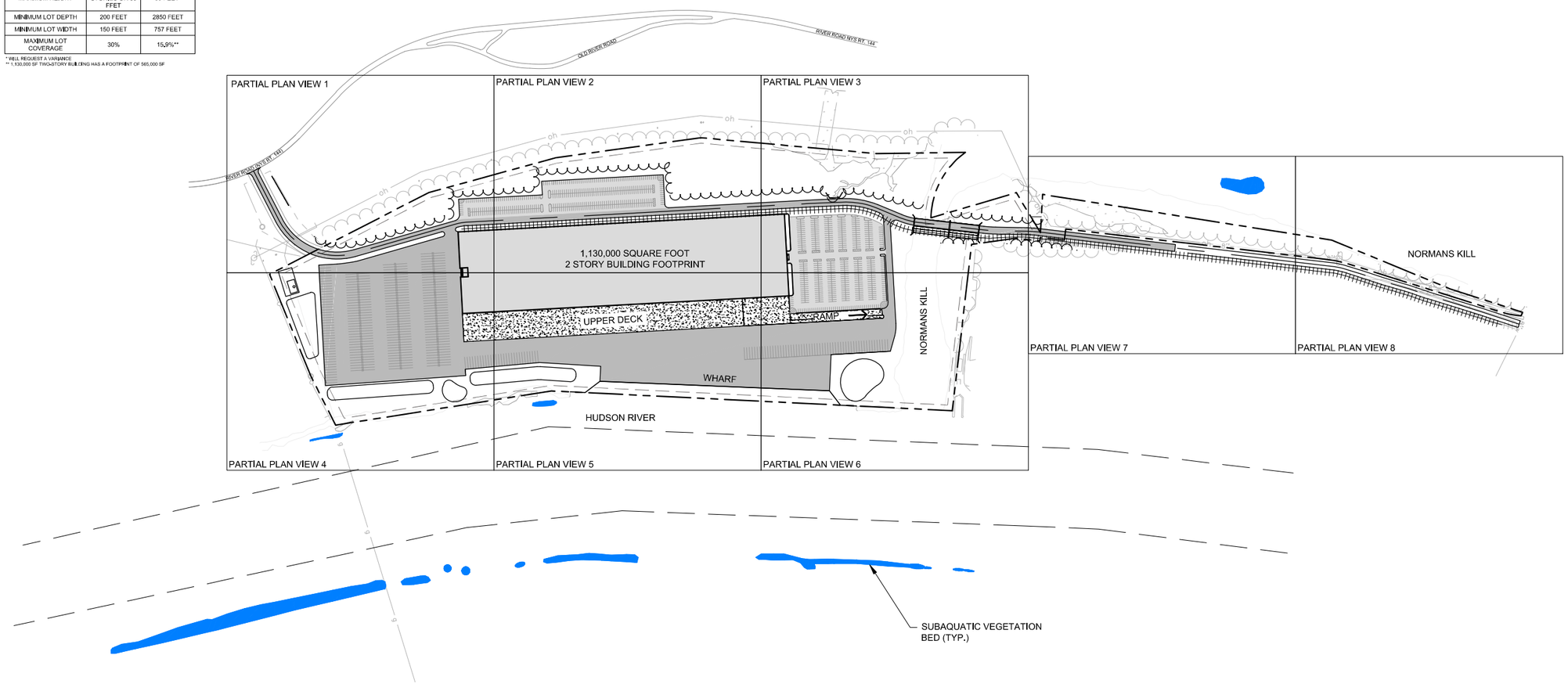
TOTAL SQUARE FEET PROPOSED = 1,130,000

REQUIRED:
1130 TOTAL SPACES REQUIRED

PROVIDED:
CAR PARKING 784 SPACES PROVIDED
TRUCK PARKING 361 SPACES PROVIDED
1145 TOTAL SPACES PROVIDED

ADA SPACES REQUIRED:
PER 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

REQUIRED (784 SPACE LOT): 16 SPACES
PROVIDED (784 SPACE LOT): 16 SPACES



LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- RAIL LINE
- TREE LINE
- NAVIGATION CHANNEL
- HEAVY DUTY PAVEMENT
- LIGHT DUTY PAVEMENT
- CONCRETE AREA
- WETLAND AREA

0 250 500 750 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	--
SCALE	1"=150'
DATE	JUNE 2019
PROJECT	18437,00

DRAWING TITLE

OVERALL CONCEPTUAL SITE LAYOUT

DRAWING NUMBER

C-00

RIVER ROAD (NYS RT. 144)

RETAINING WALL

ACCESS EASEMENT

MATCHLINE SHEET C-04

MATCHLINE SHEET C-02

PROPERTY LINE (TYP.)

SIDE BUILDING SETBACK LINE (25')

TREE LINE / LIMIT OF DISTURBANCE (TYP.)

32' WIDE ACCESS ROAD
(2) 12' WIDE TRAVEL LANES
(2) 4' WIDE SHOULDERS

RAIL LINE (TYP.)

9' (TYP.)

26' (TYP.)

18' (TYP.)

12' (TYP.)

55' (TYP.)

65.5' (TYP.)

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

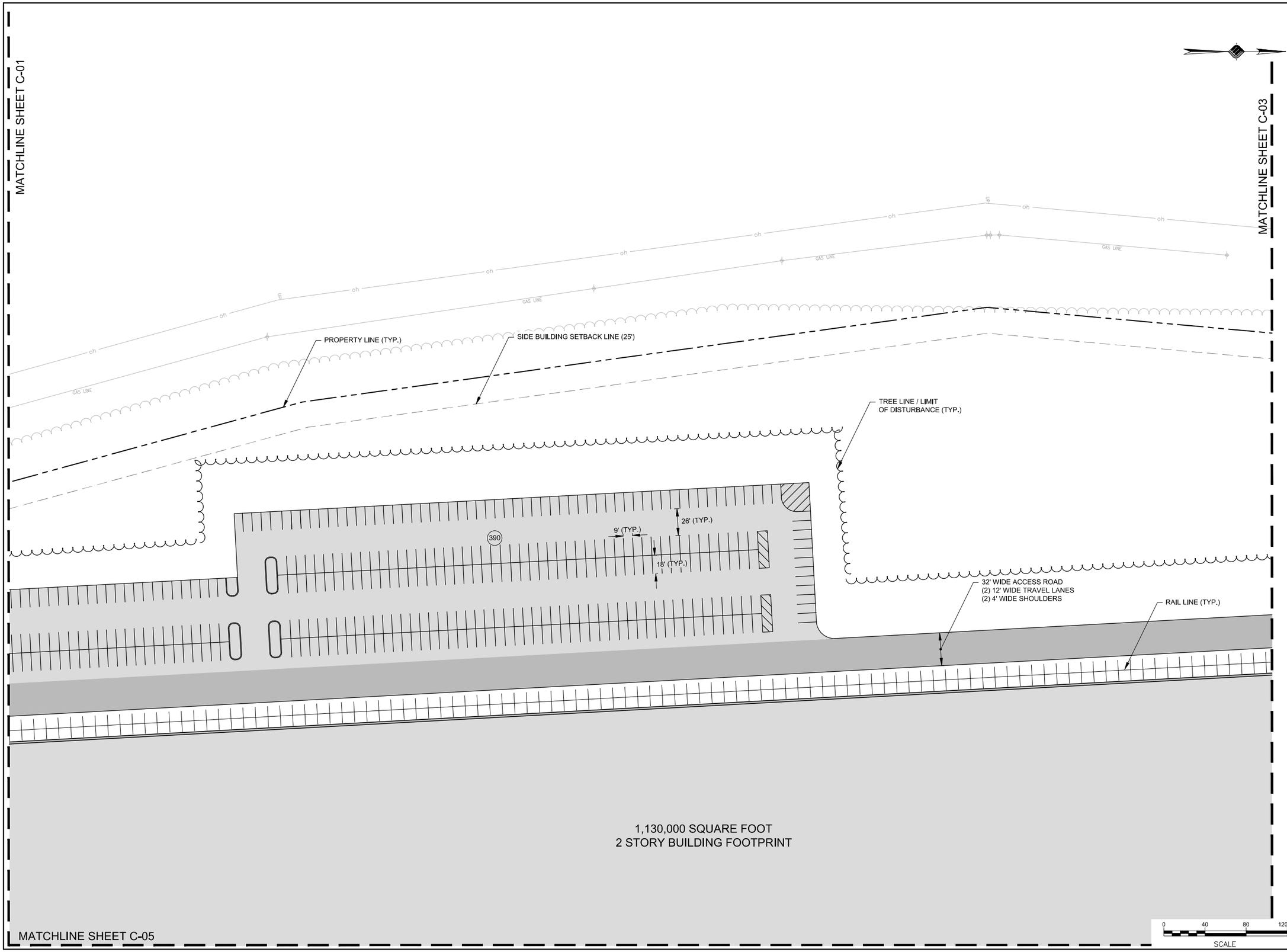
DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
PARTIAL SITE LAYOUT PLAN 1

DRAWING NUMBER
C-01

MATCHLINE SHEET C-01

MATCHLINE SHEET C-03



MATCHLINE SHEET C-05

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437,00

DRAWING TITLE
PARTIAL SITE LAYOUT PLAN 2

DRAWING NUMBER
C-02

MATCHLINE SHEET C-02

CROSSING RIGHTS

PROPERTY LINE (TYP.)

SIDE BUILDING SETBACK LINE (25')

WETLAND 1 TO REMAIN

TREE LINE / LIMIT OF DISTURBANCE (TYP.)

RETAINING WALL

32' WIDE ACCESS ROAD
(2) 12' WIDE TRAVEL LANES
(2) 4' WIDE SHOULDERS

RAIL LINE (TYP.)

9' (TYP.)

18' (TYP.)

26' (TYP.)

514

VEHICLE BRIDGE

WETLAND 9 TO BE IMPACTED (0.04 ACRES)

BRIDGE ABUTMENT (TYP.)

RAIL BRIDGE

NORMANS KILL

EDGE OF WATER

WOODS

MATCHLINE SHEET C-03

MATCHLINE SHEET C-06

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

PROJECT: PORT OF ALBANY EXPANSION

BETHLEHEM, NEW YORK

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
PARTIAL SITE LAYOUT PLAN 3

DRAWING NUMBER
C-03

MATCHLINE SHEET C-01

PROPOSED BLOWDOWN PAD BY NATIONAL GRID

BIORETENTION BASIN

CHAIN LINK FENCE

284

65.5' (TYP.)

12' (TYP.)

55' (TYP.)

55' (TYP.)

REAR BUILDING SETBACK LINE (50')

BIORETENTION BASIN

WETLAND 3 TO REMAIN

STONE BULKHEAD

STORMWATER RETENTION POND

SIDE BUILDING SETBACK LINE (25')

PROPERTY LINE (TYP.)

WETLAND 4 TO REMAIN

SUBMERGED AQUATIC VEGETATION BED (2016 DEC SURVEY)

PROPOSED GAS LINE BY NATIONAL GRID

NAVIGATION CHANNEL BOUNDARY

MATCHLINE SHEET C-05

0 40 80 120 FT

SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE

CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE

PARTIAL SITE LAYOUT PLAN 4

DRAWING NUMBER

C-04

MATCHLINE SHEET C-02

1,130,000 SQUARE FOOT
2 STORY BUILDING FOOTPRINT

UPPER DECK

125'

28

12' (TYP.)

55' (TYP.)

WHARF

BIORETENTION BASIN

STONE BULKHEAD

EDGE OF WATER

WETLAND 3 TO REMAIN

WHARF BULKHEAD

SUBMERGED AQUATIC
VEGETATION BED
(2016 DEC SURVEY)

SIDE BUILDING
SETBACK LINE (25')

PROPERTY LINE (TYP.)

NAVIGATION CHANNEL BOUNDARY

MATCHLINE SHEET C-04

MATCHLINE SHEET C-06

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

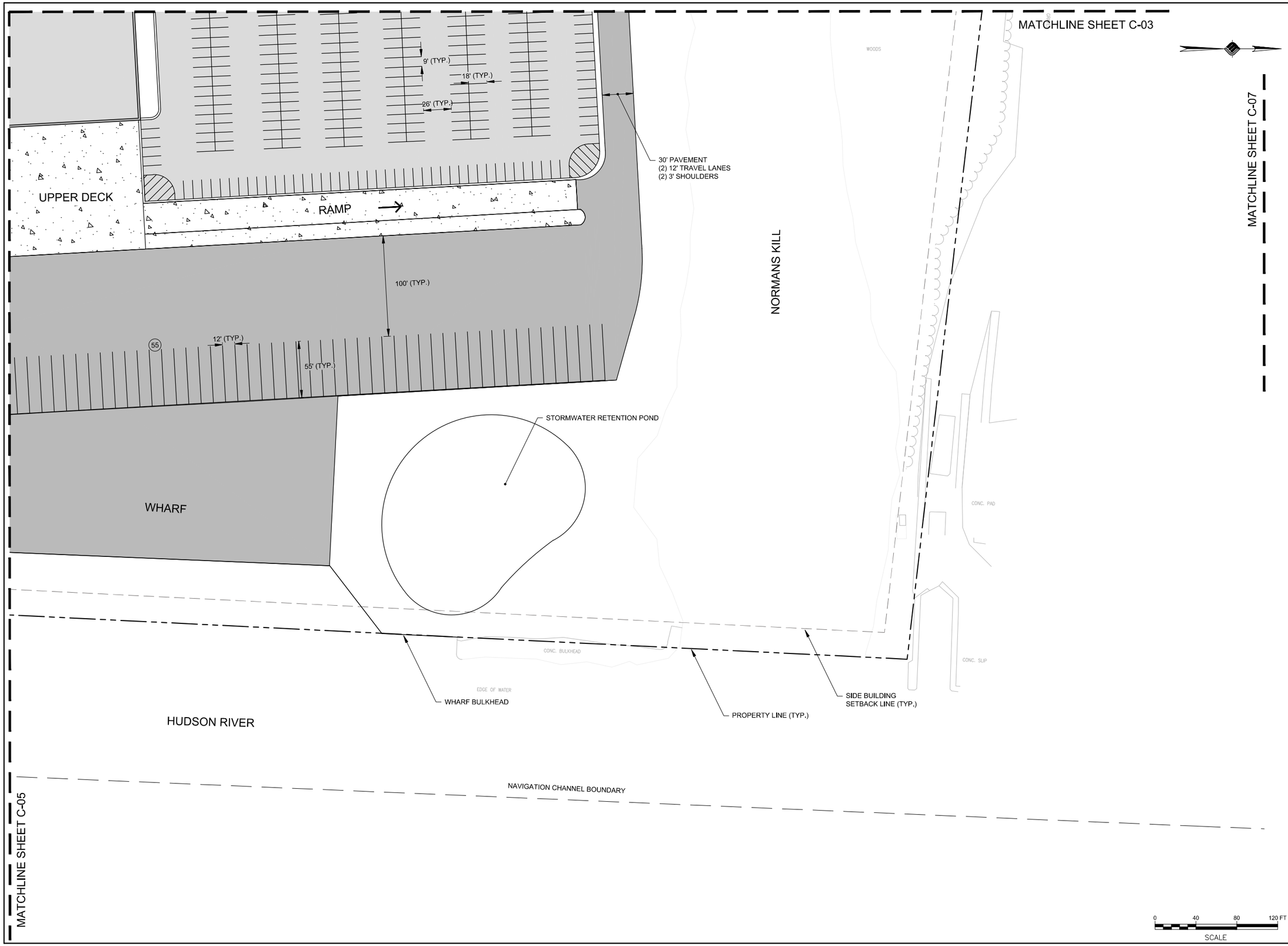
DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437,00

DRAWING TITLE

PARTIAL SITE LAYOUT PLAN 5

DRAWING NUMBER

C-05



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

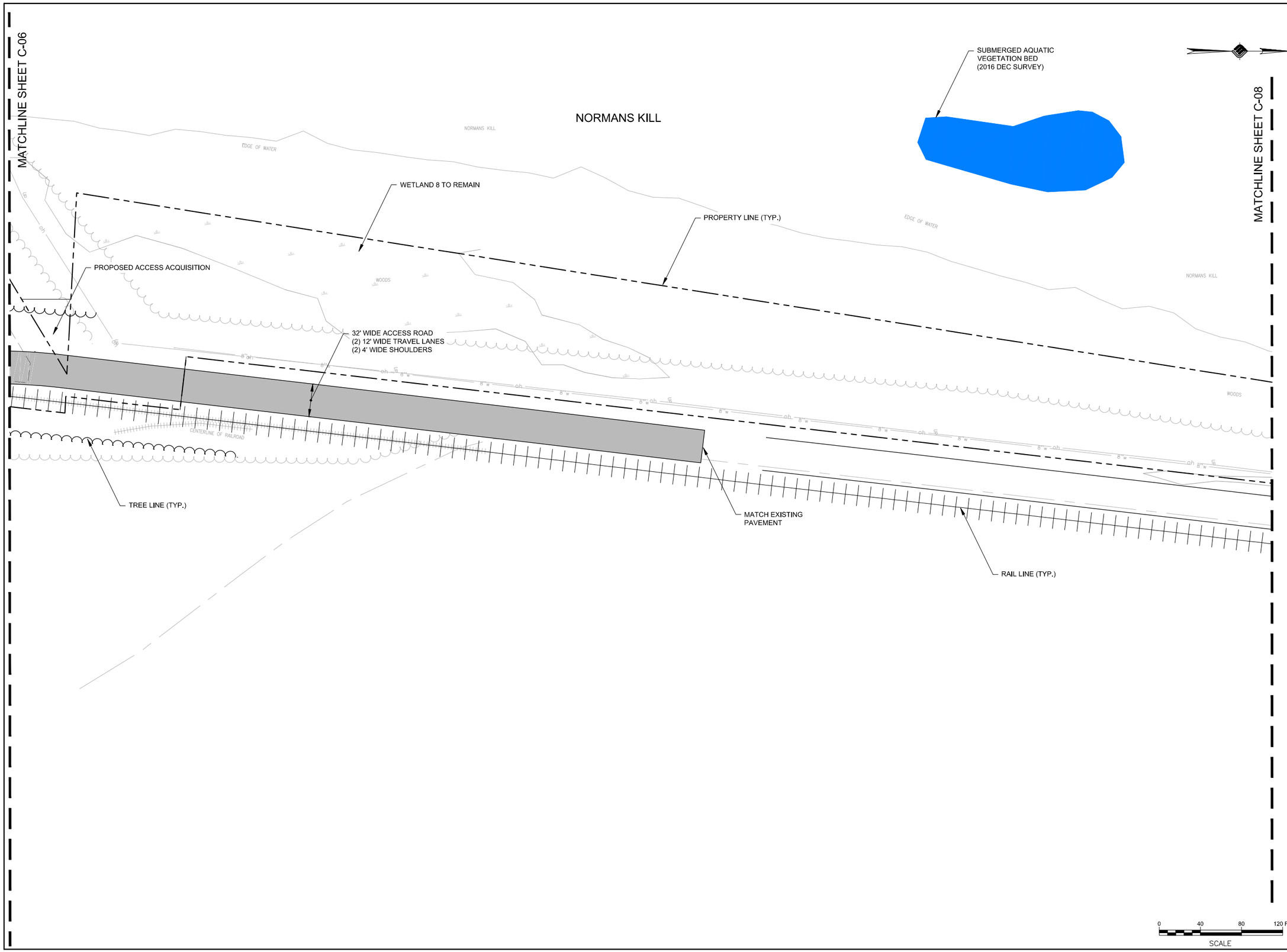
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
PARTIAL SITE LAYOUT PLAN 6

DRAWING NUMBER
C-06



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

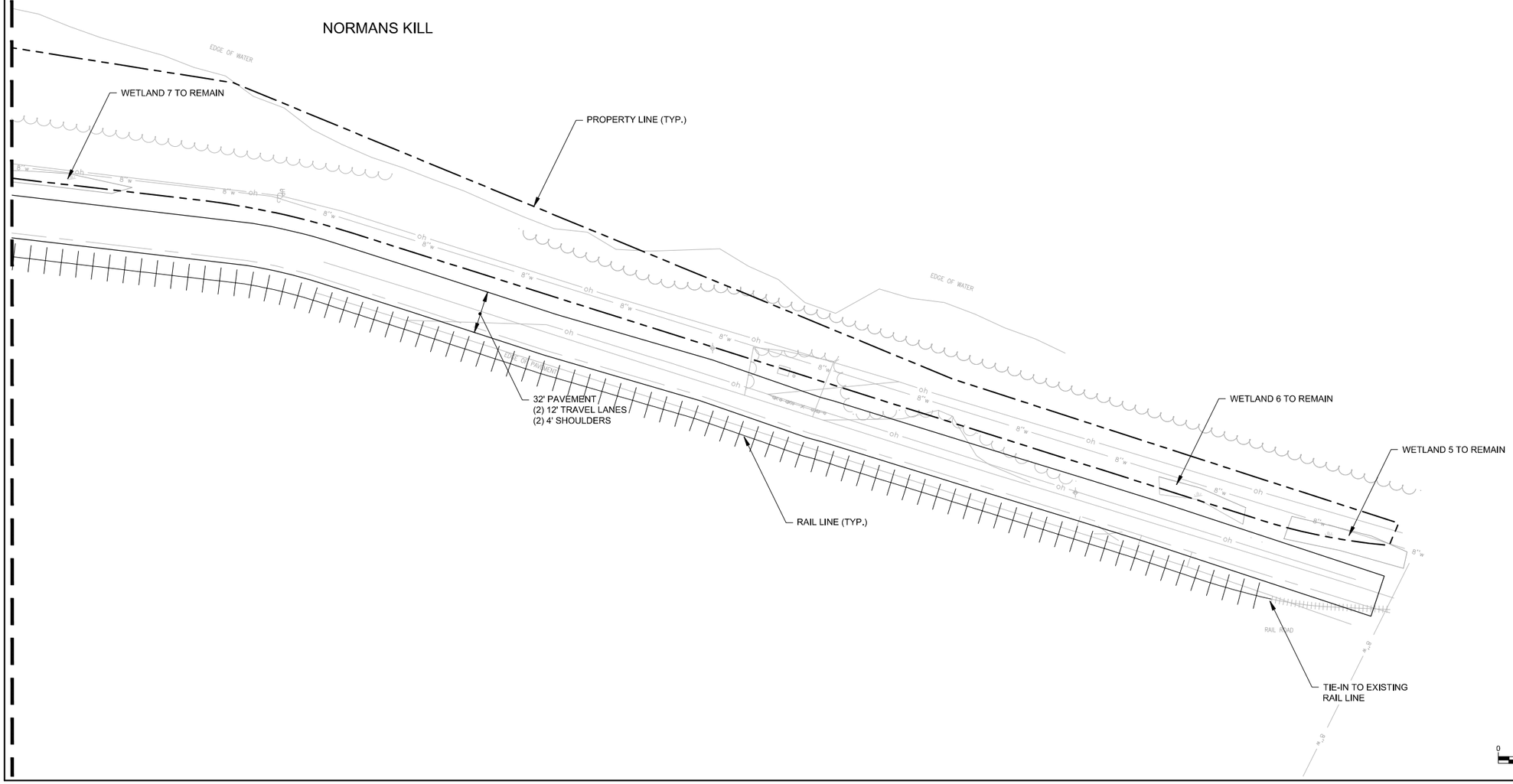
CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437,00

DRAWING TITLE
PARTIAL SITE LAYOUT PLAN 7

DRAWING NUMBER
C-07

MATCHLINE SHEET C-07



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

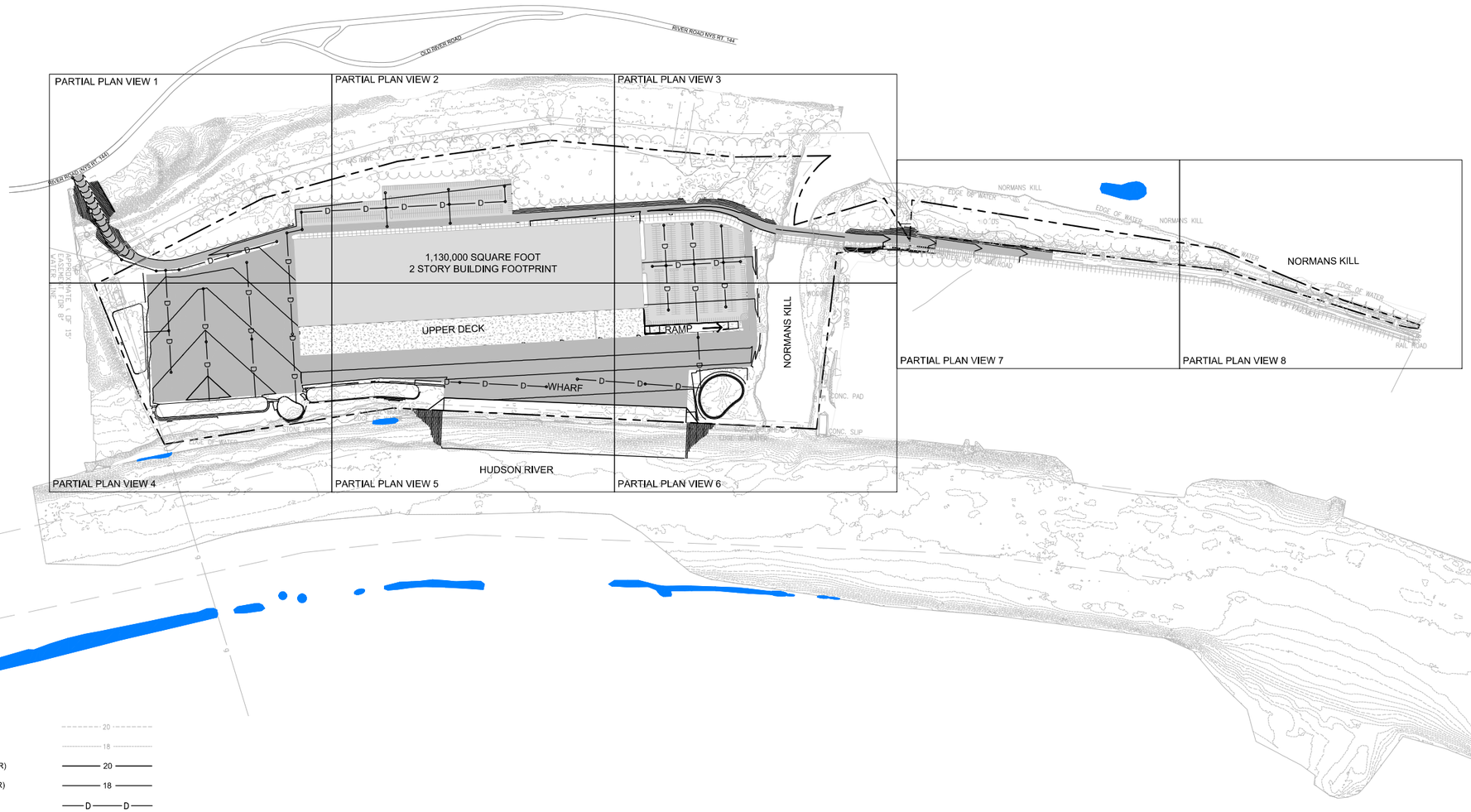
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
PARTIAL SITE LAYOUT PLAN 8

DRAWING NUMBER
C-08



LEGEND:

- EXISTING CONTOUR (MAJOR) — 20
- EXISTING CONTOUR (MINOR) — 18
- PROPOSED CONTOUR (MAJOR) — 20
- PROPOSED CONTOUR (MINOR) — 18
- PROPOSED DRAINAGE PIPE — D D
- PROPOSED RETAINING WALL
- PROPERTY LINE
- BUILDING SETBACK
- RAIL LINE
- TREE LINE
- NAVIGATION CHANNEL
- HEAVY DUTY PAVEMENT
- LIGHT DUTY PAVEMENT
- CONCRETE AREA
- WETLAND AREA

0 250 500 750 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=250'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
OVERALL CONCEPTUAL GRADING PLAN

DRAWING NUMBER
GR-00

RIVER ROAD NYS RT. 144

RETAINING WALL

CROSSING RIGHTS

PROPERTY LINE (TYP.)

TREE LINE / LIMIT
OF DISTURBANCE(TYP.)

DRAINAGE PIPE (TYP.)

MATCHLINE SHEET GR-02

MATCHLINE SHEET GR-04

APPROXIMATE LOCATION OF 15" WATER LINE & 8" WATER LINE

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

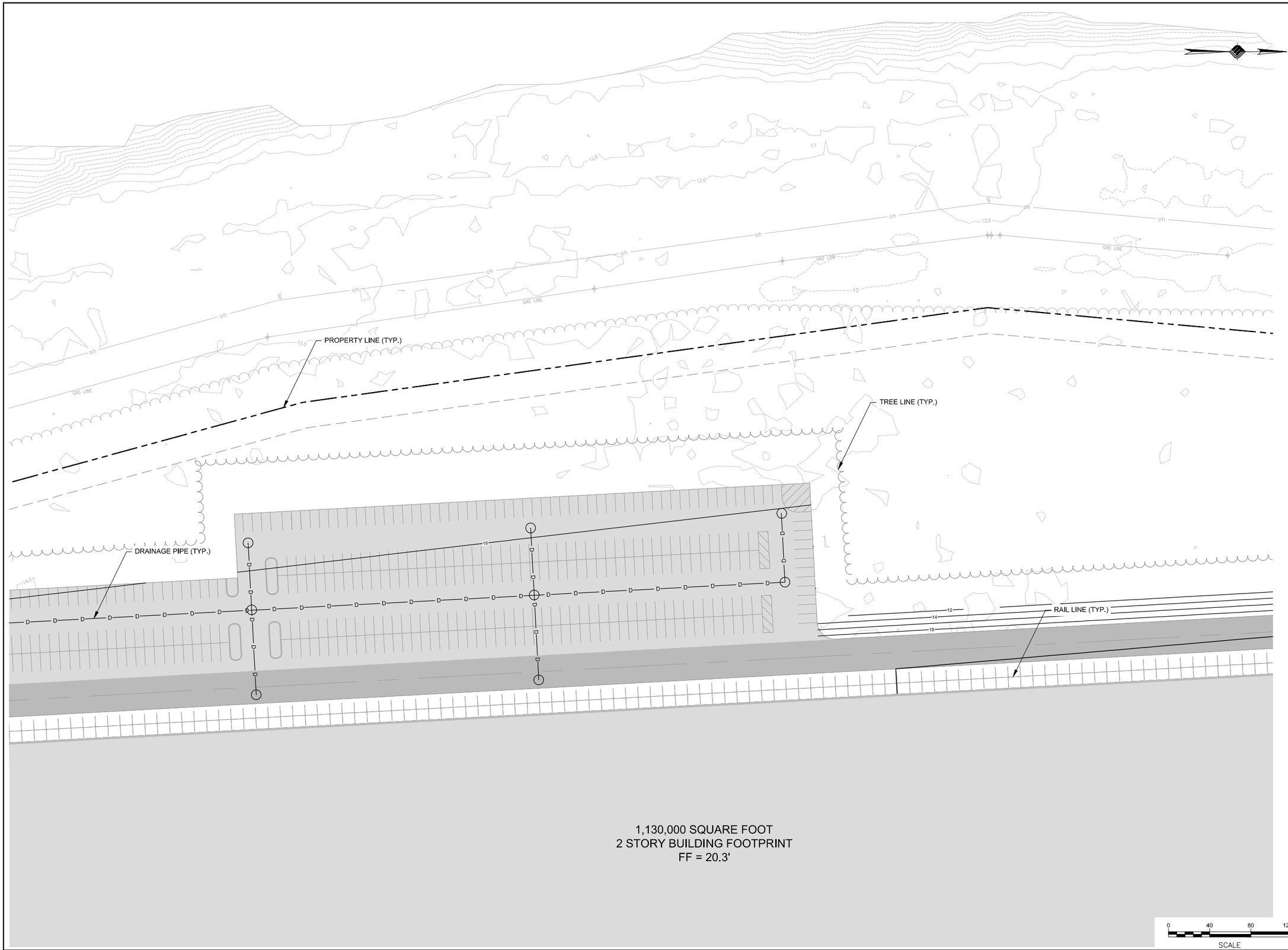
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437,00

DRAWING TITLE
CONCEPTUAL
GRADING PLAN

DRAWING NUMBER
GR-01



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

PROJECT: PORT OF ALBANY EXPANSION
BETHLEHEM, NEW YORK

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPTUAL GRADING PLAN

DRAWING NUMBER
GR-02

MATCHLINE SHEET GR-02

CROSSING RIGHTS

WETLAND 1 TO REMAIN

PROPERTY LINE (TYP.)

TREE LINE (TYP.)

RETAINING WALL

RAIL LINE (TYP.)

DRAINAGE PIPE (TYP.)

VEHICLE BRIDGE

WETLAND 9 TO REMAIN

BRIDGE ABUTMENT

RAIL BRIDGE

NORMANS KILL

MATCHLINE SHEET GR-07

MATCHLINE SHEET GR-06

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

PROJECT:
PORT OF ALBANY EXPANSION
BETHLEHEM, NEW YORK

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPTUAL GRADING PLAN

DRAWING NUMBER
GR-03

MATCHLINE SHEET GR-01

BIORETENTION BASIN

DRAINAGE PIPE (TYP.)

BIORETENTION BASIN

STORMWATER RETENTION POND

PROPERTY LINE (TYP.)

WETLAND 4 TO REMAIN

SUBMERGED AQUATIC VEGETATION BED

NAVIGATION CHANNEL BOUNDARY

MATCHLINE SHEET GR-05

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPTUAL GRADING PLAN

DRAWING NUMBER
GR-04

MATCHLINE SHEET GR-02

1,130,000 SQUARE FOOT
2 STORY BUILDING FOOTPRINT
FF = 20.3'

UPPER DECK

WHARF

DRAINAGE PIPE (TYP.)

BIORETENTION BASIN

WHARF BULKHEAD

WETLAND 3 TO REMAIN

SUBMERGED AQUATIC VEGETATION BED

LIMITS OF DREDGEING FOR WHARF ACCESS

NAVIGATION CHANNEL BOUNDARY

STONE BULKHEAD

EDGE OF WATER

MATCHLINE SHEET GR-04

MATCHLINE SHEET GR-06

0 40 80 120 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPTUAL GRADING PLAN

DRAWING NUMBER
GR-05

MATCHLINE SHEET GR-03

MATCHLINE SHEET GR-07

UPPER DECK

RAMP

DRAINAGE PIPE (TYP.)

STORMWATER RETENTION POND

WHARF

NORMANS KILL

WOODS

CONC. PAD

CONC. SLIP

CONC. BULKHEAD

EDGE OF WATER

WHARF BULKHEAD

PROPERTY LINE (TYP.)

LIMITS OF DREDGEING FOR WHARF ACCESS

NAVIGATION CHANNEL BOUNDARY

MATCHLINE SHEET GR-05

0 40 80 120 FT

SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE

CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

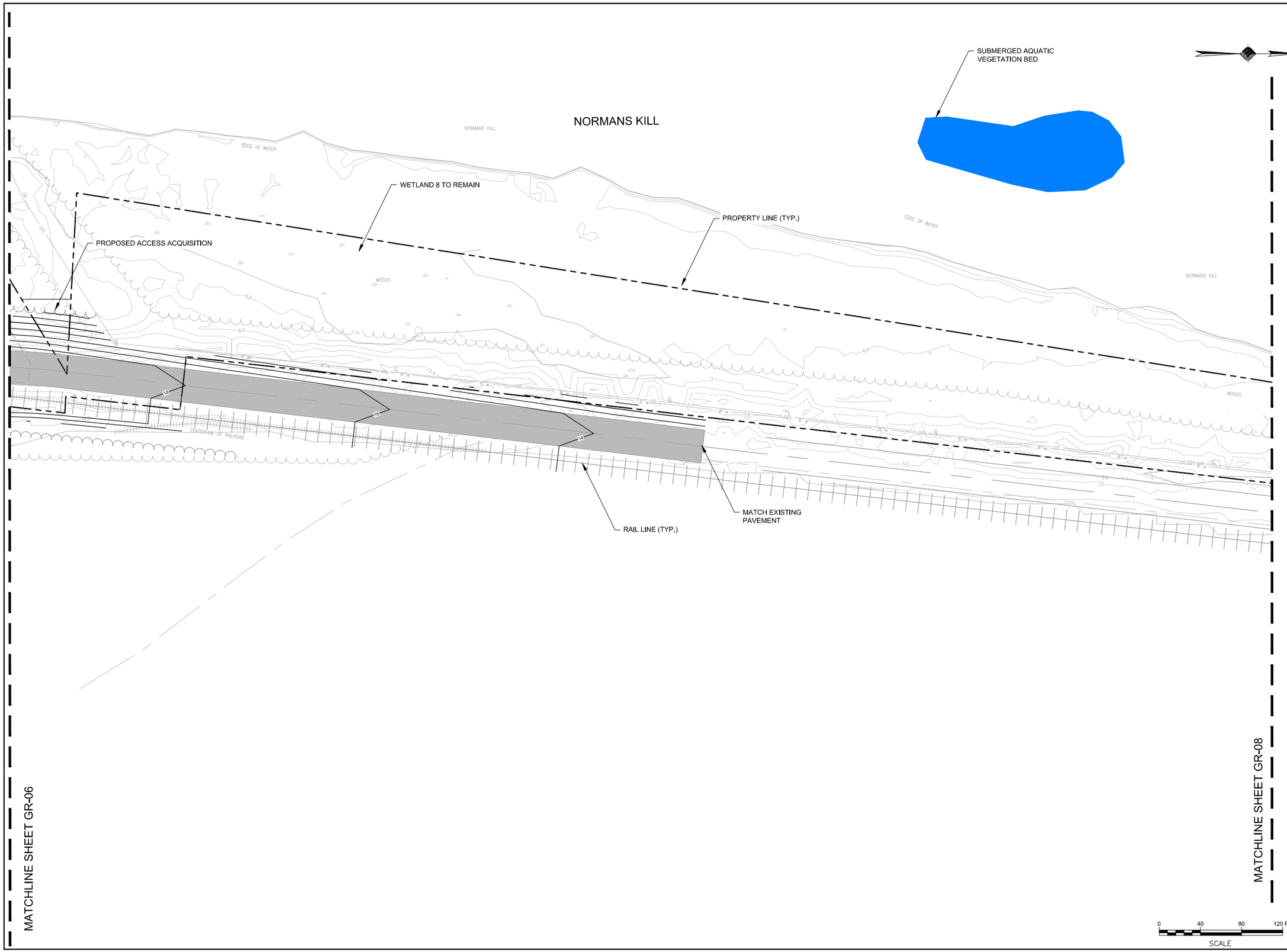
DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE

CONCEPTUAL GRADING PLAN

DRAWING NUMBER

GR-06



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

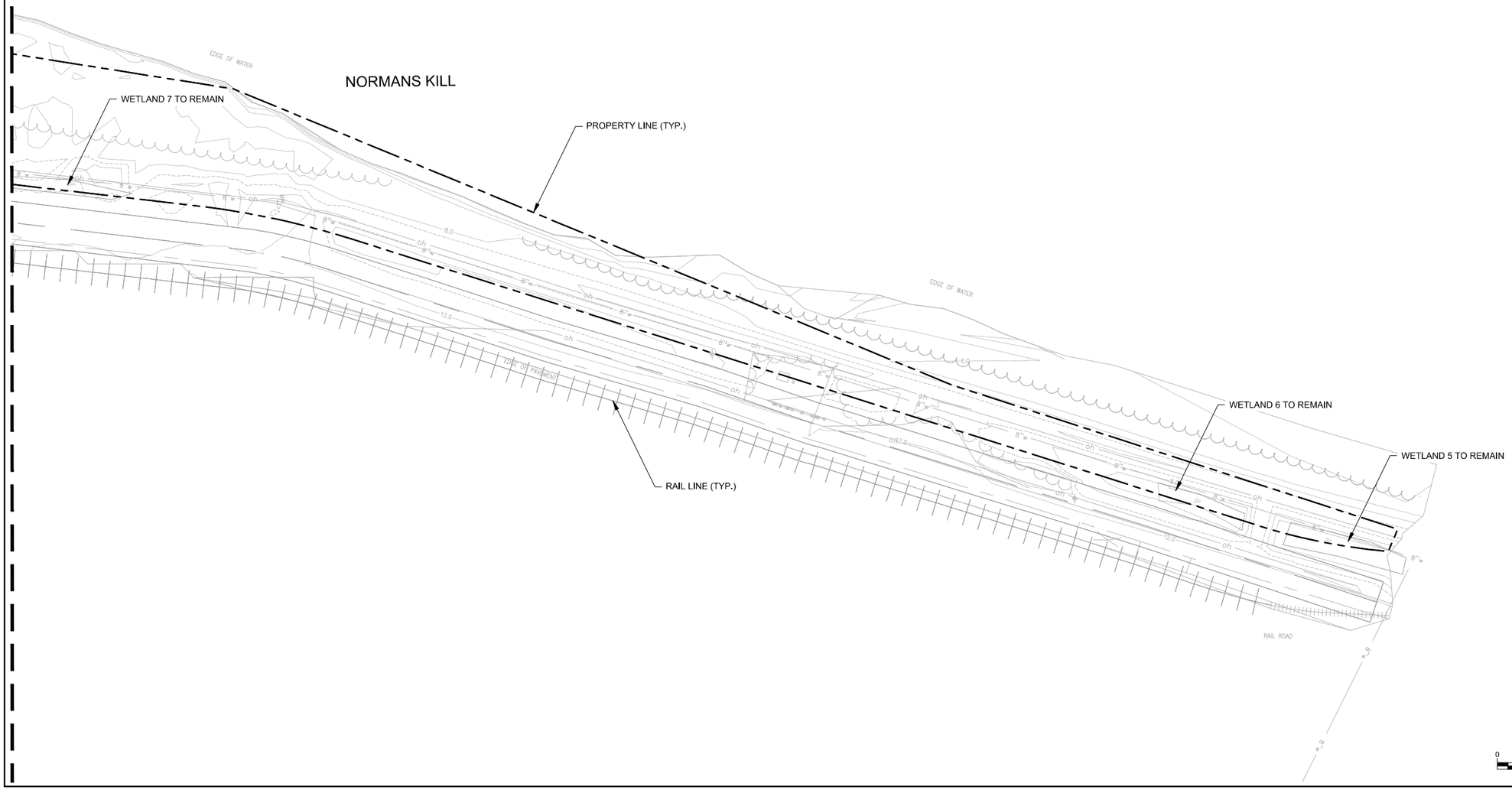
CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPTUAL GRADING PLAN

DRAWING NUMBER
GR-07

MATCHLINE SHEET GR-07



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=40'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPTUAL
GRADING PLAN

DRAWING NUMBER
GR-08

PUBLIC WATERLINE TO BE DEDICATED TO THE TOWN OF BETHLEHEM (ALTERNATIVE 3)

WATER LINE TO BE DIRECTIONALLY BORED UNDER WETLAND (ALTERNATIVES 2 & 3)

EXISTING TOWN OF BETHLEHEM WATER LINE CORNING HILL PRESSURE ZONE

EXISTING TOWN OF BETHLEHEM WATER LINE GLENMONT/RIVER ROAD PRESSURE ZONE

PUBLIC TOWN OF BETHLEHEM WATERLINE WIHTIN A DEDICATED EASEMENT (ALTERNATIVE 2)

PRIVATE WATER LINE CONNECTION TO TOWN OF BETHLEHEM SYSTEM (ALTERNATIVE 1)

SANITARY SEWER FORCE MAIN TO CONNECT TO THE ALBANY COUNTY SWTP

1,130,000 SQUARE FOOT
2 STORY BUILDING FOOTPRINT

PACKAGE WASTEWATER TREATMENT PLANT (POTENTIAL ALTERNATIVE)

WATER STORAGE TANK AND BUILDING CONNECTION FOR FIRE SUPPRESSION SYSTEM (ALTERNATIVE 1)

PRIVATE FIRE SUPPRESSION LOOP (ALL ALTERNATIVES)

WHARF

NORMANS KILL

MATCH LINE SEE BELOW

NAVIGATION CHANNEL BOUNDARY

HUDSON RIVER

NAVIGATION CHANNEL BOUNDARY

RIVER ROAD NYS RT. 144

OLD RIVER ROAD

STONE BULKHEAD

CONC. BULKHEAD

CONC. PAD

CONC. SLIP

EDGE OF WATER

WOODS

EDGE OF GRAVEL

CHAIN LINK FENCE

GAS LINE

APPROXIMATE 15' EASEMENT FOR 8" WATER LINE

LEGEND

W	WATERLINE ALTERNATIVE 1
W	WATERLINE ALTERNATIVE 2
W	WATERLINE ALTERNATIVE 3
FM	SANITARY FORCE MAIN
EF	TREATMENT PLANT EFFLUENT (SANITARY ALTERNATIVE)

NOTE: THIS PLAN IS PRODUCED WITH COLOR TO DEPICT VARIOUS OPTIONS

MATCH LINE SEE ABOVE

SANITARY SEWER FORCE MAIN TO CONNECT TO THE ALBANY COUNTY SWTP. SEE AERIAL IMAGE FOR ROUTING

AERIAL IMAGE FOR FORCE MAIN ROUTING
NOT TO SCALE

0 150 300 450 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=150'
DATE	JUNE 2019
PROJECT	18437.00

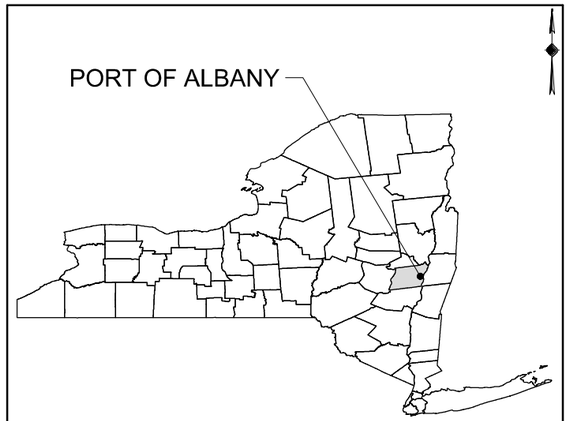
DRAWING TITLE
UTILITY LAYOUT

DRAWING NUMBER
UT-01

APPENDIX C

ALTERNATIVES CONCEPT SITE PLANS

ALBANY PORT DISTRICT COMMISSION
PORT OF ALBANY EXPANSION

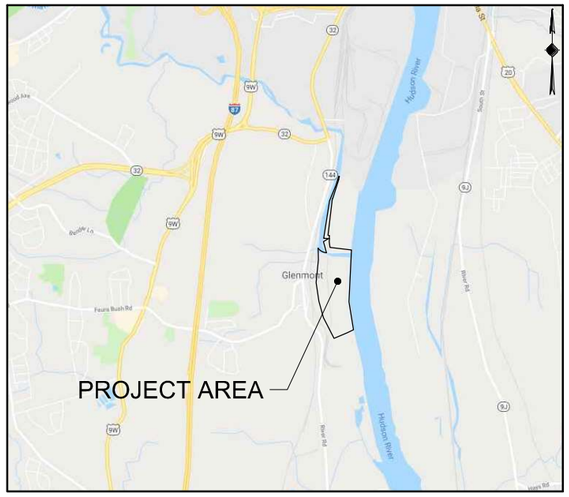


LOCATION MAP

JUNE 2019

TOWN OF BETHLEHEM
COUNTY OF ALBANY
NEW YORK

SITE LAYOUT CONCEPTS



VICINITY MAP

PREPARED FOR:

PORT OF ALBANY

ALBANY PORT DISTRICT COMMISSION
106 SMITH BOULEVARD
ALBANY, NEW YORK
(518) 463-1568
WWW.PORTOFALBANY.US

UTILITY CONTACTS

WATER/ SEWER/ STORM/ ROADS
TOWN OF BETHLEHEM DEPARTMENT OF PUBLIC WORKS
GEORGE S. KANSAS, P.E., COMMISSIONER
445 DELAWARE AVENUE
DELMAR, NY 12054
(518) 439-4955

NYSDOT REGION 1
MARK PYSKADIO, P.E. , REGIONAL TRAFFIC ENGINEER
50 WOLF ROAD
ALBANY, NY 12232
(518) 457-5283

FIRE DEPARTMENT
JOE MICHANIW, FIRE CHIEF
301 GLENMONT ROAD
GLENMONT, NY 12077
(518) 436-8203

BUILDING DEPARTMENT
JUSTIN HARBINGER, BUILDING INSPECTOR
445 DELAWARE AVENUE
DELMAR, NY 12054
(518) 439-4955

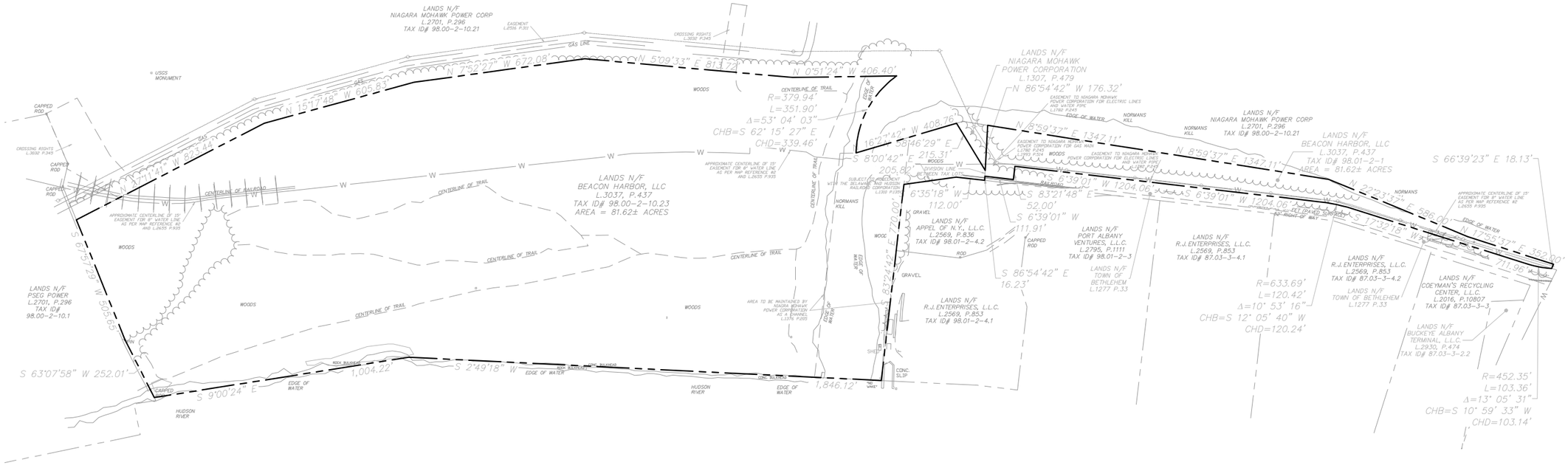
SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
--	COVER SHEET
G-01	SURVEY
G-02	TOPOGRAPHY
G-03	CONCEPT A
G-04	CONCEPT B
G-05	CONCEPT C
G-06	CONCEPT D
G-07	CONCEPT D.1

PREPARED BY:

McFarland Johnson
60 RAILROAD PLACE, SUITE 402
SARATOGA SPRINGS, NEW YORK 12866

18437.00



GENERAL NOTES:

1. THE UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM A SURVEY PREPARED BY MASER CONSULTING P.A. 18 COMPUTER DRIVE EAST SUITE 203, ALBANY, NY 12205. DATED SEPTEMBER 28, 2018 AND AVAILABLE SURVEYS AND RECORD MAPS BY OTHERS. MCFARLAND JOHNSON DOES NOT CERTIFY TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.

0 200 400 600 FT
SCALE

PLANNING BOARD ENDORSEMENT

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT SITE PLAN

NO.	DATE	DESCRIPTION

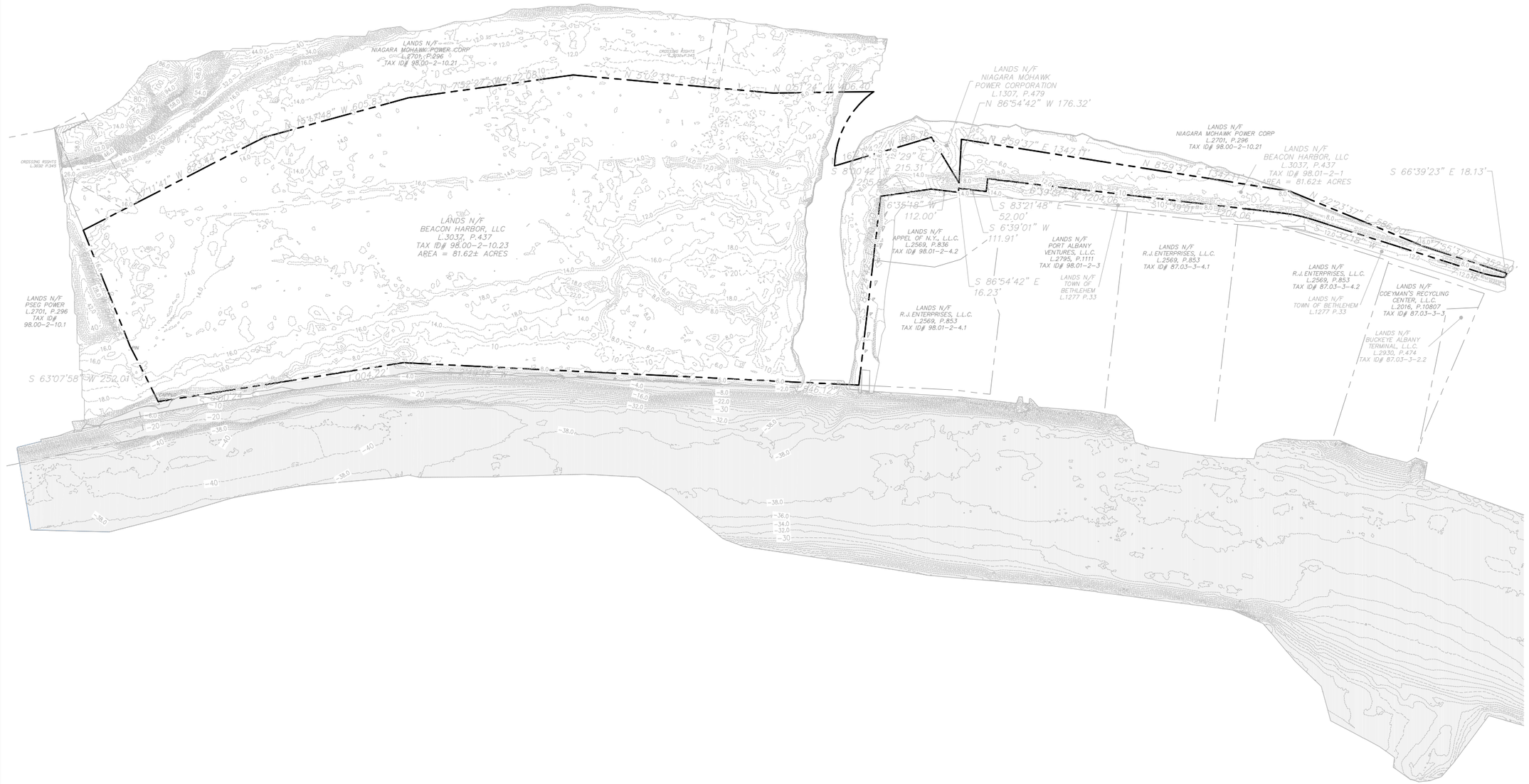
CLIENT:
ALBANY PORT DISTRICT COMMISSION

PROJECT:
PORT OF ALBANY EXPANSION
BETHLEHEM, NEW YORK

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NTS
DATE	MAY 2019
PROJECT	18437.00

DRAWING TITLE
BOUNDARY SURVEY

DRAWING NUMBER
G-01



LEGEND

PROPERTY LINE

HUDSON RIVER BATHYMETRY

GENERAL NOTES:

1. THE UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM A SURVEY PREPARED BY MASER CONSULTING P.A. 18 COMPUTER DRIVE EAST SUITE 203, ALBANY, NY 12205. DATED SEPTEMBER 28, 2018 AND AVAILABLE SURVEYS AND RECORD MAPS BY OTHERS. MCFARLAND JOHNSON DOES NOT CERTIFY TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.

0 200 400 600 FT

SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE

CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

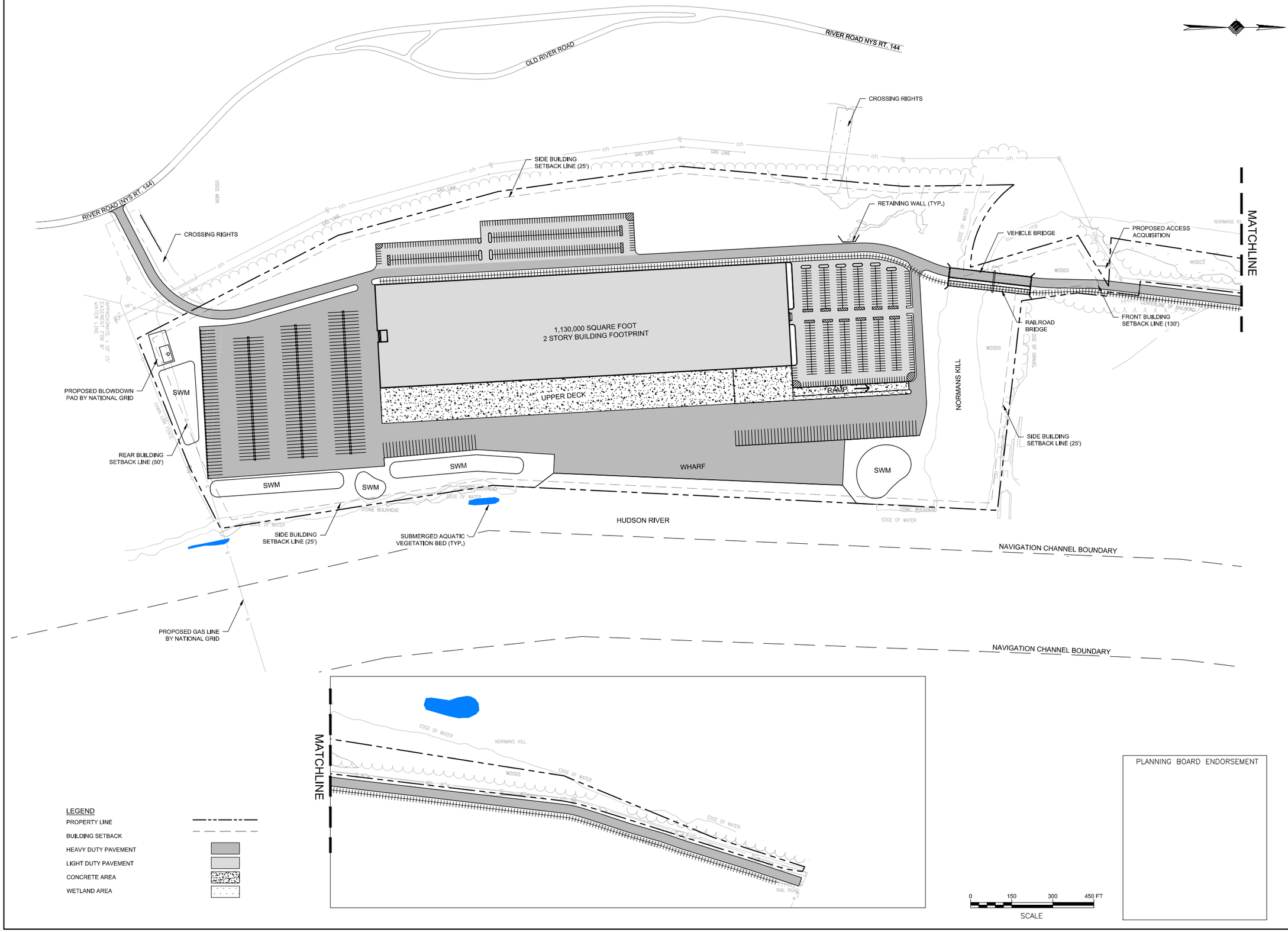
DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=200'
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE

TOPOGRAPHY

DRAWING NUMBER

SURV-02



PLANNING BOARD ENDORSEMENT

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT SITE PLAN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

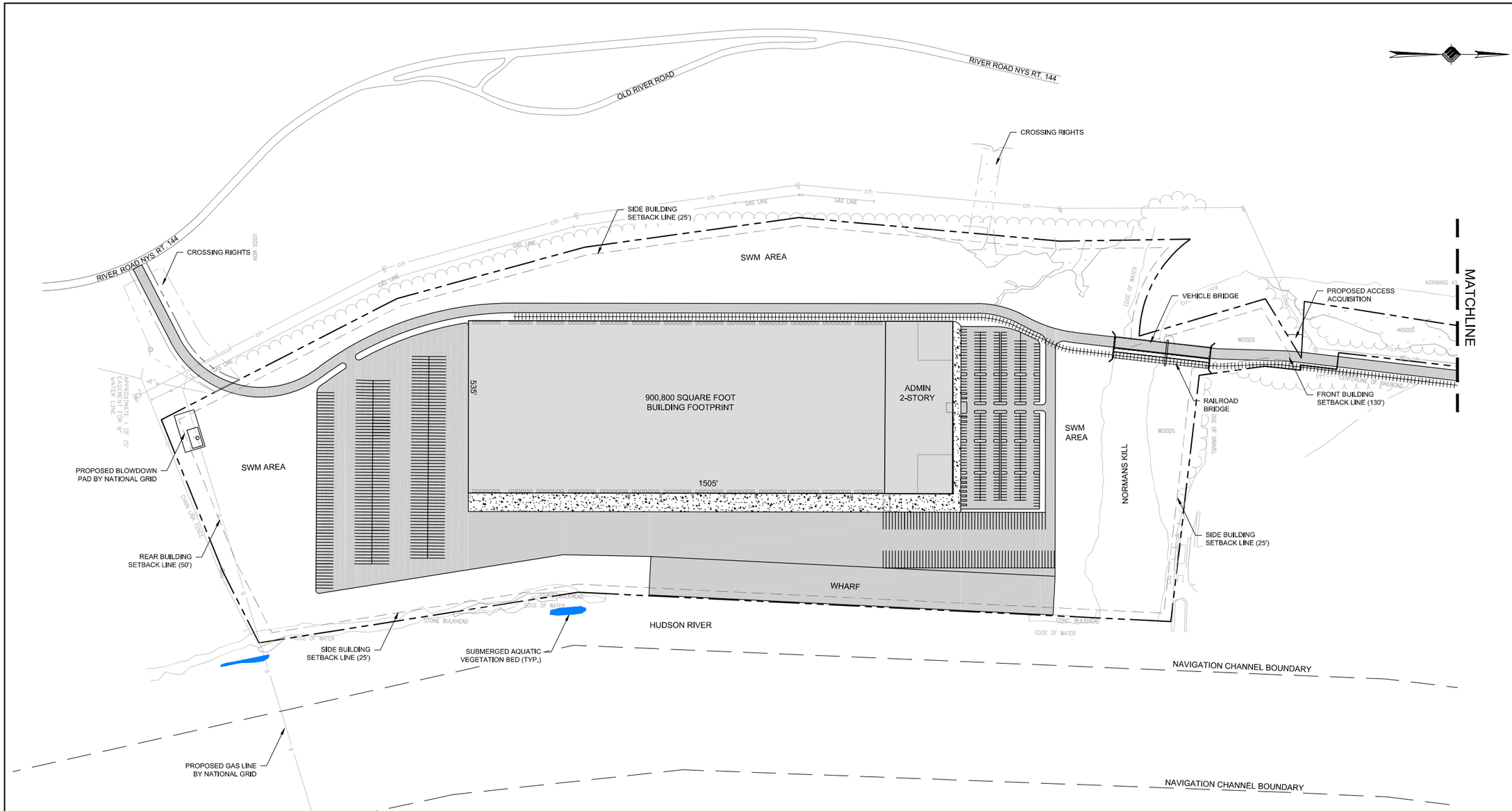
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	MAY 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPT A

DRAWING NUMBER
G-03



LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- PAVEMENT AREA
- CONCRETE AREA
- WETLAND AREA

IN ASSOCIATION WITH:
LOUIS BERGER GROUP, INC.

0 150 300 450 FT
SCALE

PLANNING BOARD ENDORSEMENT

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT SITE PLAN

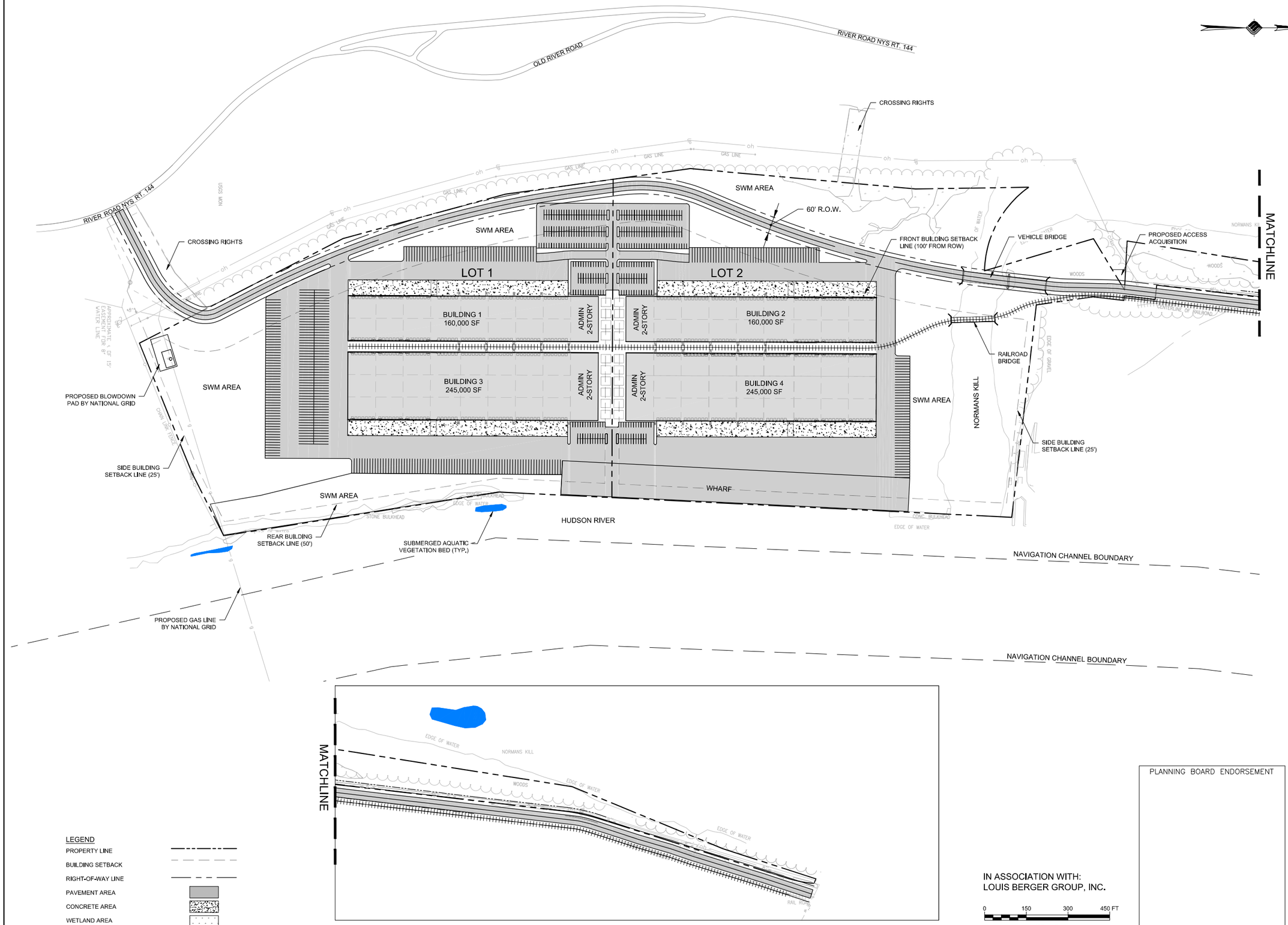
NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	JUNE 2019
PROJECT	18437,00

DRAWING TITLE
CONCEPT B

DRAWING NUMBER
G-04



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT SITE PLAN

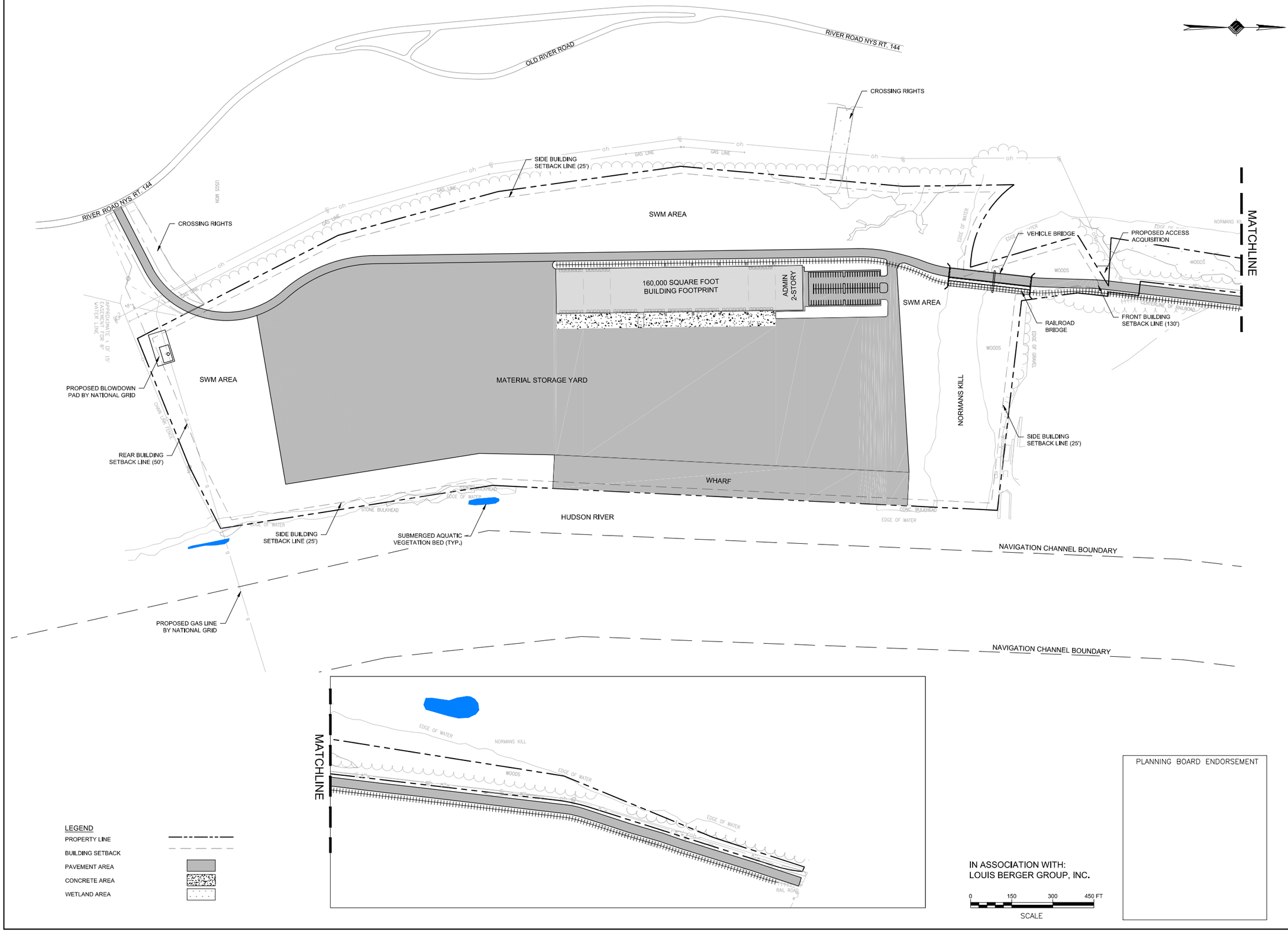
NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPT C

DRAWING NUMBER
G-05



McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT SITE PLAN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

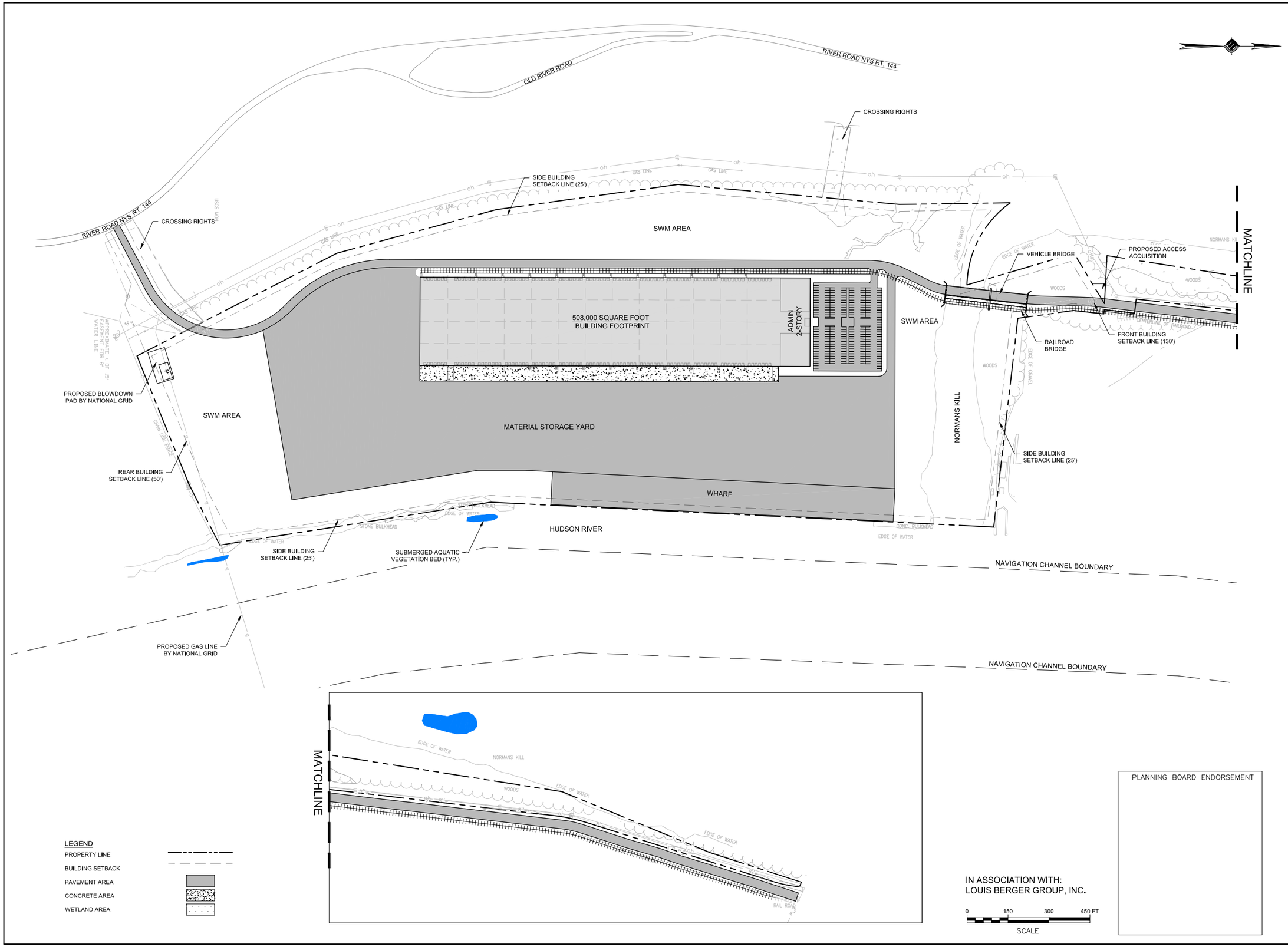
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPT D

DRAWING NUMBER
G-06



LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- PAVEMENT AREA
- CONCRETE AREA
- WETLAND AREA

IN ASSOCIATION WITH:
LOUIS BERGER GROUP, INC.

0 150 300 450 FT
SCALE

PLANNING BOARD ENDORSEMENT

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT SITE PLAN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	JUNE 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPT D.1

DRAWING NUMBER
G-07

APPENDIX D

TRAFFIC IMPACT STUDY

TRAFFIC IMPACT STUDY

FOR THE

PORT OF ALBANY EXPANSION PROJECT

ALBANY, NEW YORK

MAY 14, 2019
(Revised November 15, 2019)

PREPARED FOR:

PORT OF ALBANY

PREPARED BY:

McFarland Johnson

2525 SR 332, BOX 6, SUITE 101
CANANDAIGUA, NY 14424
PH: 585-905-0970
FX: 585-905-0882

MJ Project No. 18437.00

TABLE OF CONTENTS

PAGE

LIST OF TABLES:

LIST OF FIGURES:

LIST OF APPENDICES:

INTRODUCTION

McFarland Johnson, Inc. (MJ) has prepared the following Traffic Impact Study (TIS) for the proposed development on the property known as Beacon Island in the Town of Bethlehem, Albany County, New York. The proposed industrial development is the expansion of the Port of Albany and will be constructed along the east side of River Road/NYS Route 144 along the Hudson River, south of the existing Port of Albany site. See Figure 1 for the Project Location Map.

The proposed project will be developed on approximately 77 acres within 81.6 acres of vacant, undeveloped land in the Heavy Industrial (I) zoning district. At this time, a specific tenant or end user is unknown and therefore, in order to satisfy the State Environmental Quality Review Act (SEQRA), a concept plan was developed that represents the maximum worst-case scenario from a traffic standpoint was used as the basis for this TIS. This concept plan consists of a single 1,130,000 GSF, two-level distribution center/warehouse with associated internal driveways, parking areas, landscaped areas, utilities and stormwater infrastructure. For the purposes of this study, the project's traffic impact was analyzed in three-phases of development, with Phase I consisting of a 300,000 GSF of building space, Phase II consisting of a 600,000 GSF and Phase III representing the Full Build scenario of 1,130,000 GSF. The project's concept site plan, as depicted in Figure 2, shows two access points to the site. A 2-lane entrance driveway to the site from River Road for employees and car traffic, and truck and rail access from the north via South Port Road by way of two separate proposed bridges crossing Normans kill Creek. One bridge for vehicles and one for rail cars connect to the on-site roadway and rail network respectively. It has been assumed that the maximum build of the 1,130,000 square feet could occur over a ten-year period.

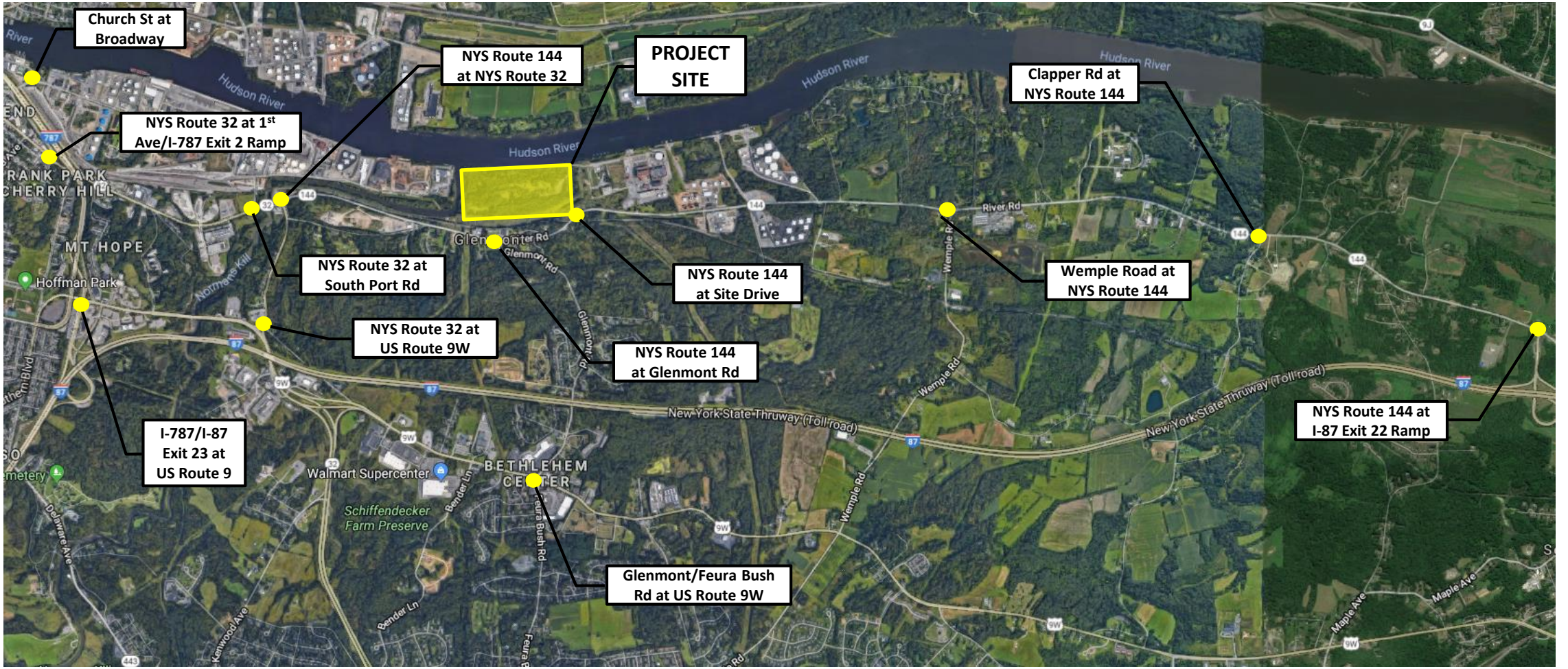
Scope of the Study

The purpose of this study is to evaluate existing and the maximum worst-case scenario future traffic operations within the study area. The analysis completed by MJ evaluated traffic operations within the Study Area during weekday morning and evening peak hours for 2019 Existing Conditions as well as the 2029 Full Build and phased development that includes Background Conditions.

Build Conditions were analyzed to determine the impacts, if any, associated with the proposed distribution center/ warehouse. Based on initial project scoping discussions with the Town of Bethlehem Planning Board and the New York State Department of Transportation, the traffic study area includes the following intersections:

- NYS Route 32 at First Avenue/I-787 Exit 2 Ramp *(Signalized)*
- NYS Route 32 at US Route 9W *(Signalized)*
- NYS Route 32 at South Port Road *(Signalized)*
- NYS Route 144 at I-87 Exit 22 Ramp *(Un-Signalized)*
- NYS Route 144 at Glenmont Road *(Un-Signalized)*
- NYS Route 144 at NYS Route 32 *(Un-Signalized)*
- Church Street at Broadway *(Un-signalized)*
- Glenmont/Feura Bush Road at US Route 9W *(Signalized)*
- Clapper Road at NYS Route 144 *(Un-signalized)*
- I-787/I-87 Exit 23 Interchange at US Route 9W (*Signalized)*
- Wemple Road at NYS Route 144 *(Un-Signalized)*

Descriptions of the existing physical conditions within the roadway corridor are presented in the following narratives.



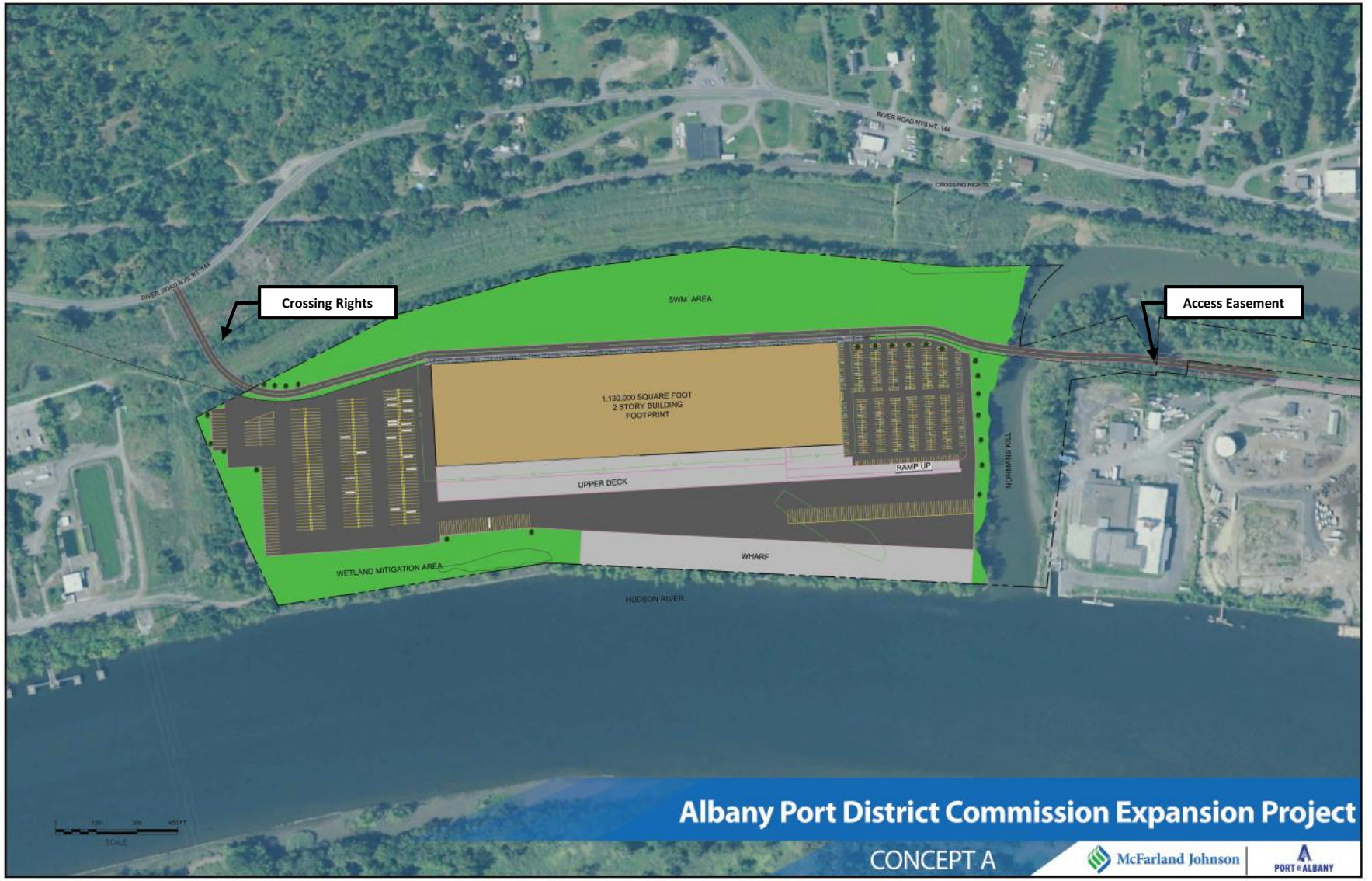
LEGEND

- Project Site
- Study Area Intersection

Not to Scale

PROJECT LOCATION MAP

Not to Scale



Conceptual Site Layout Plan

EXISTING CONDITIONS

Evaluation of the existing and future traffic conditions within the Study Area requires an understanding of the existing transportation system. Data such as roadway geometrics, traffic signal timings and peak hour traffic volumes provide the basis for a thorough understanding of existing conditions, and the requisite data necessary to provide projections of future traffic conditions typical under the Build scenarios.

Existing Roadway Network

The project is located on the east side of River Road/NYS Route 144 along the Hudson River, south of the existing Port of Albany.

River Road Corridor

NYS Route 144 (River Road) is a two lane, state-owned and maintained urban minor arterial providing north-south access from the City of Albany to land parcels along the west side of the Hudson River. There is an average daily traffic volume of approximately 6,700 vehicles. Northbound heavy vehicle volume is 13.3% of ADT, 3.8% of which are tractor trailers, while southbound heavy vehicle volume is 12.3% of ADT, 4.0% of which are tractor trailers. Land use in the immediate vicinity is primarily industrial to the north and south of the proposed site. Within the study area, lane width varies between 10 and 12 feet, and has a paved shoulder width that varies between 6 and 9 feet, as described at each specific intersection in the Existing Conditions section of this report. The posted speed limit is 55 mph with an 85th percentile speed of 55 mph just north of the proposed development site. River Road (NYS Route 144) changes to NYS Route 32 at the intersection of River Road and Corning Hill Road. Just north of this intersection is the City of Albany limits where NYS Route 32 continues but as S. Pearl Street with a 30-mph posted speed limit.

South Port Road Corridor

South Port Road is an 850 feet long two-lane, city-maintained urban major collector that tees into Normanskill Street to connects several industrial collector roads within the Port of Albany to NYS Route 32. South Port Road is approximately 28 feet wide and lacks pavement striping that would delineate travel lanes or shoulders. The road does not include curb or accommodations for pedestrians. The Roadway has corrugated beam guide railing on both sides and the intersection with NYS Route 32 and has enlarged shoulder radii to accommodate the high percentage of truck traffic. The posted speed limit is 30 mph. As described in the intersection capacity analysis section of this report, due to the high volume of traffic entering the proposed development including proposed truck traffic, it is recommended that a dedicated left turn lane for the southbound approach be installed, as well as a new right turn lane pocket for the westbound approach, to split the traffic exiting the Port to allow better use of the traffic signal.

Figure 3 show the geometry and traffic control type for the existing study area intersections and descriptions of these intersections are below.

No. 1 – NYS Route 32 (S. Pearl Street) at 1st Avenue/I-787 Exit 2 Ramp

This intersection is an offset 4-way intersection operating under an actuated traffic signal. The northbound and southbound NYS Route 32 approaches and the eastbound 1st Avenue approach each consist of a single 12' lane for shared travel movements. No shoulder is present. The westbound I-787 Exit 2 Ramp approach consists of a 16' exclusive left-turn lane and a 16' shared through/right-turn lane with 6' shoulders and split signal timing with 1st Street. The posted speed limit is 25 mph for the north, south, and eastbound approaches. No speed limit signs are posted for the westbound approach. All approaches include curbed sidewalks, push-button operated pedestrian signal poles, and crosswalk striping.

No. 2 – NYS Route 32 (Corning Hill Road) at US Route 9W

This intersection is a 3-legged, intersection operating under an actuated traffic signal. The northbound US Route 9W approach consists of two 12' through lanes with a 6' shoulder and a yield-controlled slip right-turn lane, while the southbound US Route 9W approach consists of a 12' exclusive permissive-protected left-turn lane and two 12' through lanes with a 7' shoulder. The westbound NYS Route 32 approach consists of an exclusive left-turn lane and a separate yield-controlled slip right-turn lane. Both slip right-turn lanes are 18' wide with 5' shoulders. US Route 9W and NYS Route 32 both have a posted speed limit of 45 mph. This intersection does not have accommodations for pedestrians.

No. 3 – NYS Route 32 at South Port Road

This intersection is a 'T' type, 3-legged intersection operating under a semi-actuated traffic signal. The northbound and southbound NYS Route 32 approaches and the westbound South Port Road approach each consist of a single 12' lane for shared travel movements. The posted speed limit is 30 mph for each approach. This intersection does not have accommodations for pedestrians and has enlarged shoulder radii to accommodate the high percentage of truck traffic.

No. 4 – NYS Route 144 (River Road) at I-87 Exit 22 Ramp

This is a 'T' type, 3-legged intersection operating under stop sign control for the eastbound I-87 Exit 22 Ramp approach. The northbound NYS Route 144 approach consists of a single lane for shared travel movements while the southbound approach consists of a through lane and a yield-controlled slip right-turn lane. The eastbound I-87 Exit 22 Ramp approach consists of a left-turn lane and a stop sign controlled slip right-turn lane. The posted speed limit for NYS Route 144 is 55 mph. There is no speed limit posted for the I-87 Exit 22 Ramp. There are no accommodations for pedestrians. All lanes feature 12' lanes and 6' shoulders except the slip right-turn lanes, which have 22' lanes with a 12' shoulder.

No. 5 – NYS Route 144 (River Road) at Glenmont Road

This is a four-way intersection operating under stop sign control on the eastbound Glenmont Road approach and on the westbound Old River Road Approach. All approaches consist of a single lane for shared travel movements. The posted speed limit is 55 mph on NYS Route 144 and 40 mph on Glenmont Road. Old River Road is a low volume road runs that parallel to River Road and has a sharp 90-degree bend at the intersection. No volumes were recorded for Old River Road. For the purposes of this traffic study, the intersection was treated as a 3-legged intersection. The intersection does not provide accommodations for pedestrians. The eastbound approach consists of a 10' lane with a 5' shoulder, while the north and southbound approaches have a 12' lane with a 5' shoulder.

No. 6 – NYS Route 144 (River Road) at NYS Route 32 (Corning Hill Road)

This intersection is a 'T' type, 3-legged intersection with the eastbound approach being stop sign-controlled and the north and southbound approaches being free flow. The northbound and southbound approaches consist of a single lane for shared travel movements while the eastbound approach consists of separate left and right-turn lanes. The posted speed limit is 45 mph for the NYS Route 32 and 55 mph for NYS Route 144. There are no accommodations for pedestrians at this intersection. All approaches consist of a 12' travel lane with 9' shoulders at the intersection.

No. 7 – Church Street at Broadway

This is a 'T' type, 3-legged intersection operating under stop sign control for the westbound Broadway approach. The northbound Church Street approach consists of a single lane for shared through and right-turn movements while the southbound Church Street approach provides an exclusive left-turn lane and a separate through lane. The westbound Broadway approach consists of a left-turn lane and a yield-controlled slip right-turn lane. The posted speed limit is 30 mph and the intersection does not have accommodations for pedestrians. All approaches have 12' lanes with 4' shoulders except the slip right-turn lane, which features a 20' travel lane with a 5' shoulder.

No. 8 – Glenmont/Feura Bush Road at US Route 9W

This intersection is a 4-legged intersection operating under an actuated, uncoordinated traffic signal. The northbound and westbound approaches each consist of a single lane for all movements, while the southbound approach has a dedicated right-turn lane and a shared lane for through and left-turn movements. The eastbound approach consists of a dedicated left-turn lane and a shared lane for through and right-turn movements. Both the northbound and westbound approach include curbed sidewalks, push-button operated pedestrian signal poles, and crosswalk striping. It should be noted that this signalized intersection will be converted to a hybrid 2-lane roundabout, with construction estimated to be complete by the Spring of 2021.

No. 9 – Clapper Road at NYS Route 144 (River Road)

This is a 'T' type, 3-legged intersection consisting of a stop sign controlled eastbound approach for Clapper Road and free flow for NYS Route 144. There is a residential driveway opposite Clapper Road. Clapper Road is a local road running east-west between NYS Route 144 and US Route 9W. The posted speed limit for Clapper Road is 30 mph and 55 mph for NYS Route 144. The north and southbound approaches feature a 12' travel lane with a 6' shoulder, while Clapper Road lacks pavement striping and dedicated travel lanes.

No. 10 – I-787/I-87 Exit 23 Interchange at US Route 9W

This is a four-phase actuated signalized interchange for traffic entering and exiting I-87 to US Route 9W via exit 23. This interchange consists of two signalized intersections which run on a single signal controller, with one three-legged intersection at the I-87 westbound on-ramp and the other at the I-87 eastbound off-ramp. The first intersection consists of a westbound enter only on-ramp, a northbound approach providing both left-through and through only lanes, and a southbound approach with a right-through and through only lane. The second intersection consists of the exit only off ramp with a yield controlled channelized right turn lane and dedicated left turn lane onto US Route 9W northbound. Both the northbound and southbound approaches provide two through only lanes. There are no accommodations for pedestrians. The north and southbound approaches, as well as the eastbound left-turn movement, feature 12' travel lanes with a 4' shoulder, while the off ramp's channelized right turn lane consists of a 16' travel lane with a 4' shoulder.

No. 11 – Wemple Road at NYS Route 144 (River Road)

The intersection of Wemple Road with NYS Route 144 (River Road) consists of two separate 'T' type 3-legged intersections, both consisting of a stop sign controlled eastbound approach for Wemple Road and free flow for NYS Route 144. Wemple Road is a local road running east-west between NYS Route 144 and US Route 9W. The posted speed limit for the Wemple Road is 30-mph with a curve advisory posted speed limit of 15-mph at the northern access drive, and 20-mph for Southern Intersection

the southern access drive. The posted speed limit for NYS Route 144 at the intersection is 55-mph for. NYS Route 144 features a 12' travel lane with a 6' shoulder, while the southern Wemple Road access drive consists of a 10' travel lane with a 2' shoulder. The northern Wemple Road access drive lacks pavement striping and dedicated travel lanes. The southern Wemple Road access drive provides existing signage prohibiting tractor trailers, with the exception of local deliveries.

Northern Intersection

Traffic Data Collection

Existing traffic volumes for the study area intersections were established for this project by performing manual turning movement counts (TMC). Traffic counts were video recorded from 7:00 to 9:00 AM and 4:00 to 6:00 PM on Tuesday, February 5, 2019. Additional data was recorded during the same time frames on Tuesday, February 26, 2019. Data for the Wemple Road/NYS Route 144 (River Road) intersection were established by performing TMC which were recorded Wednesday, September 25, 2019 from 7:00 to 8:30 AM and 4:15 to 5:45 PM, by McFarland Johnson. Volume data for the Interchange 23 ramps to US Route 9W were established by performing TMC which were recorded on August 15, 2019 from 7:30 to 9:00 AM and 4:15 to 5:45 PM, by McFarland Johnson. The counting timeframes were based on the peak traffic periods for intersections in the area. The TMC data shows that the weekday traffic peaks within the study area range between 7:00 and 8:30 AM in the morning while the evening traffic peak range was between 4:15 and 5:45 PM. Volume data for the I-787 northbound on ramp from US Route 9W capacity analysis was collected by an automatic traffic recorder from Monday, September 30, 2019 to Wednesday, October 2, 2019. In addition to this data, an automatic traffic recorder was placed on NYS Route 144 (River Road) near the proposed project site from Monday-Friday to continuously collect directional traffic volumes, vehicle classifications, and vehicle speed data. This information was used to verify the peak hours recorded from the TMC data and is included in Appendix A. Because of the varied distance between study intersections, the peak hour of traffic was taken from the TMC data for each individual intersection that was counted to ensure the peak volumes were analyzed at each intersection. These volumes were used to compute the 2019 Existing Conditions for the traffic study and the TMC summary data sheets are included in Appendix A.

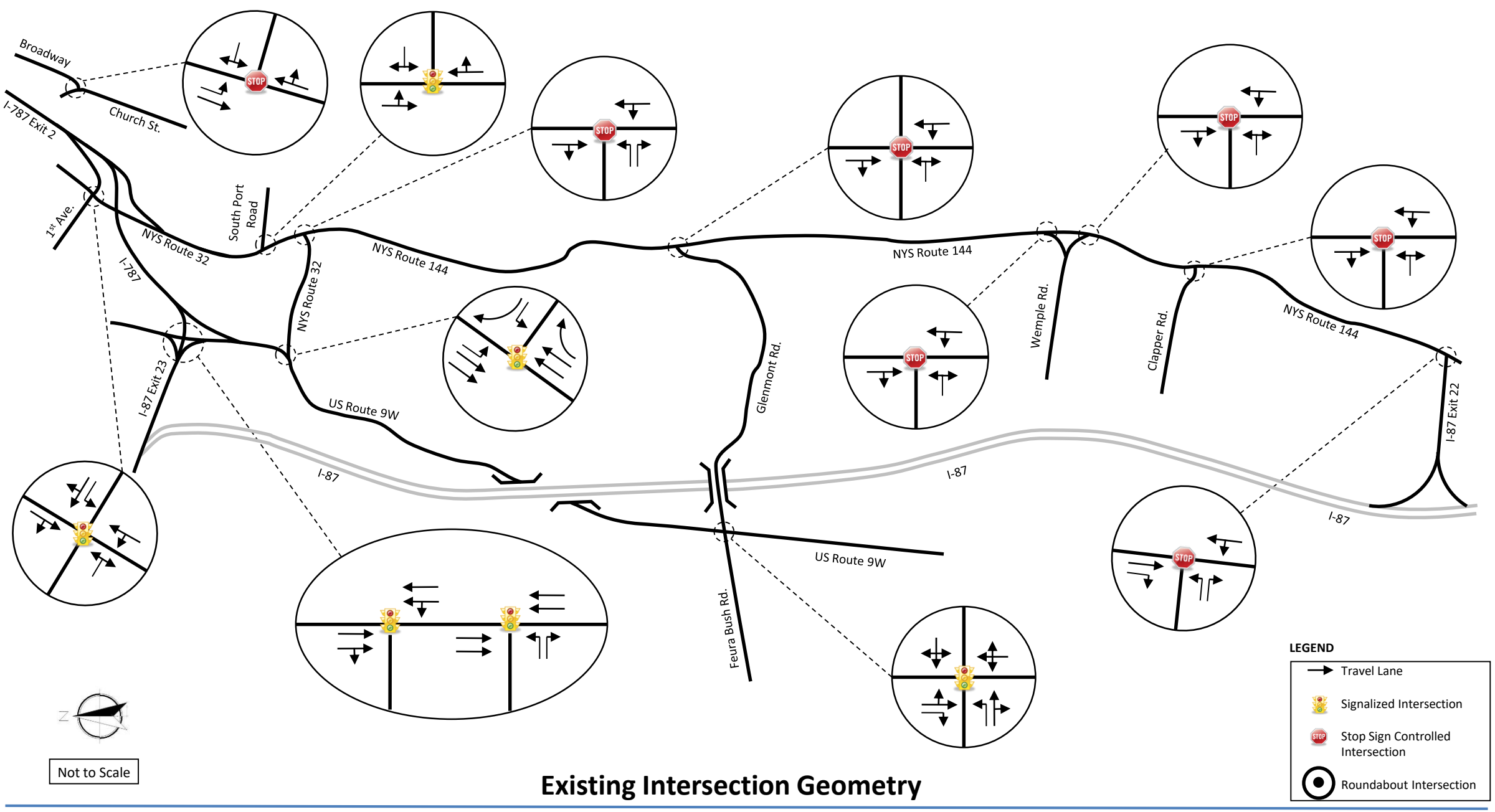
In addition to the TMC data, a field review was conducted of the proposed study area. During the visit, information regarding signal timings, peak hour queue lengths, existing pedestrian signage, and auxiliary pedestrian safety devices was recorded and used to more accurately model the existing conditions for the traffic study.

2019 Existing Traffic Volumes

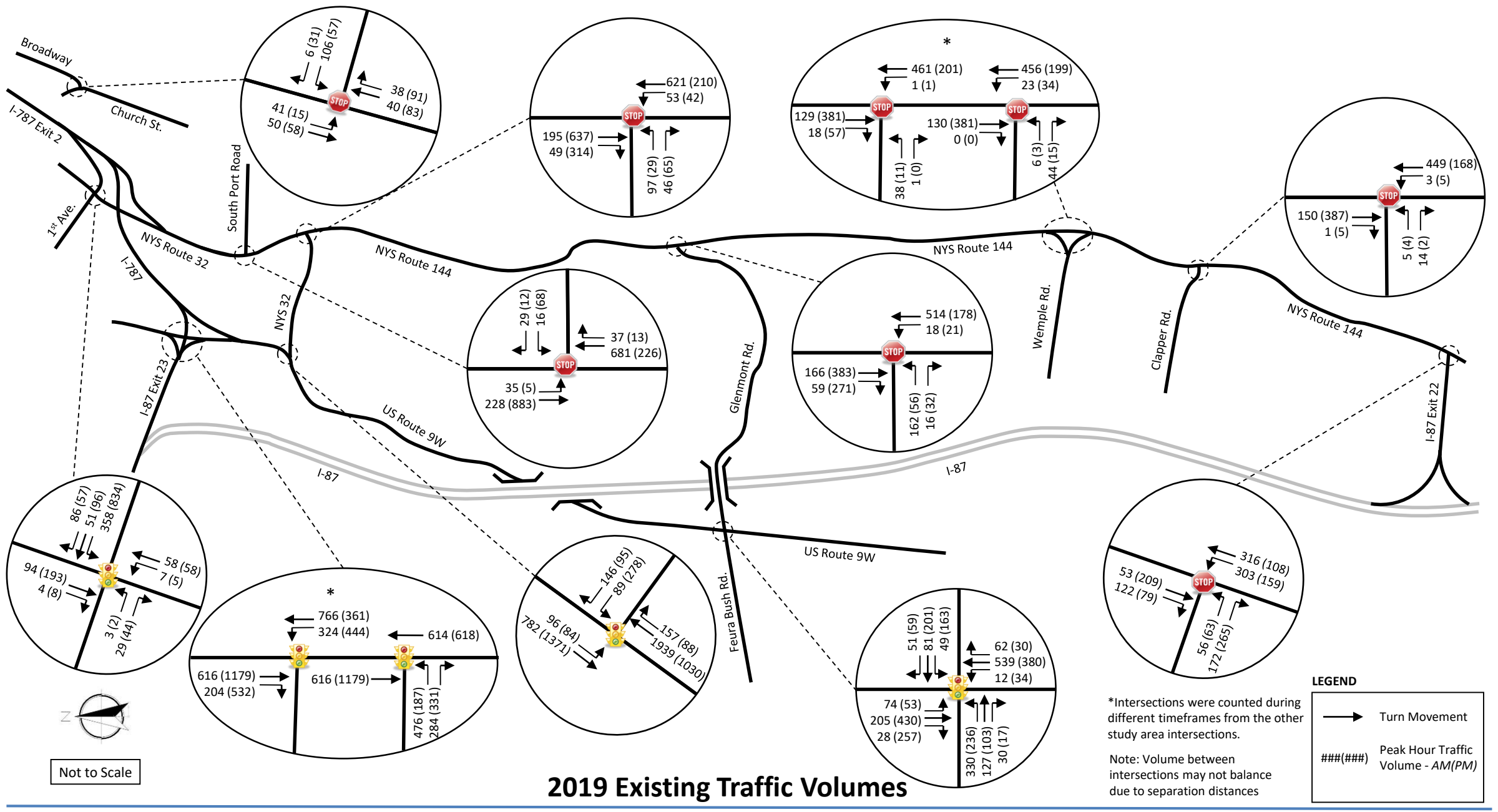
The 2019 traffic volumes in the study area were established, verified for accuracy, and are shown in Figure 4. To determine if the TMCs required adjustment due to seasonal variation, a seasonal adjustment factor data was obtained from the New York State Department of Transportation - Highway Data Services Bureau (NYSDOT). NYSDOT has developed seasonal adjustment factors based on three land-use classifications, urban, suburban and recreational. The study area for this proposed development is classified as urban and a factor of 0.944 was used to adjust the collected data collected in February to represent an average day for both the AM and PM peak hours. This results in a 6% increase in the traffic counted in the month of February, while traffic data collected in

August, September and October were not seasonally adjusted. Available historic count data from NYSDOT and previously completed traffic studies in the area were reviewed to confirm the applied adjustments were appropriate. These volumes, 2019 Existing Traffic Volumes (see Figure 4) were analyzed and are included in the appendix.

Analysis of the base condition allows the TIS to develop a comparison to future conditions and enables the study to calibrate the traffic model to mimic the present real-life operations that are observed.



Existing Intersection Geometry



2019 Existing Traffic Volumes

NO-BUILD CONDITIONS

The 2019 existing traffic volumes were grown by an annual background growth rate of 0.5% per year for a total growth of 5.0% to create the 2029 Background traffic volumes. The growth rate was established by regression analysis and comparing average annual daily traffic data published by NYSDOT for various years within the project study area. This analysis showed that the area's traffic volumes have been relatively flat with 0-0.5% annual growth over the past 10-15 years; therefore, a 0.5% annual growth rate was applied that will accurately model future traffic in the area. The regression analysis calculations are included in Appendix B and the background growth rate was sent to the NYSDOT for review. The Capital District Transportation Committee (CDTC) was contacted and the CDTC STEP Model outputs for the study corridors for the 2029 background year were provided, which ranged from 0.6% to 1.2% for the roadways in the study area. When accounting for the fact that specific background developments were also added to the TIS background conditions, the 0.5% growth rate is relatively consistent with the CDTC STEP model results.

The Town of Bethlehem and NYSDOT were contacted to determine if additional background traffic from any other developments and/or roadway projects within the study area currently under review or approved should be included in the study. The town noted the following potential future developments in the area: the Gateway Commerce Center, the Beacon Heights Senior Community, a convenience store/gas station to be built at 194 River Road, the Wiggand/Grady Conservation Subdivision, Kenwood Commons along Route 9W, and a commercial shopping plaza across from the NYS Thruway Authority Building. Of these, only the Gateway Commerce Center has had a traffic study completed and received site plan approval from the town.

The traffic impact study for the Gateway Commerce Center were used to incorporate the anticipated traffic generated by this site within the study area. Included in Appendix B is the trip generation rates and figures from the Traffic Impact Study completed by CME.

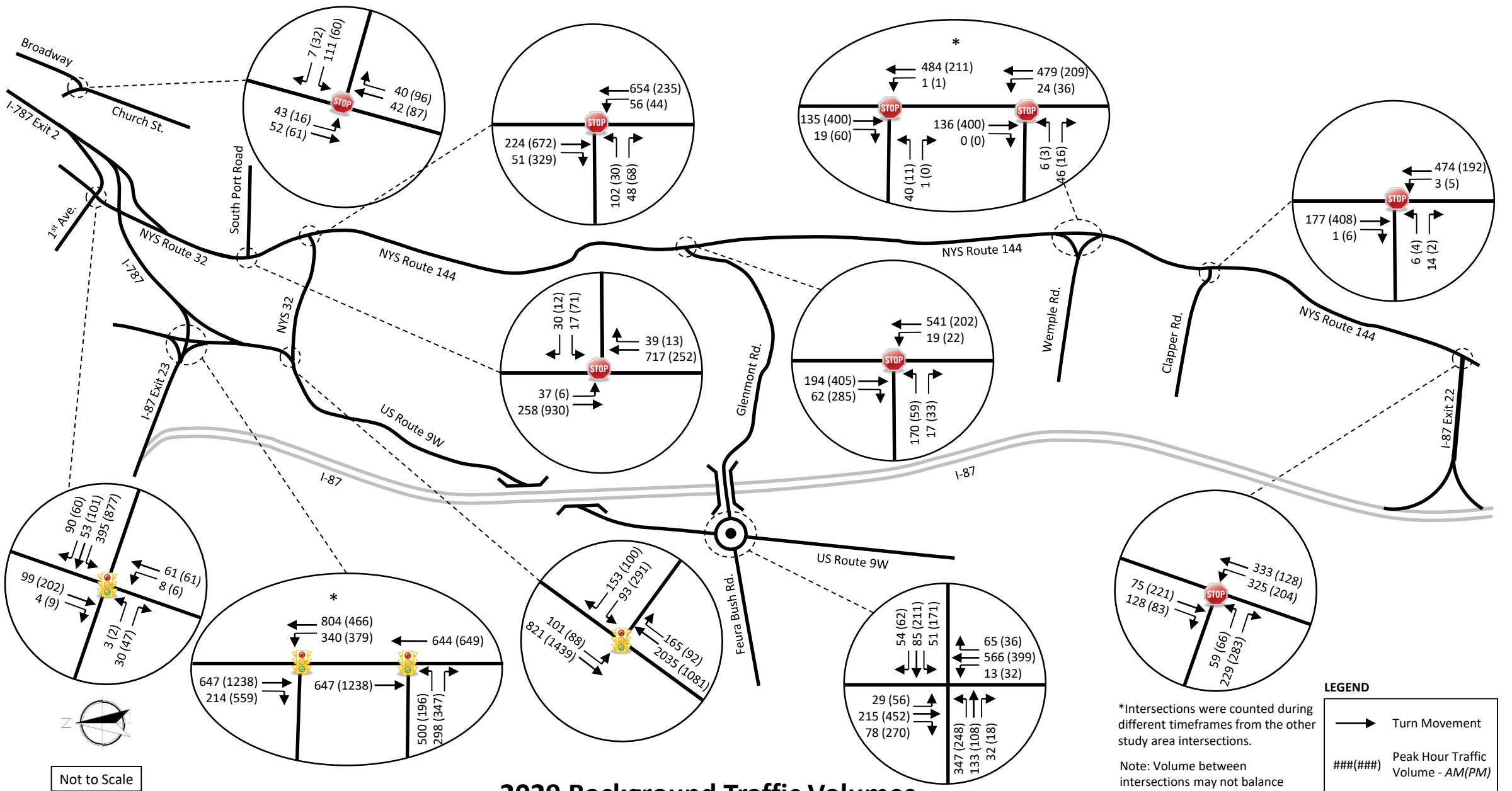
The Beacon Heights Senior Community project will be located off of River Road, Anders Lane and Glenmont Road, consisting of a two-story 89,000 square foot, 72 unit assisted living facility with parking. A two-story, 20,000 square foot commercial building with additional parking is also proposed. Due to the conceptual state of the project and the minimal traffic generated by this type of development, it was determined that the existing background growth rate will accommodate any nominal traffic associated with this project should this development be constructed and operational by 2029.

The convenience store/gas station located at 194 River Road will consist of a roughly 2,300 square foot mixed-use building, with a total of 8 gas pumps. This project will likely have minimal to no impact on traffic as the majority of the traffic would be pass-by traffic, and it is assumed that a traffic analysis was not required for the project, and as such does not warrant inclusion in this study.

Due to the location, type of development, and conceptual state of these project without any traffic studies completed at this time, it was determined that the existing background growth rate will accommodate any nominal traffic associated with the remaining projects noted (Wiggand/Grady Conservation Subdivision, Kenwood Commons along Route 9W, and a commercial shopping plaza across from the NYS Thruway Authority Building) should some of these developments be constructed and operational by 2029.

The 2029 Background traffic volumes shown in Figure 5 include existing traffic data, the proposed traffic volumes from the Gateway Commerce Center and annual background traffic growth. These

"Background" traffic volumes are used as a base upon which to add the proposed development's traffic.



2029 Background Traffic Volumes

BUILD CONDITIONS

Trip Distribution

The projected trip distribution model for this proposed project was established for all vehicles based on distributions from the existing Port of Albany site and taking into consideration the proposed new southern driveway onto NYS Route 144. This distribution was reviewed by the Town's Consultant Engineer and compared with the previous study completed for the site (Beacon Harbor 2009) to compare the proposed traffic distributions, which were relatively consistent. CDTC was provided the TIS and did not provide any comments on the proposed traffic distributions.

Figure 6 shows the calculated trip distribution percentages for the proposed development's access drive onto NYS Route 144 during the weekday morning and evening peak hours. These trip distribution percentages were used to assign the trips generated by the proposed project.

Trip Generation

The proposed development is scheduled to be completed by 2029 over three phases. For analysis purposes, site generated traffic was based on the current Port of Albany's traffic generation. A traffic generation rate was calculated for the existing Port on a peak hour trip per building square foot basis. The number of vehicles entering/exiting the Port driveways from the TMC data during the peak hour was used to develop the existing site's trip generation rate. That site-specific rate was applied to the proposed build-out of the site for Phase I, II and III scenarios. The proposed trip generation volumes are comparable to the Institute of Transportation Engineer's (ITE) Trip Generation manual, 10th edition (ITE's) established rates for an Industrial Park land use, at 463 morning and 452 evening trips, higher than the Warehousing land use, at 249 morning and 271 evening trips, and less than the Manufacturing land use, at 915 morning and 893 evening trips. Utilizing the current traffic generation for the Port of Albany is the most accurate representation of proposed land use and tenants likely for the new development site. Should a single manufacturing facility be proposed at the site, the facility/building would not be in the order of magnitude of 1.13 million square feet as this is not feasible as a proposed development alternative for the site. Based on the nature of the development no multi-use trips or pass-by trips were assumed in this study as all proposed traffic is directly related to the Port expansion with proposed commercial/industrial/manufacturing land use.

For all three redevelopment phases, the 2029 Background traffic volumes were used as the base volume for consistency and to be conservative.

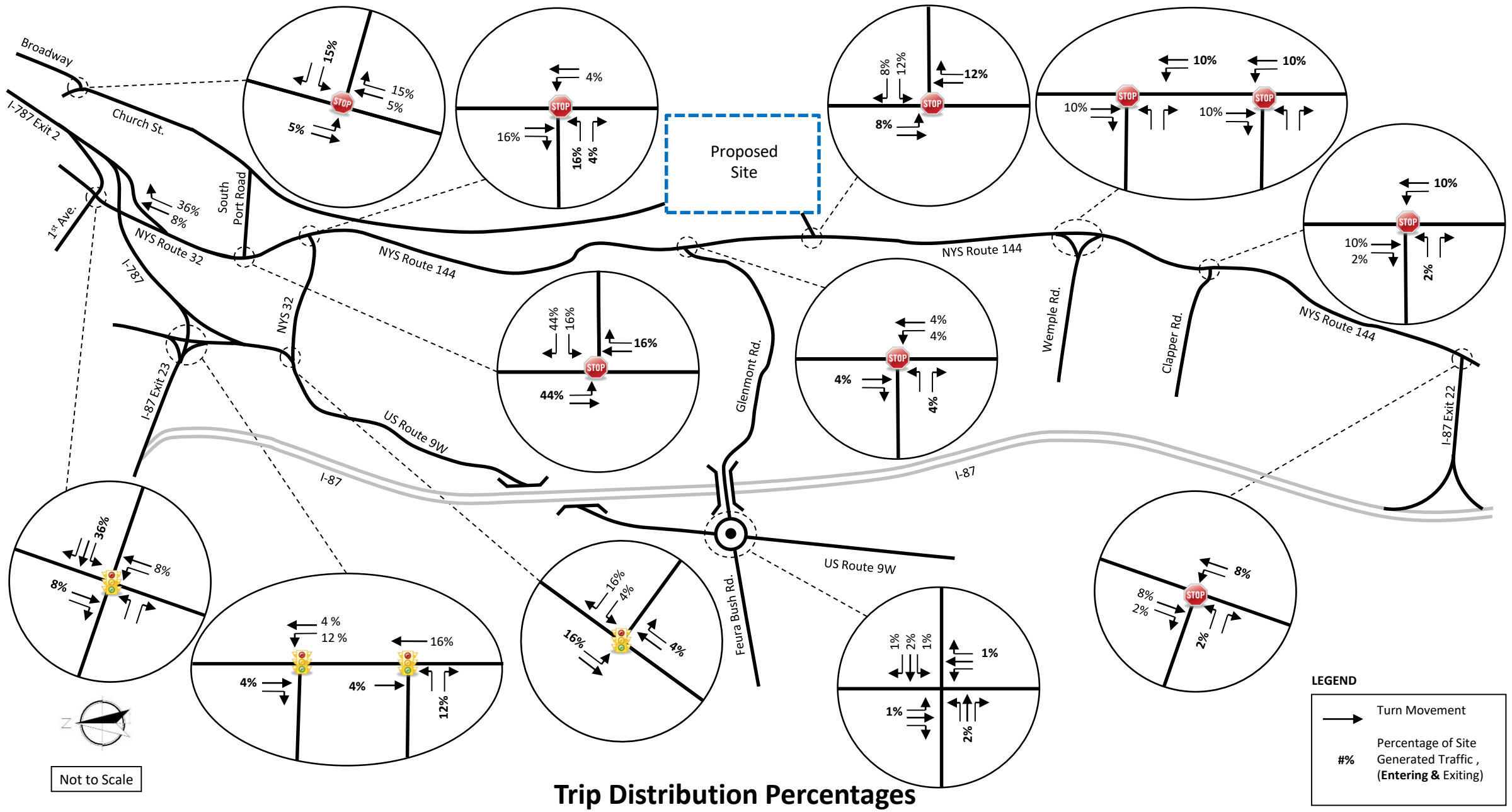
Shown in Table 1 are the resulting trip generation volumes calculated for the proposed project.

Table 1 – Trip Generation Table

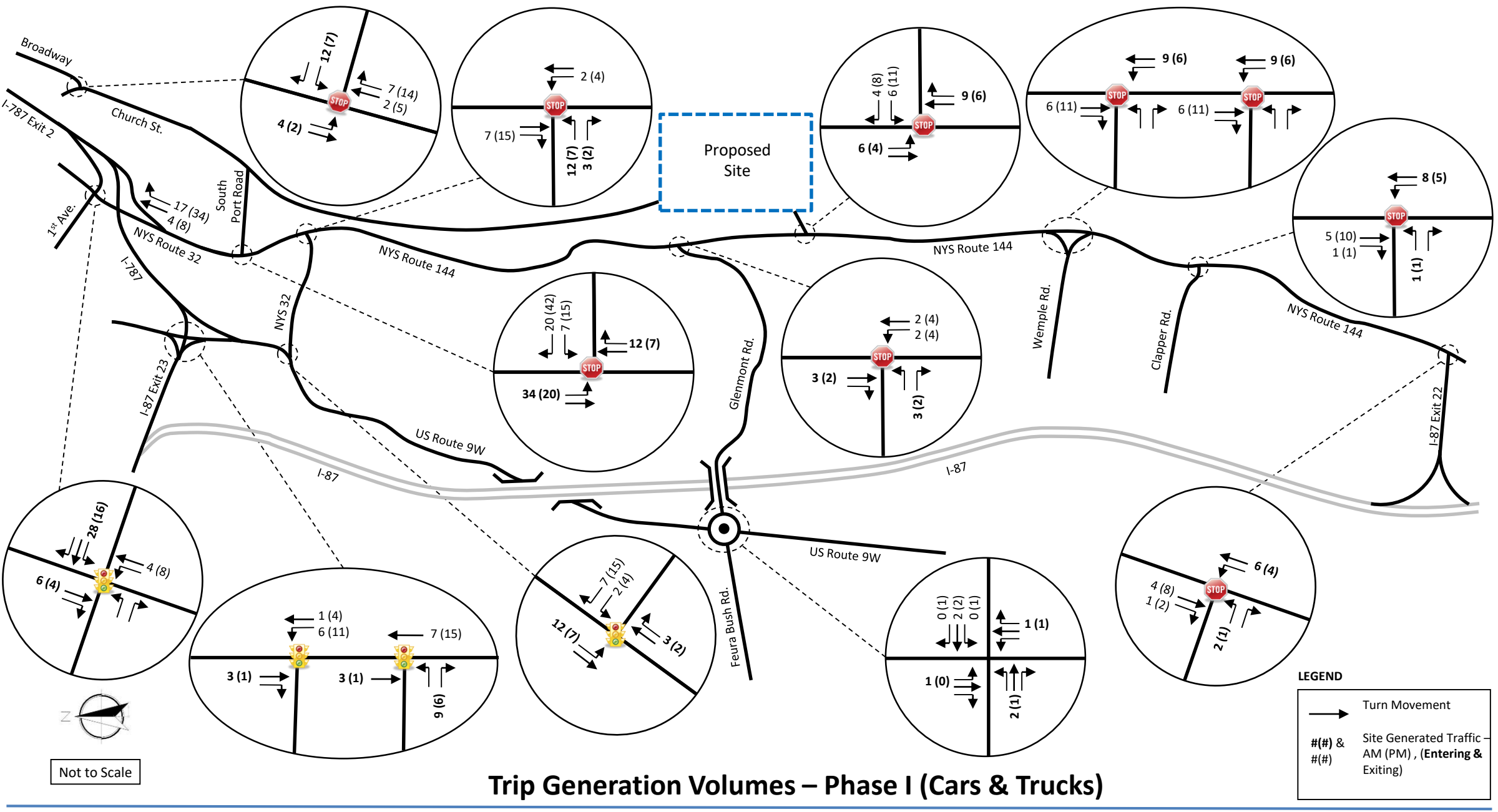
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase I	NA	300 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			77	46	124	46	95	141
Total Projected Trips			**77**	**46**	**124**	**46**	**95**	**141**
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase II	NA	600 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			154	93	247	92	189	281
Total Projected Trips			**154**	**93**	**247**	**92**	**189**	**281**
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase III	NA	1,130 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			291	175	465	173	355	529
Total Projected Trips			**291**	**175**	**465**	**173**	**355**	**529**

To generate the trips in the table above, the peak hour turn movement counts were used as the basis for establishing the existing commuter peak hour volumes and associated trip generation rate. Figures 7,8 and 9 show the trips generated by the proposed development distributed within the study area intersections for the Build Phases I, II and III.

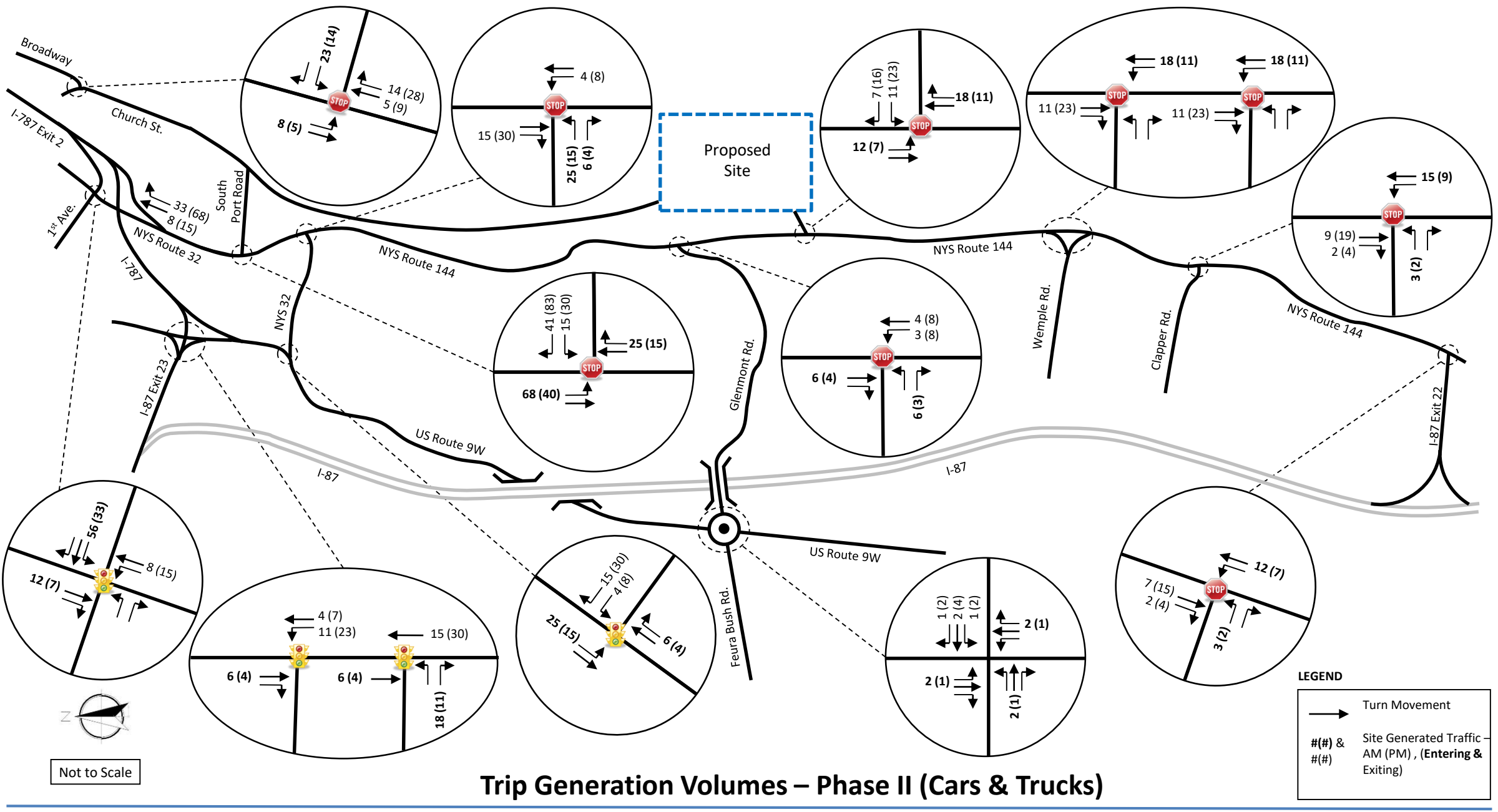
Additional data and calculation sheets used to develop the trip generations rates are included in Appendix B, including a breakdown of projected traffic associated with comparable ITE land uses.



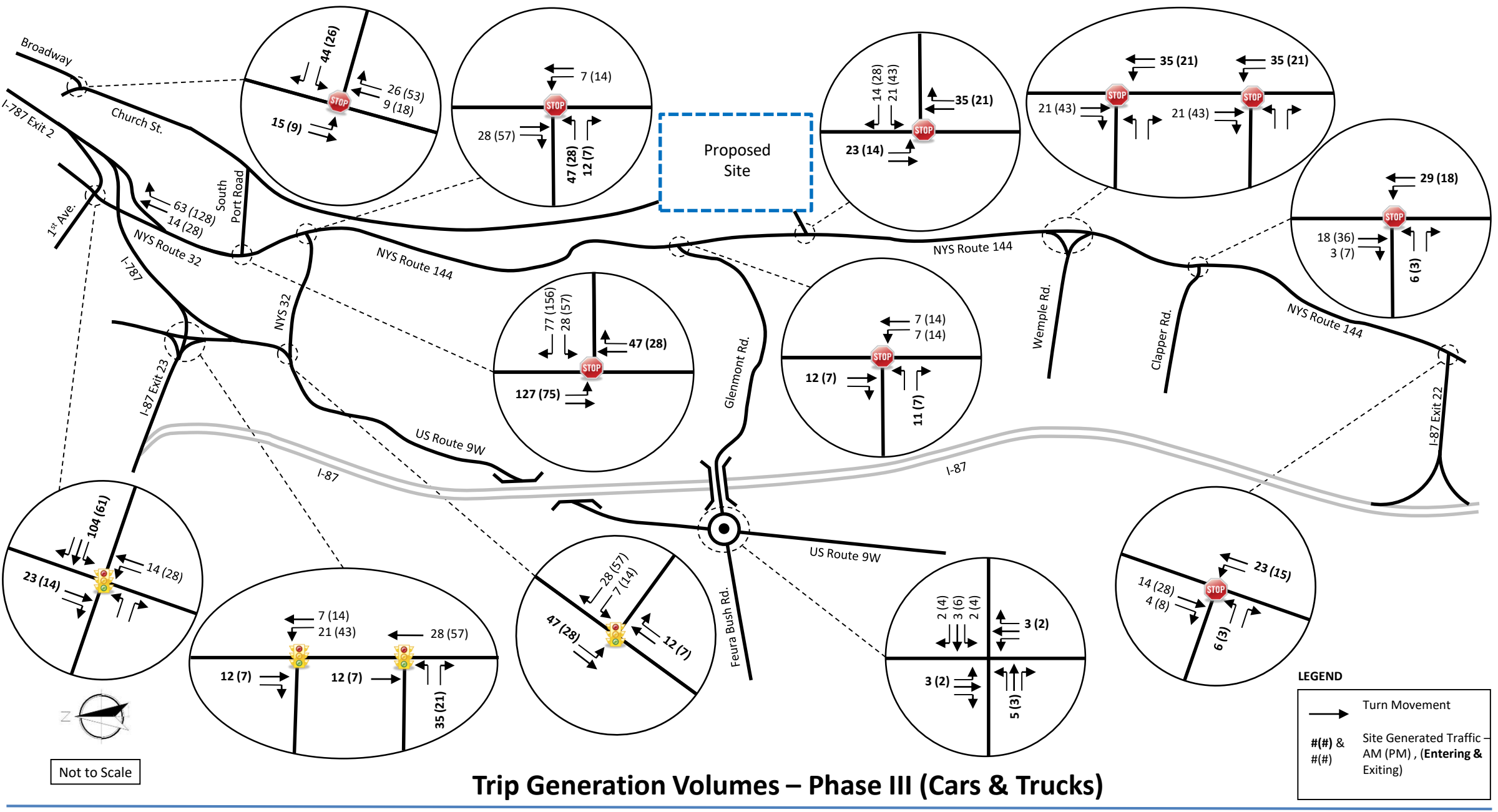
Trip Distribution Percentages



Trip Generation Volumes – Phase I (Cars & Trucks)



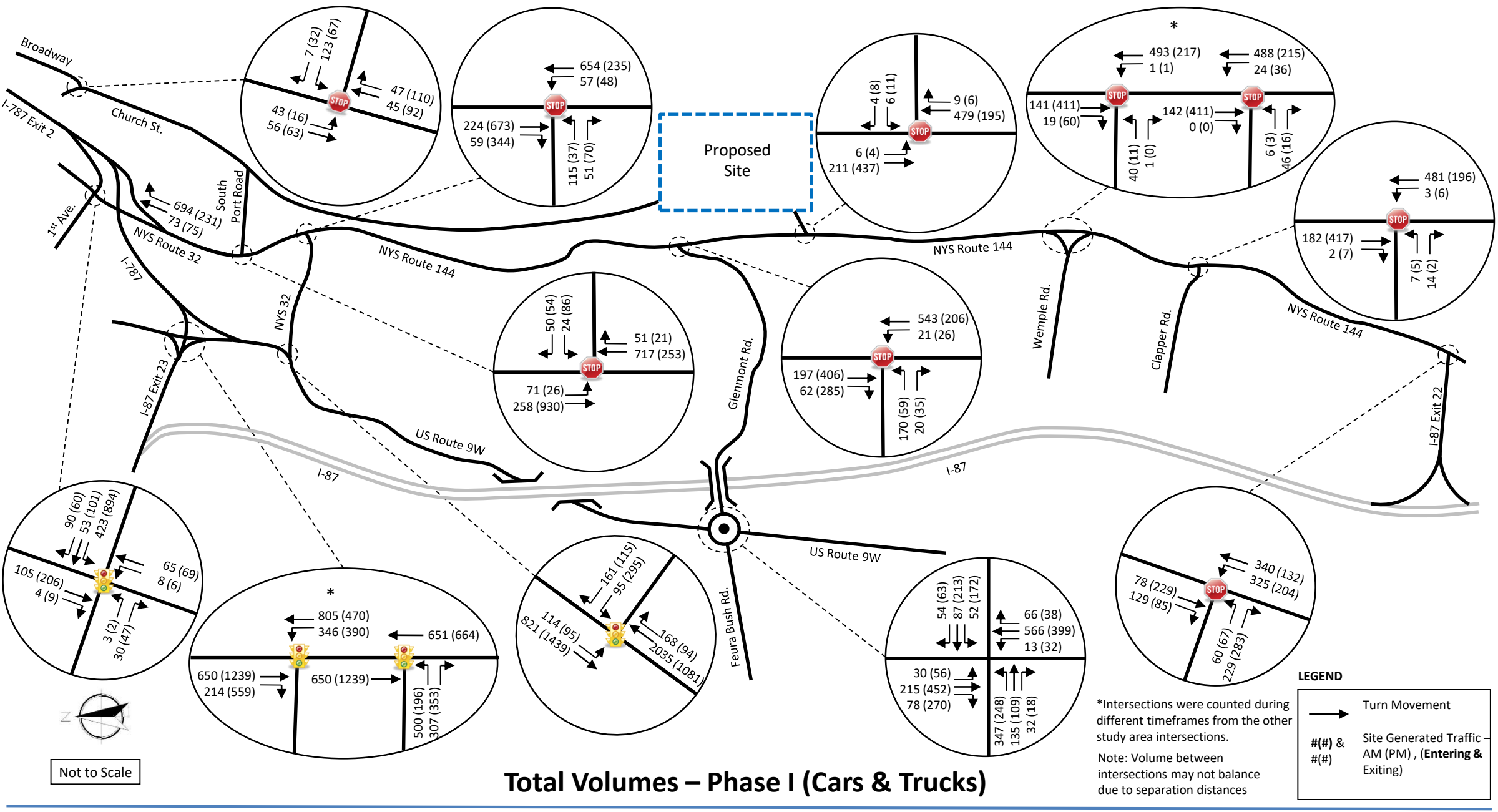
Trip Generation Volumes – Phase II (Cars & Trucks)



Trip Generation Volumes – Phase III (Cars & Trucks)

2029 Build Traffic Volumes

Figures 10, 11 and 12 show the proposed weekday morning and evening peak hour traffic volumes associated with the 2029 Build conditions for build Phases I, II and III. These volumes represent the 2019 Existing volumes combined with the 2029 Background annual traffic growth and the addition of the estimated trips generated by the proposed project for each respective build phase.

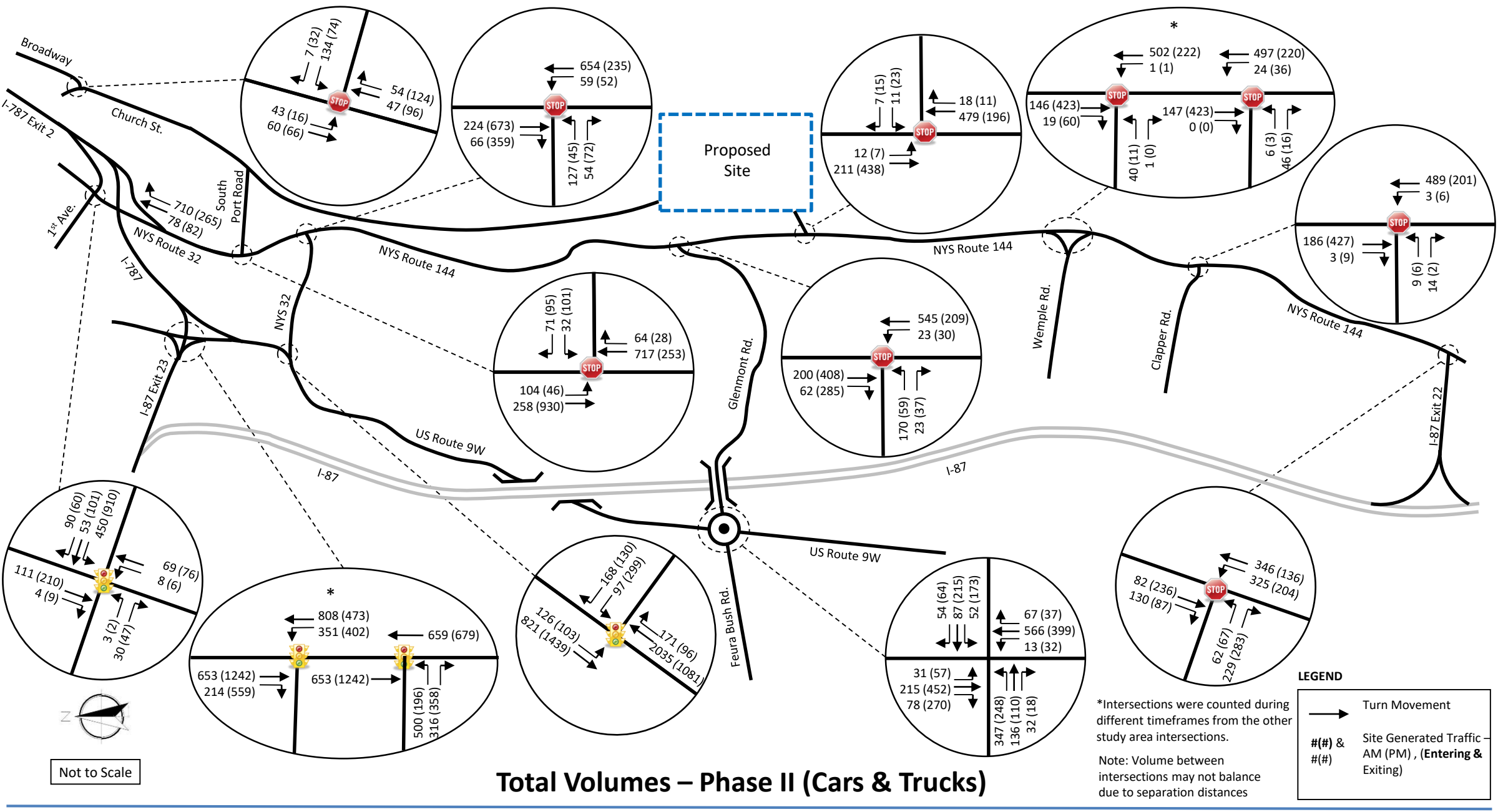


Not to Scale

*Intersections were counted during different timeframes from the other study area intersections.

Note: Volume between intersections may not balance due to separation distances

Total Volumes – Phase I (Cars & Trucks)



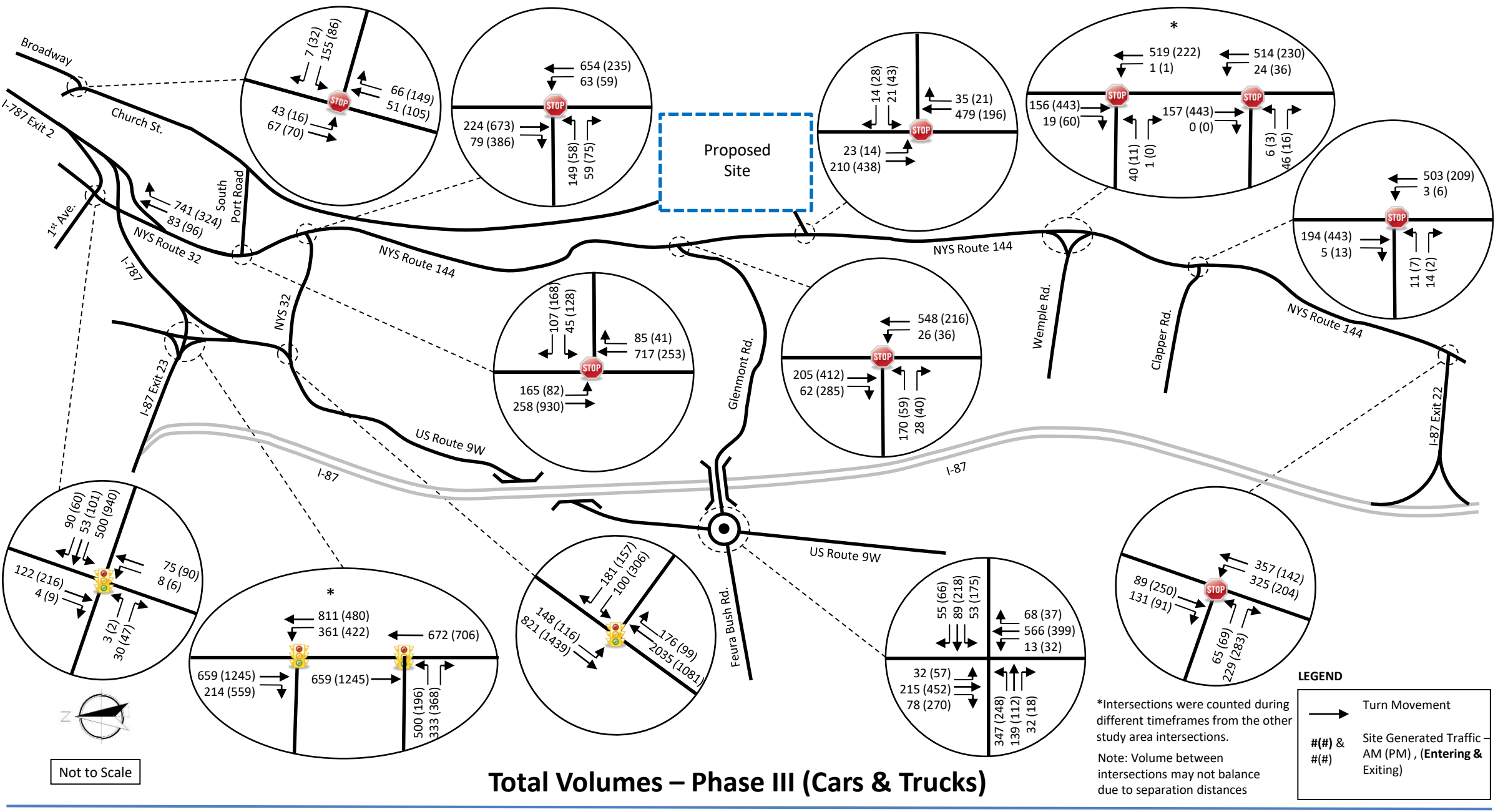
Total Volumes – Phase II (Cars & Trucks)

*Intersections were counted during different timeframes from the other study area intersections.

Note: Volume between intersections may not balance due to separation distances

LEGEND

- Turn Movement
- **#(#)** & #(#) Site Generated Traffic – AM (PM) , (**Entering & Exiting**)



Total Volumes – Phase III (Cars & Trucks)

*Intersections were counted during different timeframes from the other study area intersections.

Note: Volume between intersections may not balance due to separation distances

LEGEND

- Turn Movement
- **#(#)** & #(#) Site Generated Traffic – AM (PM) , (**Entering &** Exiting)

TRAFFIC OPERATIONS

Intersection Capacity – Unsignalized Intersections

Level of service (LOS) is a term used to characterize the operational conditions of a traffic facility at a particular point in time. Numerous factors contribute to a facility's LOS including travel delay and speed, congestion, driver discomfort, convenience, and safety based on a comparison of the facility's capacity to the facility's demand. Alphabetic designations A through F define the six levels of service. LOS A represents very good traffic operating conditions with minimal delays while LOS F depicts poor traffic operating conditions with excessive delays and queues.

Operating levels of service are calculated using the procedures defined in the Highway Capacity Manual, published by the Transportation Research Board. The operating LOS of two-way stop-controlled (TWSC), all-way stop-controlled (AWSC) and roundabout intersections is the computed or measured delay. The intersection delay is based upon the quality of service for the vehicles turning into and out of minor approaches, i.e.; approaches that are stop/yield controlled. The availability of sufficient gaps in the traffic stream on the major street/roundabout controls the capacity for movements to and from the minor approaches, thus resulting in delays for the minor approaches. The criteria, or the delays associated with corresponding levels of service for TWSC, AWSC and roundabout intersections, as specified by the Highway Capacity Manual and are shown in Table 2 below.

Table 2
Unsignalized/Roundabout Intersection Level of Service Criteria

Level of Service	Controlled Delay (sec/veh) TWSC, AWSC and Roundabout Intersections
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Intersection Capacity – Signalized Intersections

The operating Level of Service (LOS) of a signalized intersection is based on the average control delay per vehicle. The control delay per vehicle is estimated for each lane group, combined for each approach and the intersection as a whole. The criteria, i.e., the delays associated with corresponding levels of service for signalized intersections, as specified by the Highway Capacity Manual are shown in Table 3.

Table 3
Signalized Intersection Level of Service Criteria

Level of Service	Controlled Delay (sec/veh) Signalized Intersections
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Presented in Table 4 are the results of the analysis for the 2019 Existing, 2029 Background and 2029 Build Phases I, II, and III scenarios for the intersections located within the study area. The traffic modeling software Synchro, Ver. 10.0, which utilizes the methodologies of the Highway Capacity Manual for unsignalized and signalized intersection, was used for the analysis portion of this study. The full analysis results printouts from the Synchro software are available in Appendix C.

As shown in Table 4, the proposed development will not have any noticeable effects on the traffic operations within the study area when the recommended mitigation is implemented. Described below is a detailed breakdown of the impacts, if any, on the study area intersections' operations as a result of traffic from the proposed development.

No. 1 – NYS Route 32 (S. Pearl Street) at 1st Avenue/I-787 Exit 2 Ramp

This signalized intersection is operating at an overall LOS 'B' for the morning peak hour and an overall LOS 'C' for the evening peak hour. During the Phase III Build scenario, the intersection will see an increase in delay resulting in the overall LOS to degrade to 'C' during the morning peak hour and 'D' during the evening peak hour. With minor signal timing modifications, the background LOS can be maintained for the Phase III full build scenario. These timing modifications include shifting time to the Off-ramp phase in the morning peak hour and shifting time to the NYS Route 32 phase during the evening peak hour. The traffic signal cycle length was changed from 105 seconds to 75 seconds in the morning and 95 seconds in the evening to optimize the LOS for the intersection. It is recommended that the signal timings at this intersection be monitored through coordination between the applicant and NYSDOT as development occurs in the area to ensure the timings are optimized for the current traffic volumes.

No. 2 – NYS Route 32 (Corning Hill Road) at US Route 9W

This 3-legged actuated signalized intersection operates with an overall LOS 'C' during both the weekday morning and evening peak hours. It will continue to operate at the same overall LOS with the proposed development during the evening peak hour, while some individual movement LOS will see negligible increases and decreases in delay. During the morning peak hour, the overall LOS will drop from a 'C' to a 'D'; however signal timing changes by shifting 2 seconds from the NYS Route 32 phase to the US Route 9W phase approach will maintain existing levels of service for the all build conditions. It should be noted that the northbound thru movement has a volume to capacity (v/c) ratio greater than 1.0 for both the background and build scenarios. It is recommended that the signal timings at this intersection be monitored through coordination between the applicant and NYSDOT as development occurs in the area to ensure the timings are optimized for the current traffic volumes.

No. 3 – NYS Route 32 (S. Pearl Street) at South Port Road

This 3-way signalized intersection operates efficiently today with an overall LOS 'A' during the morning and evening peak hour. However, the southbound left operation for the morning peak hour will start to degrade from a LOS 'B' during the Phase II Build scenario to LOS 'F' for Phase III and degrade from a LOS 'B' during the Phase I build scenario to LOS 'C' and 'E' for Phases II and III, respectively for the evening peak hour. This movement will be a point of entry for a high volume of traffic entering the proposed development; therefore, it is recommended that a dedicated left turn lane for the southbound approach be installed. A new right turn lane pocket for the westbound approach is also recommended to split the traffic exiting the Port to allow better use of the westbound green time from the signal. These roadway improvements along with upgrading the existing traffic signal system to provide a protected southbound left turn movement with a right turn overlap phase for the new travel lanes will allow the intersection to maintain adequate levels of service through the Phase III (Full Build) conditions, as an intersection operating at an overall LOS 'C' during the peak hour is considered to be adequate by NYSDOT, as outlined in the Highway Design Manual, Chapter 5, Appendix 5D, and their guidelines during the NYSDOT highway design report process.

With the recommended improvements, the westbound South Port Road approach will have a LOS 'D' during the morning peak hour and a LOS 'C' for the evening peak hour from the 2029 Background to 2029 Phase III conditions. The overall intersection operations indicate that these improvements will spread delay to all approaches in order to maximize intersection efficiency and improve the overall delay during both peak hours. Prior to site plan approval for the development, an updated traffic analysis would be completed based on the actual proposed site plan in for review and submitted to the Town of Bethlehem and NYSDOT as a part of the site plan approval process.

No. 4 – NYS Route 144 (River Road) at I-87 Exit 22 Ramp

This 3-legged unsignalized intersection is operating at an overall LOS 'A' for both the morning and evening peak hour currently and will continue to do so for all three build scenarios. Despite the addition of the proposed development's traffic, all intersection movements will continue to operate at the same LOS as the 2029 Background scenario for both the morning and evening peak hours. No proposed mitigation is recommended at this intersection as a result of the proposed development.

No. 5 – NYS Route 144 (River Road) at Glenmont Road

This unsignalized intersection is currently operating well today during the evening peak hour. During the morning peak hour, the eastbound left-turn movement is operating with a LOS of 'F' for the background conditions due to the high number of left turn vehicles combined with the heavy northbound traffic on NYS Route 144. This existing condition will continue to operate at similar levels of service for the Build scenarios as well. These vehicles will continue to have some delay as they wait for an acceptable gap in the NYS Route 144 traffic flow (see the Gap Analysis section for additional details). Despite this, the overall LOS for the intersection for the build scenario is a LOS 'B' and LOS 'A' during the morning and evening peak hour, respectively for the high volume of free-flow traffic. The traffic volumes at this intersection will see minor increases from the proposed development in comparison to the Background volumes. No mitigation is recommended at this intersection as the proposed development will not noticeably impact the operations at this intersection. This is further justified later in the signal warrant analysis and gap analysis report sections. Prior to site plan approval, a signal warrant analysis will need to be updated based on the actual proposed site plan in for review and submitted to the Town of Bethlehem and NYSDOT as a part of the site plan approval process.

No. 6 – NYS Route 144 (River Road) at NYS Route 32 (Corning Hill Road)

This intersection is currently operating with an overall LOS 'A' during the morning and evening peak hour. The eastbound left movement will be exceeding/approaching capacity under the 2029 background condition, where it is projected to operate at a LOS 'F' for the morning peak hour and a LOS 'E' for the evening peak hour. Through Phase I of the development there will be a negligible impact on the operating conditions; however, to maintain adequate levels of service from Phase II through the full build scenario, it is recommended that a traffic signal be installed at this intersection (see the Signal Warrant section of this report for additional details). After installation of a new signal, under the Phase III conditions the eastbound left operation is raised from a LOS 'F' to LOS 'C' for both morning and evening peak hours.

The timing of the installation of a traffic signal at this intersection should be based on the magnitude of the site plan for the initial proposed development and potential phasing of the proposed development within the site. Prior to site plan approvals, a signal warrant analysis should be updated based on the actual proposed site plan in for review and submitted to the Town of Bethlehem and NYSDOT as a part of the site plan approval process.

No. 7 – Church Street at Broadway

This stop sign controlled 'T' intersection operates well today with an overall LOS 'A' in the morning and evening peak hour. The intersection will continue to operate well with the additional proposed development traffic, with no individual movement falling below LOS 'C'. No mitigation is recommended at this intersection.

No. 8 – Glenmont/Feura Bush Road at US Route 9W

This current signalized intersection is in the design stage to be converted to a roundabout by Spring 2021. After correspondence with the engineering firm designing the roundabout, Creighton Manning Engineers, LLP (CME), it was found that the minimal amount of site generated traffic entering this intersection has already been incorporated into the background traffic analysis during the analysis and design of the new roundabout. The level of service table from the Traffic Assessment Memo prepared by CME for the alternatives reviewed for the US Route 9W/Glenmont Road/Feura Bush Road intersection project are included in Appendix B. A detailed traffic analysis of the existing intersection is not warranted, given the conversion to a roundabout. Through coordination with CME, oversized load accommodations through the roundabout are part of the design criteria which is still being progressed through the design phase of the project with NYSDOT.

No. 9 – Clapper Road at NYS Route 144 (River Road)

This unsignalized intersection is currently operating at an overall LOS 'A' for both morning and evening peak hour and will continue to do so for all three build scenarios. The eastbound left movement will see an increase in delay from Phase II to Phase III, changing from a LOS 'B' to LOS 'C' for both morning and evening peak hours; however, this is considered an acceptable level of service, as previously noted. Because of the low volume of existing and site-generated traffic anticipated to use Clapper Road, the remaining intersection movements will continue to operate at the same LOS as the existing conditions for both morning and evening peak hours. No proposed mitigation is recommended at this intersection as a result of the proposed development.

No. 10 – I-787/I-87 Exit 23 Interchange at US Route 9W

These signalized intersections are currently operating at LOS 'B' and LOS 'C' levels of service during the morning peak hour for the I-787/I-87 Exit 23 On and Off Ramp, respectively. They will continue to operate at these overall levels of service through all three build scenarios during the morning peak hour. No noticeable impacts are anticipated at these intersections as a result of the proposed development.

During the evening peak hour, the I-787/I-87 Exit 23 On Ramp is currently operating at a LOS 'F' while the I-787/I-87 Exit 23 Off Ramp is at a LOS 'C'. The on ramp will continue to operate at the same levels of service for all movements through the build phases with the exception of the northbound left movement, which will experience an increase in delay from Phase II to Phase III, changing from a LOS 'E' to a LOS 'F'. The I-787/I-87 Exit 23 Off Ramp will maintain the same levels of service as the background conditions, through all three build phases. With minor signal timing modifications, the overall background LOS can be maintained for the Phase III full build scenario for the off ramp and improved from a LOS 'F' to LOS 'E' for the on ramp. These timing modifications include shifting time to the north and southbound approaches as well as shortening the traffic signal cycle length from 135 to 130 seconds. It is recommended that the signal timings for this intersection continue to be monitored by NYSDOT as development occurs in the area to ensure the timings are optimized for the current traffic volumes as it is operating near capacity.

No. 11-Wemple Road at NYS Route 144 (River Road)

Wemple Road splits and has two intersections with NYS Route 144 (River Road), because of this, each access drive was analyzed separately in order to more accurately model existing and future conditions. Both of these unsignalized intersections are currently operating at an overall LOS 'A' for both morning and evening peak hour and will continue to do so for all three build scenarios. The eastbound left movement for the northern access drive will see an increase in delay from Phase I to Phase II, changing from a LOS 'B' to LOS'C' during the evening peak hour; however, this is considered an acceptable level of service as previously noted. Because no site-generated traffic is anticipated to utilize Wemple Road, the remaining intersection movements will continue to operate at the same LOS as the existing conditions for both morning and evening peak hours. No proposed mitigation is recommended at this intersection as a result of the proposed development.

No. 12– NYS Route 144 at Proposed Site Driveway

The proposed site access drive was modeled as two lane road with single entering and exiting lanes, under stop sign control for the exiting traffic. The driveway will be restricted to car traffic only as all truck traffic will be directed to South Port Road and Church Street. This will be accomplished by including signage prohibiting trucks from using this entrance as well as enforcement by the Port, the Port's tenants and local law enforcement. The proposed driveway will have a negligible impact to the traveling public on NYS Route 144 as this will be a free movement. The level of service summary shows that this intersection will operate efficiently for all three phases of development, with an overall LOS 'A' for both morning and evening peak hours. In addition, no movement at this intersection will operate below a LOS 'C' for the morning and evening peak hour. A signal was not warranted for build phase I, II, or III, which is detailed later in the signal warrant report section.

TABLE 4 - INTERSECTION LEVEL OF SERVICE TABLE

Study Intersection	Approach and Movement		MORNING PEAK HOUR											
			2019 EXISTING		2029 BACKGROUND		2029 BUILD-PHASE I		2029 BUILD-PHASE II		2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NYS Route 32 at First Avenue/I-787 Exit 2 Ramp (*Signalized*)	Eastbound	L-T-R	8.4	A	8.4	A	8.4	A	8.4	A	8.4	A	2.4	A
	Westbound	L	9.7	A	9.4	A	10.5	B	11.3	B	13.1	B	17.0	B
		T-R	3.4	A	3.4	A	3.5	A	3.6	A	3.8	A	4.7	A
	Northbound	L-T	45.1	D	45.1	D	44.7	D	44.5	D	43.4	D	29.2	C
	Southbound	T-R	54.5	D	54.5	D	54.6	D	54.7	D	54.8	D	36.1	D
	OVERALL		**18.5**	**B**	**18.6**	**B**	**19.1**	**B**	**19.7**	**B**	**20.8**	**C**	**18.6**	**B**
NYS Route 32 at US Route 9W (*Signalized*)	Westbound	L	55.1	E	56.5	E	57.7	E	58.9	E	61.0	E	72.0	E
		R	12.7	B	12.8	B	12.8	B	13.0	B	13.1	B	14.9	B
	Northbound	T	35.8	D	49.3	D	52.1	D	54.9	D	60.0	E	48.8	D
		R	4.7	A	5.1	A	5.2	A	5.3	A	5.6	A	4.9	A
	Southbound	L	34.3	C	36.0	D	40.6	D	44.8	D	52.9	D	52.2	D
		T	4.7	A	4.8	A	4.7	A	4.7	A	4.7	A	4.0	A
	OVERALL		**25.7**	**C**	**33.7**	**C**	**35.6**	**D**	**37.3**	**D**	**40.6**	**D**	**34.4**	**C**
NYS Route 32 at South Port Road (*Un-Signalized*)	Westbound	L	22.1	C	22.3	C	21.5	C	22.8	C	21.8	C	47.7	D
		R											18.4	B
	Northbound	T-R	5.7	A	6.3	A	8.9	A	14.7	B	15.4	B	19.2	B
	Southbound	L	3.7	A	4.0	A	6.4	A	18.5	B	158.1	F	13.5	B
		T											2.5	A
	OVERALL		**6.0**	**A**	**6.5**	**A**	**9.1**	**A**	**16.5**	**B**	**59.5**	**E**	**16.4**	**B**
NYS Route 144 at I-87 Exit 22 Ramp (*Un-Signalized*)	Northbound	T-L	8.1	A	8.3	A	8.3	A	8.3	A	8.3	A		
	Eastbound	L	14.5	B	16.3	C	17.2	C	18.4	C	21.1	C		
	OVERALL		**5.6**	**A**	**6.4**	**A**	**6.6**	**A**	**6.8**	**A**	**7.5**	**A**		
NYS Route 144 at Glenmont Road (*Un-Signalized*)	Eastbound	L-R	39.6	E	56.2	F	59.3	F	62.7	F	68.7	F		
	Northbound	T-L	7.9	A	8.0	A	8.0	A	8.0	A	8.0	A		
	OVERALL		**7.7**	**A**	**10.6**	**B**	**11.3**	**B**	**12.0**	**B**	**13.3**	**B**		
NYS Route 144 at NYS Route 32 (*Un-Signalized/Signalized*)	Northbound	T-L	8.2	A	8.3	A	8.3	A	8.3	A	8.4	A	14.8	B
	Eastbound	L	41.0	E	54.3	F	64.5	F	73.7	F	119.9	F	31.1	C
		R	10.3	B	10.6	B	10.6	B	10.5	B	10.8	B	8.0	A
	Southbound	T-R											5.5	A
	OVERALL		**4.6**	**A**	**5.8**	**A**	**7.3**	**A**	**9.0**	**A**	**15.5**	**C**	**14.2**	**B**
Church Street at Broadway (*Un-Signalized*)	Westbound	L	12.7	B	13.0	B	13.6	B	14.2	B	15.5	C		
		R	8.8	A	8.8	A	8.9	A	8.9	A	9.0	A		
	Southbound	L	7.5	A	7.5	A	7.5	A	7.6	A	7.6	A		
	OVERALL		**6.4**	**A**	**6.6**	**A**	**6.8**	**A**	**7.0**	**A**	**7.6**	**A**		
Clapper Road at NYS Route 144 (River Road) (*Un-Signalized*)	Northbound	L	7.5	A	7.6	A	7.6	A	7.6	A	7.7	A		
	Eastbound	L	11.9	B	12.8	B	13.4	B	14.2	B	15.1	C		
	OVERALL		**0.4**	**A**	**0.5**	**A**	**0.5**	**A**	**0.6**	**A**	**0.7**	**A**		
I-787/I-87 Exit 23 On Ramp at US Route 9W) (*Signalized*)	Northbound	L	12.1	B	15.1	B	15.9	B	16.7	B	18.1	B		
		T	1.3	A	1.3	A	1.3	A	1.3	A	1.4	A		
	Southbound	T	23.1	C	25.5	C	25.9	C	26.3	C	27.1	C		
	OVERALL		**12.3**	**B**	**13.8**	**B**	**14.1**	**B**	**14.4**	**B**	**15.1**	**B**		
I-787/I-87 Exit 23 Off Ramp at US Route 9W) (*Signalized*)	Eastbound	L	71.1	E	82.0	F	82.0	F	82.0	F	82.0	F		
		R	11.1	B	12.5	B	12.6	B	12.8	B	12.9	B		
	Northbound	L	14.6	B	14.8	B	14.9	B	14.9	B	15.0	B		
		T	4.2	A	4.2	A	4.2	A	4.3	A	4.3	A		
	OVERALL		**25.5**	**C**	**28.6**	**C**	**28.5**	**C**	**28.4**	**C**	**28.2**	**C**		
NYS Route 144 at Wemple Road North (*Un-Signalized*)	Northbound	L-T	7.6	A	7.6	A	7.6	A	7.6	A	7.7	A		
	Eastbound	L-R	15.9	C	16.7	C	17.0	C	17.4	C	18.1	C		
	OVERALL		**1.2**	**A**	**1.2**	**A**	**1.2**	**A**	**1.2**	**A**	**1.2**	**A**		
NYS Route 144 at Wemple Road South (*Un-Signalized*)	Northbound	L-T	7.6	A	7.7	A	7.7	A	7.7	A	7.8	A		
	Eastbound	L-R	10.2	B	10.3	B	10.4	B	10.4	B	10.6	B		
	OVERALL		**1.0**	**A**	**1.1**	**A**	**1.1**	**A**	**1.0**	**A**	**1.0**	**A**		
NYS Route 144 at Proposed Site Driveway (*Un-Signalized*)	Westbound	L					13.9	B	14.5	B	15.5	C		
	Southbound	L					8.5	A	8.6	A	8.7	A		
	OVERALL						**0.3**	**A**	**0.6**	**A**	**1.1**	**A**		

TABLE 4 - INTERSECTION LEVEL OF SERVICE TABLE

Study Intersection	Approach and Movement		EVENING PEAK HOUR											
			2019 EXISTING		2029 BACKGROUND		2029 BUILD-PHASE I		2029 BUILD-PHASE II		2029 BUILD- PHASE III		2029 BUILD-PHASE III - MITIGATION	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NYS Route 32 at First Avenue/I-787 Exit 2 Ramp (*Signalized*)	Eastbound	L-T-R	17.6	B	19.1	B	19.1	B	19.1	B	19.1	B	31.8	C
	Westbound	L	26.5	C	31.8	C	34.2	C	36.9	D	44.0	D	34.8	C
		T-R	7.6	A	8.0	A	8.1	A	8.1	A	8.3	A	5.7	A
	Northbound	L-T	37.9	D	37.4	D	37.9	D	38.4	D	38.9	D	37.2	D
	Southbound	T-R	53.7	D	53.3	D	53.6	D	53.8	D	53.5	D	54.1	D
	OVERALL		**28.6**	**C**	**32.0**	**C**	**33.7**	**C**	**35.5**	**D**	**40.2**	**D**	**34.6**	**C**
NYS Route 32 at US Route 9W (*Signalized*)	Westbound	L	33.6	C	36.7	D	37.2	D	38.6	D	39.6	D		
		R	16.2	B	17.8	B	17.8	B	18.1	B	18.9	B		
	Northbound	T	26.6	C	26.5	C	26.6	C	29.1	C	29.3	C		
		R	4.8	A	4.8	A	4.8	A	4.9	A	4.9	A		
	Southbound	L	14.9	B	16.1	B	17.6	B	21.2	C	24.4	C		
		T	18.3	B	18.6	B	18.5	B	17.9	B	17.8	B		
	OVERALL		**22.1**	**C**	**22.6**	**C**	**22.7**	**C**	**23.5**	**C**	**23.7**	**C**		
NYS Route 32 at South Port Road (*Signalized*)	Westbound	L	28.6	C	28.8	C	24.9	C	25.6	C	30.7	C	31.8	C
		R											1.3	A
	Northbound	T-R	4.0	A	4.2	A	5.5	A	6.7	A	8.5	A	5.7	A
	Southbound	L	9.5	A	11.1	B	17.4	B	26.1	C	65.2	E	4.6	A
		T											13.7	B
	OVERALL		**9.5**	**A**	**10.6**	**B**	**15.3**	**B**	**21.4**	**C**	**46.0**	**D**	**11.6**	**B**
NYS Route 144 at I-87 Exit 22 Ramp (*Un-Signalized*)	Northbound	T-L	8.4	A	8.6	A	8.7	A	8.7	A	8.8	A		
	Eastbound	L	11.9	B	12.6	B	12.7	B	12.9	B	13.2	B		
	OVERALL		**6.0**	**A**	**6.3**	**A**	**6.3**	**A**	**6.2**	**A**	**6.2**	**A**		
NYS Route 144 at Glenmont Road (*Un-Signalized*)	Eastbound	L-R	20.3	C	22.8	C	23.5	C	24.2	C	25.6	D		
	Northbound	T-L	9.5	A	9.7	A	9.7	A	9.7	A	9.8	A		
	OVERALL		**2.2**	**A**	**2.3**	**A**	**2.5**	**A**	**2.6**	**A**	**2.8**	**A**		
NYS Route 144 at NYS Route 32 (*Un-Signalized/Signalized*)	Northbound	T-L	11.1	B	11.5	B	11.6	B	11.8	B	12.1	B	5.9	A
	Eastbound	L	32.3	D	37.2	E	41.5	E	47.0	E	60.0	F	30.3	C
		R	18.7	C	20.1	C	20.5	C	20.8	C	21.5	C	10.2	B
	Southbound	T-R											16.9	B
	OVERALL		**2.0**	**A**	**2.1**	**A**	**2.5**	**A**	**2.9**	**A**	**3.9**	**A**	**14.8**	**B**
Church Street at Broadway (*Un-Signalized*)	Westbound	L	11.0	B	11.2	B	11.5	B	11.8	B	12.3	B		
		R	9.3	A	9.4	A	9.5	A	9.5	A	9.7	A		
	Southbound	L	7.7	A	7.7	A	7.7	A	7.8	A	7.9	A		
	OVERALL		**3.1**	**A**	**3.1**	**A**	**3.2**	**A**	**3.2**	**A**	**3.3**	**A**		
Clapper Road at NYS Route 144 (River Road) (*Un-Signalized*)	Northbound	L	8.3	A	8.3	A	8.4	A	8.4	A	8.5	A		
	Eastbound	L	13.0	B	13.6	B	14.0	B	14.5	B	15.1	C		
	OVERALL		**0.4**	**A**	**0.4**	**A**	**0.5**	**A**	**0.5**	**A**	**0.5**	**A**		
I-787/I-87 Exit 23 On Ramp at US Route 9W (Signalized)	Northbound	L	95.3	F	66.2	E	68.6	E	72.8	E	82.5	F	110.3	F
		T	0.4	A	0.4	A	0.4	A	0.4	A	0.4	A	0.4	A
	Southbound	T	100.1	F	166.8	F	175.0	F	179.7	F	180.5	F	90.3	F
	OVERALL		**81.3**	**F**	**121.7**	**F**	**127.2**	**F**	**130.6**	**F**	**132.0**	**F**	**77.1**	**E**
I-787/I-87 Exit 23 Off Ramp at US Route 9W (*Signalized*)	Eastbound	L	57.7	E	56.6	E	56.6	E	56.6	E	56.1	E	72.0	E
		R	13.0	B	14.6	B	15.4	B	16.1	B	17.3	B	14.3	B
	Northbound	T	6.6	A	7.1	A	7.1	A	7.2	A	7.4	A	6.0	A
		T	38.3	D	57.7	E	57.7	E	57.7	E	57.6	E	36.5	D
	OVERALL		**27.4**	**C**	**37.4**	**D**	**37.3**	**D**	**37.2**	**D**	**37.0**	**D**	**27.0**	**C**
NYS Route 144 at Wemple Road North (Un-*Signalized*)	Northbound	L-T	8.3	A	8.4	A	8.4	A	8.4	A	8.5	A		
	Eastbound	L-R	14.1	B	14.5	B	14.8	B	15.1	C	15.6	C		
	OVERALL		**0.5**	**A**	**0.5**	**A**	**0.4**	**A**	**0.4**	**A**	**0.4**	**A**		
NYS Route 144 at Wemple Road South (*Un-Signalized*)	Northbound	L-T	8.3	A	8.7	A	8.7	A	8.8	A	8.9	A		
	Eastbound	L-R	11.8	B	12.8	B	13.0	B	13.2	B	13.5	B		
	OVERALL		**0.8**	**A**	**0.8**	**A**	**0.7**	**A**	**0.7**	**A**	**0.7**	**A**		
NYS Route 144 at Proposed Site Driveway (*Un-Signalized*)	Westbound	L					12.5	B	13.1	B	14.3	B		
	Southbound	L					7.7	A	7.7	A	7.8	A		
	OVERALL						**0.5**	**A**	**0.9**	**A**	**1.6**	**A**		

Truck Impact Analysis

Due to the nature of the proposed development, a separate review of the proposed truck traffic was assessed. Truck traffic in the area was analyzed separately from the total traffic volumes as the truck peak period in the study area is relatively consistent between the hours of 9:00 AM and 1:00 PM which do not coincide with the overall peak hour volumes on the roadway network.

Truck access to the site will be restricted to the northern truck/rail entrance via a bridge crossing Normans Kill and connecting to the existing Normanskill St before turning onto NYS Route 32 at South Port Road. This restriction was proposed by the Town of Bethlehem as it would allow all trucks that require access onto NYS Route 32 to have a signalized entrance for safety reasons and to further discourage trucks from utilizing Glenmont Road and other primarily residential side roads to the south and west.

An alternative truck distribution scenario was analyzed to assess the possibility of allowing trucks to utilize the southern driveway. This alternative analysis assumed that 15% of trucks would enter and exit the southern driveway from the south, while 5% would enter and exit from the north. As shown in Figure 14a and 15a, included in Appendix B, allowing trucks to use the southern driveway reduces truck traffic on NYS Route 144 between the north and south driveways by roughly 3 trucks during the AM peak hour, 2 trucks during the PM peak hour, and 4 trucks during the Midday peak hour, while increasing truck traffic on NYS Route 32 by approximately 3 trucks during the AM peak hour, as many as 3 trucks during the PM peak hour, and as many as 5 trucks during the Midday peak hour. There is no change in truck traffic on Glenmont Road, as both distribution scenarios assumed no site-generated trucks would use this route.

Because of the small variations in truck volumes between the two distribution scenarios, there would be a negligible difference in impact on the existing roadway network, from an intersection capacity standpoint. Other factors besides intersection capacity play a role in determining if a full access southern driveway is feasible. Based on the 55 mph posted speed limit along NYS Route 144, a sight distance of 930 ft is required for a truck to perform a left-turn out of the driveway. The required sight distance exceeds the available sight distance of 500 ft which is restricted by a horizontal curve of NYS Route 144 to the north. Without enough available sight distance, trucks exiting the site do not have enough time to safely perform the left turn. It is not recommended that trucks utilize this entrance due to the sight distance restrictions.

Truck Volume Assessment

The projected truck trip distribution was established based on distributions from the existing Port of Albany site and given the proposed new southern driveway onto NYS Route 144 will have a truck restriction. This distribution was compared with other truck studies recently completed in the area, including South Albany Truck Traffic completed by CME dated January 16, 2017 and The City of Albany S. Pearl Heavy Vehicle Travel Pattern Study completed by the Capital District Transportation Committee dated May 2018 to ensure the proposed traffic distributions were consistent with the results of these studies. These trip distribution percentages were used to assign the trips generated by the proposed project. See Figure 14 – Truck Trip Distribution Percentages.

Data from other studies provided by the town including the Albany South End Community Air Quality Screening, completed by the New York State Department of Environmental Conservation (NYSDEC), dated August 14, 2014, and the Albany South End Study Progress Update, also completed by NYSDEC dating January 10, 2018 were not used as they did not contain any information related to the volume of truck traffic in the area useful for this TIS, and instead focused on the air quality in and around the Albany South End Community.

As with the total traffic, the number of site-generated trucks was based on the current Port of Albany's truck generation. A truck generation rate was calculated utilizing the turning movement counts collected as part of the TIS and included in Appendix B for the morning and evening peak hour timeframes. This rate was calculated for the existing Port on a peak hour trip per building square foot basis and was analyzed for the Phase III (Full Build) scenario to assess the overall project's impact on truck traffic volumes.

Shown in Table 5 and Figure 15 are the resulting truck trip generation volumes calculated for the proposed project.

Table 5 – Truck Trip Generation

Type of Land Use	ITE Code	Unit	*Weekday Morning Peak			*Weekday Evening Peak			Mid-Day Peak		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Based on Existing Port of Albany Truck Traffic Generation	NA	1,130 1000 SF	Generation Rate =		0.13	Generation Rate =		0.07	Generation Rate =		0.13
			51%	49%	100%	56%	44%	100%	52%	48%	100%
			75	72	147	42	33	75	78	73	151
Total Projected Trips			**75**	**72**	**147**	**42**	**33**	**75**	**78**	**73**	**151**

* = Weekday morning and evening peak hours represent the peak hour for all vehicles on the roadway network.

The midday peak was established using the truck peak hour data from the previously referenced South Albany Truck Traffic report. Because midday truck traffic volumes were not recorded or necessary as a part of the capacity analysis, the truck volume data from the previous report was used as it was thorough, previously reviewed, and less than 3 years old. The peak truck traffic will be on the road during the midday hours where overall traffic volumes are approximately 45% less than the morning peak hour and 42% less than the evening peak hour, based on 24-hour tube count data NYS Route 144; included in Appendix A. The employee peak hour and the truck peak hour are not anticipated to occur during the same timeframes. As a result, a capacity analysis for the truck peak hours is not useful as the roadway network has the capacity during the midday truck peak. Table 6 shows from a qualitative standpoint, the anticipated impact from the proposed development related to the volume of trucks during the midday peak timeframe.

Table 6 – Project Truck Increases

MID-DAY PEAK HOUR

ROAD SEGMENT	Existing Truck Volume		Proposed Truck Volume		% Increase	
	NB/EB	SB/WB	NB/EB	SB/WB		
NYS Route 32 from NYS Route 144 to US Route 9W (East/West)	34	32	42	39	23.5%	21.9%
Glenmont Rd. from NYS Route 144 to US Route 9W (East/West)	3	6	3	6	0.0%	0.0%
NYS Route 32 from 1st Ave. to South Port Rd. (North/South)	83	86	109	111	31.3%	29.1%
NYS Route 144 from NYS Route 32 to Glenmont Rd. (North/South)	68	79	76	86	11.8%	8.9%
NYS Route 144 from Glenmont Rd. to Clapper Rd. (North/South)	67	75	75	82	11.9%	9.3%
NYS Route 144 from Clapper Rd. to I-87 Exit 22 (North/South)	67	75	75	82	11.9%	9.3%

Based on this information the proposed development will increase the number of trucks on the surrounding roadway network from 8.9% to 31.3% during the peak truck timeframe (Midday), while no increase in trucks is anticipated on Glenmont Road.

As shown in Figure 14, 40% of trucks entering and exiting the proposed development are anticipated to utilize the Broadway/Church Street intersection to the north based on current truck patterns. This route provides free access to and from I-787 with minimal disturbance to the surrounding area, as it is fronted by several industrial and commercial businesses. The remaining 60% of trucks entering and exiting the site from the north (40%), as well as the west (10%) and south (10%), which pass through residential areas on their way to/from the South Port Road access. In order to minimize truck noise along these routes, it is recommended that signage be installed restricting the use of compression braking within these residential areas. Other signage clarifying the intended truck routes should be installed to prevent heavy vehicles from accidentally or intentionally using neighborhood streets to access the site, as outlined in the Albany County Commercial Transportation Access Study, completed by CME dated April 5, 2002.

Oversized loads may be required access to/from the proposed Port Expansion site in a similar manner to the existing Port site. These deliveries require a specific traffic control plan for the intended route developed on a case by case basis with the approval of NYSDOT and any other municipality that has jurisdiction on the roads on which the oversized load is traveling. A general oversized truck route to the GE site is in development by CME Associates and is included in Appendix B for reference.

Truck Sensitivity Analysis

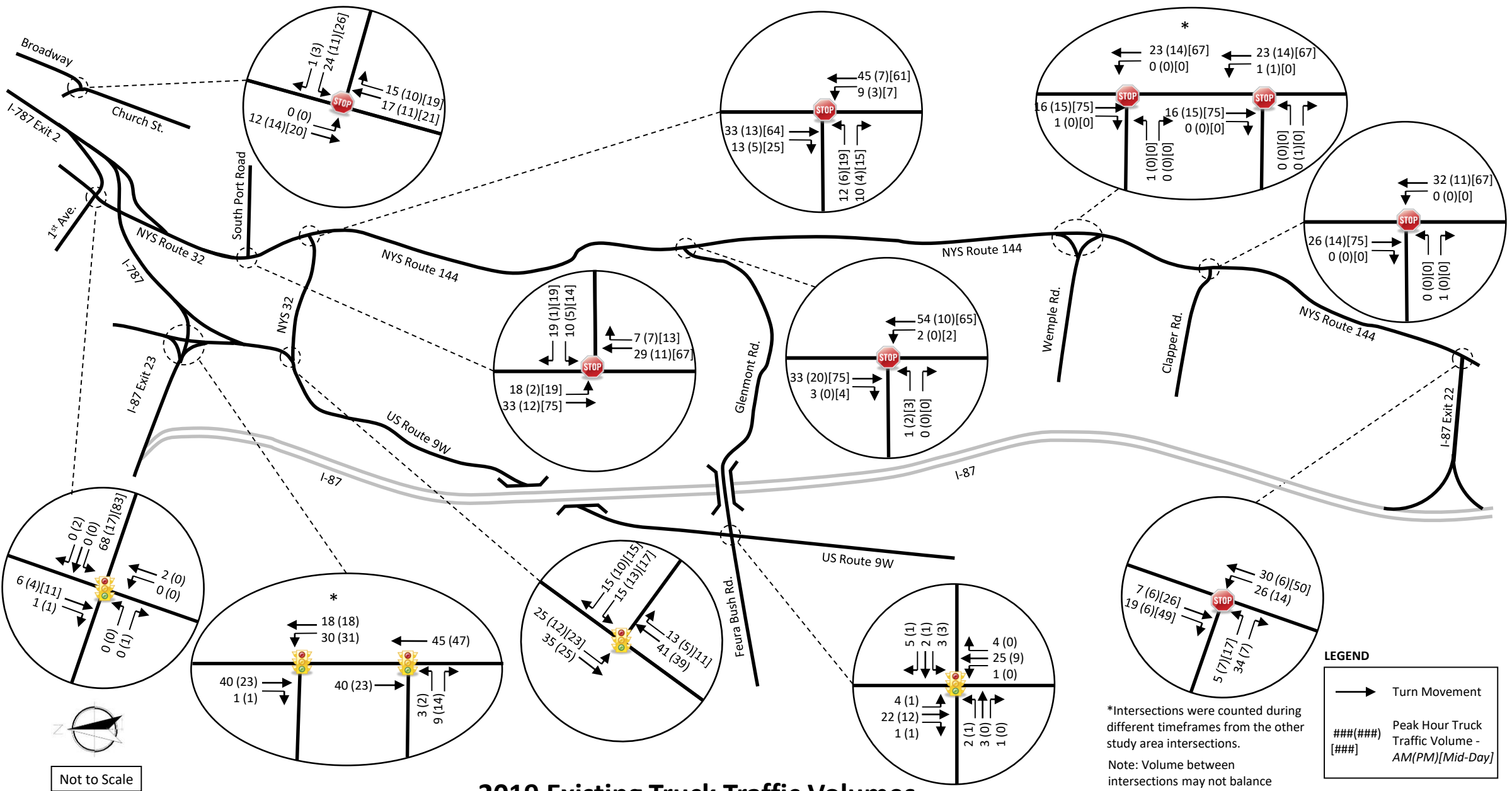
To assess the impact of the increased truck traffic on the surrounding roadway network, a sensitivity analysis was performed assuming 100% of all the trucks entering and exiting the site would be restricted to a single route. Three options were assessed: A north/eastbound route via I-787 at Broadway, a westbound route via I-87 Interchange 23, and a southbound route, traveling via NYS Route 144 to I-87 Interchange 22. These routes were modeled in the traffic software Synchro Ver. 10.0, and their LOS compared against the 2029 Phase III LOS, assuming all recommended mitigation efforts were in place. These routes are shown on Figure 16, the results table is included in Appendix B and the Synchro printouts of this analysis are included in Appendix C.

Northbound/Eastbound Route:
When assuming 100% of the site-generated trucks traveling to/from the north/east via I-787 at Church/Broadway, as shown by the red line in Figure 16, there is only a slight degradation of service during the morning peak hour, dropping from a LOS ‘A’ to LOS ‘B’, while all other approaches will experience negligible increases in delay. This is the recommended truck route, should the tenant utilize a single trucking route.

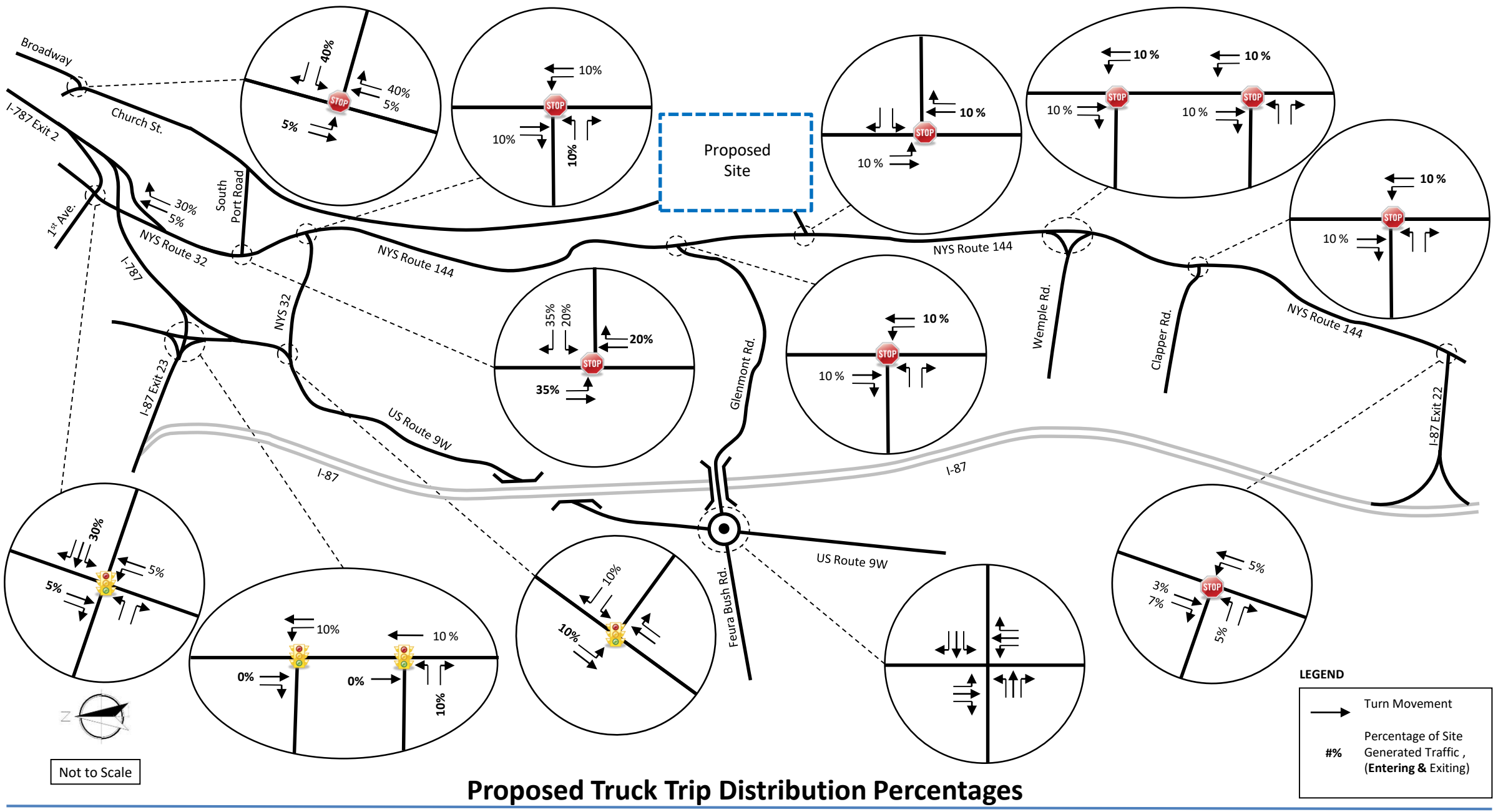
Southbound Route:
For the southbound route, as shown by the green line in Figure 16, 100% of trucks travel to/from South Port Road along NYS Route 32/144 to the I-87 Interchange 22. Along this route the unsignalized intersection approaches onto NYS Route 144 would have an increase in delay as the available gaps in traffic would decrease due to the increase in volume. Should the southern access scenario be proposed by the future tenant, during the site plan approval process an updated traffic analysis would be required to assess the impacts from the actual proposed development including the proposed trucking operations for the tenant.

Westbound Route:
The westbound route, as shown by the blue line in Figure 16 is assuming the worst-case scenario that all truck travel to the I-87 Interchange via NYS Route 32 and US Route 9W; however, access to this interchange is also available via Church Street to the Green Street slip ramp onto I-787. Nevertheless, as an extreme scenario, when all trucks utilize this route, additional recommended mitigation includes a follow up review of the US Route 9W intersection with NYS Route 32 as the

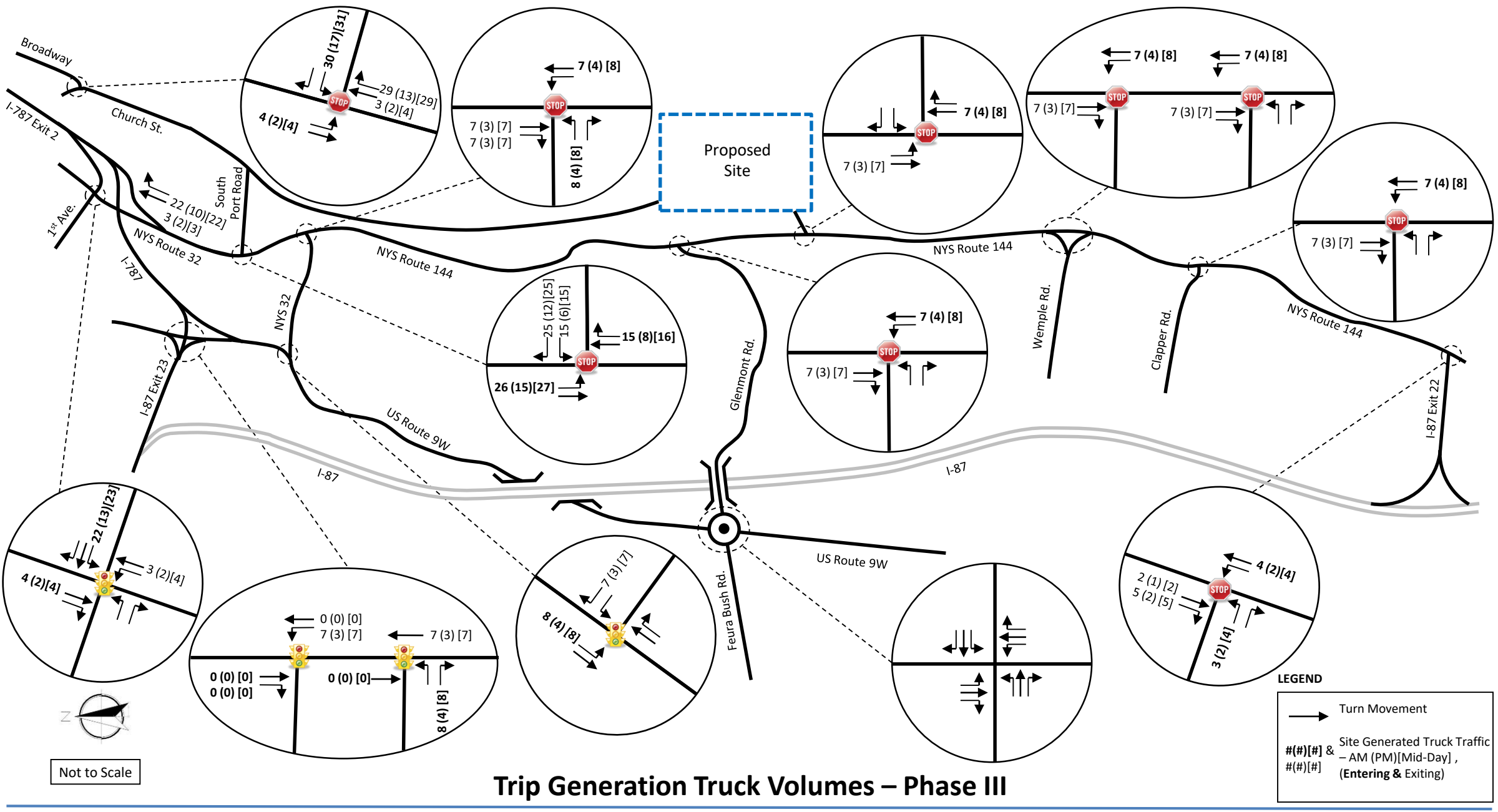
intersection is projected to degrade from a LOS 'C' to a LOS 'D' in the morning peak hour with the analysis showing failing operations for the southbound left turn movement. With 10 of the 75 total site-generated trucks making this turn, the movement can maintain the same level of service as the Build Phase III-Mitigation scenario. When 50 of the 75 total site-generated trucks make this turn, the movement reaches failing levels of service, degrading from a LOS 'E' to a LOS 'F' for the morning peak hour. Should this scenario be proposed by the future tenant, the potential recommended mitigation to consider would be to extend the existing southbound left turn lane to ensure the additional trucks making the left turn do not queue back into the southbound through lanes. During the site plan approval process an updated traffic analysis would be required to assess the impacts from the actual proposed development including the proposed trucking operations for the tenant.



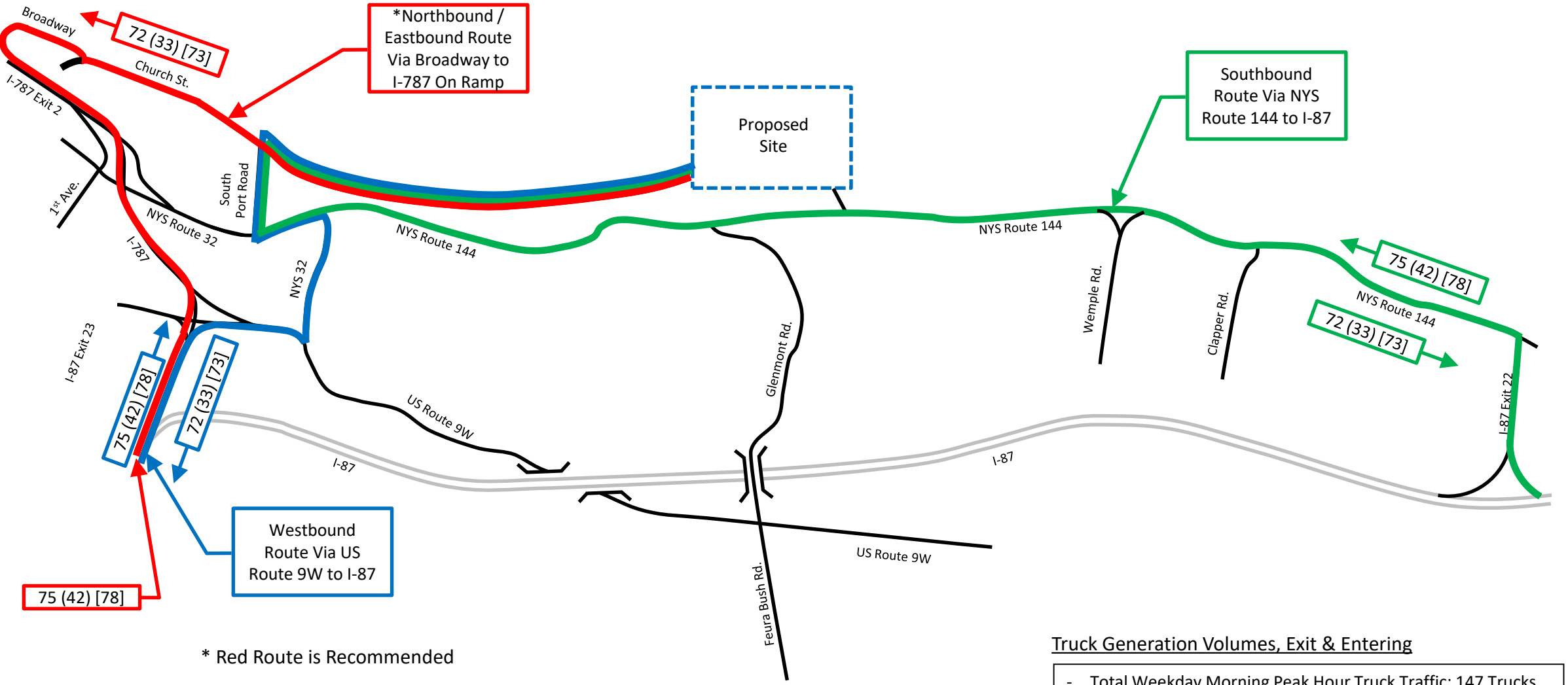
2019 Existing Truck Traffic Volumes



Proposed Truck Trip Distribution Percentages



Trip Generation Truck Volumes – Phase III



* Red Route is Recommended

Not to Scale

Truck Sensitivity Review

Assuming Single Destination

Truck Generation Volumes, Exit & Entering

- Total Weekday Morning Peak Hour Truck Traffic: 147 Trucks
- Total Weekday Evening Peak Hour Truck Traffic: (75) Trucks
- Total Weekday Mid-Day Peak Hour Truck Traffic: [151] Trucks

Gap Analysis

A gap analysis was completed to determine if there were sufficient gaps in traffic to accommodate the existing and projected traffic volumes at the Glenmont Road approach to NYS Route 144 during the critical morning peak hour. The number of gaps from 7:00 AM to 8:15 AM were recorded in conjunction with the traffic volumes and are included under Appendix B. Critical Gaps and Follow Up Times for the left and right turn movements were calculated in Synchro based on intersection geometry, heavy vehicle percentages and speed limit. This critical gap represents the minimum amount of time between vehicles traveling on the NYS Route 144 corridor for a car from Glenmont Road to enter the traffic flow. Follow Up Times indicate the time span between the departure of one vehicle from Glenmont Road and the following vehicle pulling up to the intersection. Table 6 below summarizes the result of the data collected and the gap analysis performed:

Table 7 - Gap Analysis

AM PEAK HOUR

Study Intersection	Approach & Movement	CRITICAL GAP	FOLLOW UP TIME	AVAILABLE TURN MOVEMENT GAPS	2029 BACKGROUND VOLUME	2029 FULL BUILD VOLUME
NYS Route 144 at Glenmont Road *(Un-Signalized)*	Northbound Left	4.1	2.2	331	19	26
	Eastbound Left	6.5	3.6	222	170	170
	Eastbound Right	6.3	3.4	191	17	28

The 'Available Turn Movement Gaps' column represents the total number of gaps available during the morning peak hour. The 2029 Background and Full Build Volume's represents the number of vehicles turning at Glenmont Road during the peak hour. As shown in the table, there are sufficient available gaps for all the traffic movements at the proposed intersection. The eastbound left-turn vehicles will experience delay as they wait for an acceptable gap. During gap data collection the maximum queue length was 6-7 vehicles; however, the queue cleared out on a regular basis, as the NYS Route 144 traffic came in waves.

Signal Warrant Analysis

Signal warrants were reviewed for the study area un-signalized intersections in accordance with the Federal Highway Administrations; Manual of Uniform Traffic Control Devices, 2009 edition. The un-signalized intersections of NYS Route 144 (River Road) at Glenmont Road as well as NYS Route 144 (River Road) at NYS Route 32 (Corning Hill Road) were reviewed using 2019 existing volumes due to the volumes and operating conditions at both intersections which have the potential to warrant a traffic signal. These intersections were also reviewed using the 2029 Build Phase III volumes to determine if the proposed development's additional traffic generation warranted a traffic signal.

The detailed signal warrant analysis worksheets for the existing and proposed conditions for both intersections are provided in Appendix D. This analysis showed that the NYS Route 144 (River Road) and Glenmont Road intersection meets one of the MUTCD signal warrants for the existing condition and following three of the MUTCD signal warrants for the proposed Build conditions.

- Warrant 1B – Eight Hour Vehicle Volume Warrant, Interruption of Continuous Traffic (Existing & Full Build based on projected midday traffic volumes)
- Warrant 2 – Four Hour Vehicle Volume Warrant (Full Build)
- Warrant 3B - Peak Hour Vehicle Volume Warrant (Full Build - AM Peak Hour Only)

Although a signal warrant threshold is met, this does not mean that a signal should be installed. The MUTCD signal warrants are a trigger to assess when further evaluation is needed to determine the most appropriate traffic control at the intersection. Despite meeting a signal warrant using existing traffic volumes, the gap analysis on NYS Route 144 that was performed (see the Gap Analysis section of the TIS for more details) showed that there are gaps available in the NYS Route 144 traffic flow for vehicles from Glenmont Road to turn onto NYS Route 144 during the most critical time, the morning peak hour. Based on the result of the Gap Analysis and potential negative impacts that installing a traffic signal has on traffic progression along a corridor, a signal is not currently recommended at this intersection. This intersection's traffic volumes should be monitored in the future as background growth occurs and when the expansion to the Port has a proposed site plan under review.

The NYS Route 144 (River Road)/NYS Route 32 (Corning Hill Road) intersection met three warrants based on the existing traffic volumes, and four warrants when applying the projected Full Build volumes as noted below:

- Warrant 1B – Eight Hour Vehicle Volume Warrant, Interruption of Continuous Traffic (Existing & Full Build)
- Warrant 2 – Four Hour Vehicle Volume Warrant (Existing & Full Build)
- Warrant 3A - Peak Hour Vehicle Delay/Volume Warrant (Full Build)
- Warrant 3B - Peak Hour Vehicle Volume Warrant (Existing & Full Build)

Based on these warrants being met, a traffic signal was assessed for this intersection to determine what impacts it would have both positive and negative. The warrants were met based on the 85th percentile speed exceeding 40 mph and utilized the MUTCD 70% Factor for the volume-based warrants. River Road (NYS Route 144) at the intersection has a 55-mph posted speed limit; however, the intersection is just south of the city's 30mp zone. At this intersection, southbound traffic is accelerating, while northbound traffic is slowing down. Speed data north of this intersection showed a 40 mph 85th percentile speed in both directions; therefore, it was concluded that the 85th percentile speed through the intersection is greater than 40 mph.

From a capacity standpoint, the signal will alleviate the anticipated future failing operations of the NYS Route 144 and NYS Route 32 stop sign controlled intersection and provide adequate levels of operations with minor increases in delay over the 2029 Background levels of operation. Installation of a traffic signal is not recommended based on the current volumes; however, this intersection should be monitored as background traffic volumes increase to determine if/when a signal installation may be appropriate. As a result of this assessment, a follow up traffic signal warrant analysis is recommended at this intersection as a mitigation measure for the development project during the initial project's site plan approval process.

Sight Distance Analysis

The sight distance at the proposed site entrance was field measured to determine if the available intersection sight distances meet the AASHTO recommended values. The NYSDOT Engineering Bulletin 17-007 was consulted when obtaining standard sight distance and is incorporated into the NYSDOT Highway Design Manual's sight distance tables which were used for the sight distance assessment. As shown in Table 8 below and Figure SD-01, located in Appendix B, adequate sight distance is available at the proposed site driveway onto NYS Route 144 when looking left to the south when current vegetation is removed to clear the sight lines. Looking right to the north from the proposed site entrance there is not adequate intersection sight distance or roadway stopping sight distance due to the horizontal curve and the crest of the road at the existing bridge. This section of the NYS Route 144 has an advisory speed of 45 mph posted with a curve sign (MUTCD W1-4) due

to the horizontal curves; however the sight distance was calculated based on the posted regulatory speed limit of 55-mph which is also the 85th Percentile speed in this segment. There is adequate intersection and stopping sight distance for 45 mph once the vegetation along NYS Route 144 in the vicinity of the proposed drive is cleared at least 15-feet back from the edge of the travel way. Truck traffic to/from the Port will not be allowed to use this southern proposed access drive due to the restricted sight distance. It is recommended that the advisory speed limit of 45 mph in this section become the regulatory posted speed limit and the vegetation along NYS Route 144 in the vicinity of the proposed drive be cleared at least 15-feet back from the edge of the travel way to maximize intersection sight distance.

Based on the limited sight distance to the north, it is also recommended that signage be installed (Static or Dynamic) to notify southbound drivers approaching the proposed site entrance that an intersection is ahead (MUTCD W2-2 with W16-9P). Additional Port of Albany entrance advanced notice signage should also be considered to aid in notifying drivers in advance of the site driveway being visible. Adding intersection lighting is another recommendation to consider to improve the visibility of the intersection during nighttime.

During the site plan approval process, the exact location of the site entrance will be reviewed/approved by the Town and NYSDOT at which point the location(s) of the recommended signage and/or lighting can be designed and reviewed/approved by NYSDOT through their highway work permit process.

Table 8 – Sight Distance Summary Table

SIGHT DISTANCE CALCULATIONS							
Location	Speed Limit	Direction	AASHTO/NYSDOT Recommended Intersection Sight Distance	Available Intersection Sight Distance *	AASHTO/NYSDOT Recommended Stopping Sight Distance	Available Stopping Sight Distance *	Visual Restriction
Proposed Access Drive at NYS Route 144	55 mph	Looking Left	530 feet	490' / 580'	495 feet	410' / 500'	Vegetation & Horizontal Curve
	55 mph	Looking Right	610 feet	345' / 450'		340' / 375'	Vegetation, Horizontal & Vertical Curves
Shifted Access Drive at NYS Route 144	45 mph	Looking Left	430 feet	495' / 590'	360 feet	410' / 500'	Vegetation & Horizontal Curve
	45 mph	Looking Right	500 feet	385' / 500'		340' / 375'	Vegetation, Horizontal & Vertical Curves

Note:
* = Sight distance was measured based on the current conditions with vegetation restricting the sight lines and also projected based on removal of this vegetation.

Maritime Analysis

The Port of Albany consists of multiple deep-water facilities located on both the Albany (west) and Rensselaer (east) side of the Hudson River, which has a navigable width in the project area of approximately 400'. The river is also utilized for recreational boating traffic and locations for ingress/egress/docking operations in the area are shown in Table 9. Based on previous Annual Reports for the Port of Albany and historic growth trends, it is estimated that the Port currently receives roughly 100 ships/barges per year, projected to reach 210 by 2029, equating to

approximately 4 ships per week. In a worst-case scenario, the end-user would require the construction of an additional wharf, increasing maritime traffic at the Port by approximately 10%, or 21 ships/barges per year. These additional ships/barges are not projected to have a significant impact on the existing Hudson River maritime commercial or recreational traffic.

Within the project area, Normanskill Creek is currently used by law enforcement and emergency services for training purposes, and by the public, in a recreational capacity. The proposed development will not add any additional maritime traffic to this waterway, regardless of the end user. The proposed bridge over Normanskill Creek will be designed with adequate freeboard to accommodate the existing usage.

Table 9 – Recreational Maritime Traffic Summary Table

FACILITY	DESCRIPTION	CAPACITY
Albany Yacht Club	Private boating club located approximately 2 miles north of Normanskill on the Rensselaer side of the Hudson River, providing dockage services	± 75 Slips
Springers Marina	Commerical Business located approximately 2 miles north of Normanskill, providing dockage services	± 45 Slips
Captain JP Cruises	Commercial Business operating out of Troy, providing chartered and weekly cruises along the Hudson River	4-Deck Cruise Ship
Corning Preserve Launch	Public concrete boat launch located 3.5 miles north of Normanskill on the Albany side of the Hudson River	Parking for 15 Cars and Trailers
Normans Kill Launch	Public hand launch located in small urban park off New Scotland Road, 0.4 miles east of Maher Road exit of Route 85	Parking for 5 Cars, no Trailers

Rail Analysis

An existing railroad track owned by CSX runs north/south from the Port of Albany along the east side of NYS Route 32/144 and terminates at the Albany Port Railroad, a separate, short-line entity co-owned and operated by CSX and Canadian Pacific. As noted in the previous DGEIS from 2010, a railroad track and bridge had run through the proposed site, over and across the Normans Kill, connecting the proposed site with the Port of Albany Railroad. The track and bridge were used to transport coal through the Port but have not been in operation since 1975, with the bridge being removed, as it had collapsed and was in a state of disrepair. The track has been abandoned and any rights, easements, or ownership have been abandoned with it. A new rail bridge will be constructed to again connect the proposed site to the existing rail line.

The bulk of the daily rail activity at the existing Port of Albany site occurs within the confines of the Port on private property, thus limiting its impact on the general public. Over the last 5 years, approximately 11,000 railroad cars annually pass through the Albany Port Railroad, with 80% continuing past the Town of Bethlehem to CSX's Selkirk Yard, located approximately 8 miles south of the City of Albany. Currently, the only impact to the public is through CSX trains that run to and from the Port on a secondary line connected to Selkirk Yard. The CSX operations to the Port conservatively consist of one train per day that arrives at the Port sometime between midnight and 6:00 AM and leaves between 6:00 AM and noon. The Port also utilizes unit trains on a random, as needed basis about 4 times a month, usually consisting of approximately one-unit train per week that

run on the same schedule. When a unit train is scheduled to come to the Port, that day could include two trains traveling to the Port from Selkirk. When the unit train is unloaded, two trains could be leaving the Port back to Selkirk that day. These unit trains follow the same time schedule as the daily trains, arriving sometime between midnight and 6:00 AM and leaving between 6:00 AM and noon.

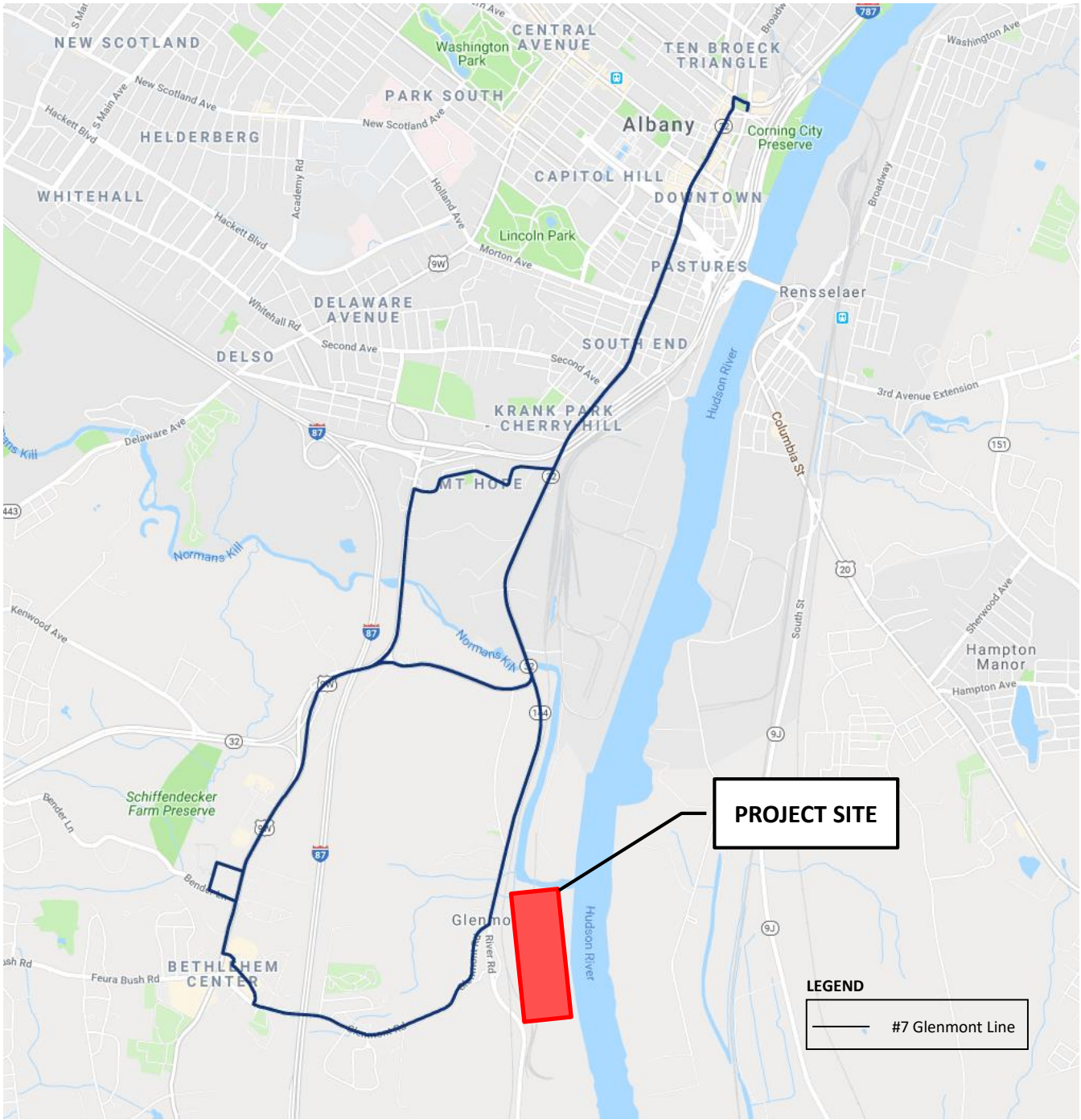
The proposed developments impact on rail operation will be dependent on the tenant/end user. Regardless of the tenant, the only impact to the public will continue to be through the CSX train running on the secondary line to the Selkirk Rail Yard. The projected worst-case scenario operations consist of the current one train-per-day arriving at the Port with an additional 4-5 cars on the existing train, assuming a multi-tenant makeup of the proposed additional 1.3 million square feet. The number of unit trains could potentially increase from 4 to 6 times per month should a single large material-producing tenant occupy the new developable area. These worst-case scenarios will not result in an increase in idling trains in the study area.

The additional 4-5 rail cars are projected to be added to the existing trains that currently pass through the rail yard and therefore will not add any noise or diesel emissions impact to the Ezra Prentice neighborhood. The additional 1-2 trains per month is a slight increase to the roughly 30-35 trains that already pass through the area. Noticeable impacts to the public from increased rail operation are not anticipated as a result of the proposed development.

Public Transportation Analysis

Transit service available in the study area is provided by the Capital District Transportation Authority (CDTA). One CDTA line currently travels past the project site on NYS Route 144 and stops at the NYS Route 144/NYS Route 32 intersection. The Glenmont line (#7) starts from Broadway in the City of Albany and travels past the site on NYS Route 144 to the Walmart located on US Route 9W. No impacts on the public transportation are expected as a result of the proposed development. Figure 17 shows the available transit service in the immediate project area. The Port estimates that roughly 5-7% of their employees commute to work via transportation methods other than personal passenger cars. As a result, there is not expected to be any noticeable changes to the public transportation operations in the study area as a similar high utilization of passenger cars is anticipated for the employees of the proposed expansion project. The public transportation serving the site (Glenmont #7 Bus) has adequate passenger capacity and would experience the same roadway capacity impacts noted in the capacity analysis section.

Not to Scale



CDTA Transit Routes

Pedestrian and Bicycle Transportation Analysis

A review of the existing road network in the study area shows crosswalks with pedestrian push buttons and countdown timers provided at the NY Route 32/1st Avenue/I-787 Exit 2 Ramp intersection and that a crosswalk is provided on Broadway approximately 265-feet east of Church Street. Sidewalks are also provided in the vicinity of the NY Route 32 /1st Avenue/I-787 Exit 2 Ramp intersection and the Broadway/Church Street intersection which are located within the City of Albany. The existing signalized Glenmont/Feura Bush Road/US Route 9W intersection currently provides sidewalks, crosswalks, pushbuttons and countdown timers and will make accommodations for pedestrians when it is converted to a roundabout design. There are no pedestrian accommodations provided at the remaining intersections in the study area.

The Hudson Mohawk Bike Hike Trail system's cycle track ends at the intersection of Broadway and Quay Street and is outside the project area. The Albany County Helderberg Hudson Rail trail currently terminates at S. Pearl Street north of S. Port Road with a bridge over S. Pearl Street. At that point there is a parking lot where riders can then drive, or they can utilize the street network to continue their riding. Currently under construction is the South End Bikeway Connector which will connect these two existing trails/bikeways by constructing a separated cycle track to replace the on-street parking on the east side of S. Pearl Street, which will follow the I-787 frontage road before proceeding under I-787, adjacent to Church Street. This connection will add safety for pedestrians and bicyclists by providing a physical separation from moving vehicles while also serving as a traffic calming improvement in this section of S. Pearl St. There are no State Bike Routes posted in the project area; however, the northern portion of the existing Port of Albany starting at Dunham Street is located within a Tier 2 Pedestrian district of the Bike Pedestrian Priority Network. Based on the number of pedestrians counted during the peak hours, the traffic generated by the proposed project will have a negligible impact on the Bike Pedestrian Priority Network and the recent improvements being constructed will not see any negative impact from the proposed project.

Table 10 shows a summary of the peak hour pedestrian and bicycle activity observed during the traffic data collection. As shown, the NY Route 32/1st Avenue/I-787 Exit 2 Ramp intersection located in the City of Albany currently has pedestrian accommodations and experiences the most pedestrian traffic. Minimal pedestrian activity was observed at the Glenmont/Feura Bush Road/US Route 9W and NYS Route 32/1st Avenue/I-787 Exit 2 Ramp intersections with pedestrian facilities. The remaining study area intersections experience no pedestrian and bicycle activity with the exception of one pedestrian at the I-87 interchange ramps.

Based on the number of pedestrians and bicycles recorded during the peak hour at the NYS Route 32 /South Port Road and Church Street/Broadway intersections during the AM and PM peak hours, it can be assumed that few if any Albany Port employees currently walk and/or ride a bicycle to get to work. The Port estimates that roughly 5-7% of their employees commute to work via transportation methods other than personal passenger cars. As a result, there is not expected to be any noticeable changes to pedestrian and bicycle activity in the study area as a similar high utilization of passenger cars is anticipated for the employees of the proposed expansion project and no additional pedestrian accommodations are planned as mitigation for the project.

Table 10 – Pedestrian/Bicycle Traffic

INTERSECTION	AM PEAK HOUR		PM PEAK HOUR	
	Bicycle	Pedestrian	Bicycle	Pedestrian
Glenmont/Feura Bush Road at US Route 9W	0	4	0	1
NYS Route 32 at US Route 9W	0	0	0	0
Clapper Road at NYS Route 144	0	0	0	0
NYS Route 32 at 1st Avenue/I-787 Exit 2 Ramp	0	19	1	28
Church Street at Broadway	0	3	0	0
NYS Route 144 at Glenmont Road	0	0	0	0
NYS Route 32 at South Port Road	0	0	0	0
NYS Route 144 at NYS Route 32	0	0	0	0
NYS Route 144 at I-87 Exit 22 Ramp	0	0	0	1

Accident History Analysis

An accident history analysis has been completed for the NYS Route 144 corridor based on accident data provided by the Town of Bethlehem Police Department from the Corning Hill Intersection down to the NYS Thruway Exit 22 ramp. This data is included in Appendix B. Table 11 below shows the results of the data analysis.

Table 11 – Accident History Summary

ACCIDENT HISTORY SUMMARY - NYS Route 144 (River Road) February 3, 2016 to September 15, 2019						
	INTERSECTIONS					SEGMENT
	SR 144 / SR 32	SR 144 / Glenmont Rd	Wemple Rd / SR 144	Clapper Rd / SR 144	SR 144 / I-87 Exit 22	SR 144
TOTAL ACCIDENTS	**4**	**10**	**3**	**0**	**11**	**181**
Non-Reportable	1	10	3	0	7	111
Property Damage	1	0	0	0	1	29
Injuries	2	0	0	0	3	40
Fatalities	0	0	0	0	0	1
Intersection Accident Rate (ACC/MEV)	0.27	0.74	0.24	0.00	0.95	2.95
NYS Average Accident Rate (2016)	0.18	0.18	0.18	0.18	0.17	3.50
Accident Types						
Other Vehicle	3	8	1		11	70
Deer/Animal		2	1			69
Fixed Object	1		1			39
Overturned						1
Ran Off Road						1
Bicycle						1

Based on the accident data provided the overall corridor has an accident rate below the statewide average accident rate for a roadway of this nature. As shown in the table, a high percentage of these accidents were animal strikes (38%) while the specifics of the multi-vehicle accidents were not available from the data provided.

The individual intersection accident rates within the roadway corridor included in our study area were also reviewed. All of the intersections reviewed are un-signalized 3-way 'T' intersections which typically have a low accident rate as shown by the statewide average rates of 0.18 (Urban) and 0.17 (Rural). The intersections within the corridor have accident rates higher than the statewide average with the exception of the Clapper Road intersection which did not have any accidents in the time period. The Corning Hill (SR 32) and Wemple Road intersections have accident rates comparable to the statewide average, especially given their small overall number of accidents (4 and 3, respectively). At Glenmont Road and the NYS Thruway Ramp 22 intersections, accident rates are higher than the statewide average by 4 and 5 times respectively. Based on the data provided additional analysis of any specific accident trends is not possible at this time. It is our understanding that the Bethlehem Police Department is currently in the process of implementing an initiative to increase enforcement on this roadway segment and install additional signage to increase driver awareness of the intersections along the corridor.

It is recommended that during the site plan review process, the developer work with the Town and Bethlehem Police Department to coordinate any proposed roadway safety improvement initiatives to ensure there is consistency throughout the corridor to avoid driver confusion. Similar to the recommendations detailed in the sight distance section, our recommendation is to consider the installation of advanced intersection signage, intersection warning signage with flashing beacons, and intersection lighting to improve driver awareness of the side street intersections

I-787 Northbound On Ramp from US Route 9W Capacity Analysis

To analyze the adequacy and safety of the preferred truck route on I-787 via NYS Thruway Exit 23 or US Route 9W and the ability of trucks to merge safely before Exit 2 towards the Port of Albany, a merging capacity analysis was performed by modeling the section of highway where the two lanes from I-787 and the two lanes from NYS Thruway Exit 23 combine before dropping to three lanes prior to the Exit 2 ramp. The traffic modeling software HCS7 was used to generate a Level of Service (LOS) for this merging area to assess any impacts to the traffic operations associated with the proposed development traffic and the report is included in Appendix B. Level of operations for ramp merging is based on the average density, measured in passenger cars per mile per lane (pc/mi/ln). The criteria, i.e. the densities associated with corresponding levels of service for weaving, merging, and diverging road segments, as specified by the Highway Capacity Manual are shown in the table below.

Table 12 – Weaving, Merging, and Diverging Segments Level of Service Criteria

Weaving, Merging, and Diverging Segments Level of Service Criteria

Level of Service	Weaving areas		Merge or Diverge Areas
	Density Range (pc/mi/ln)		
	On Freeways	On Multilane Highways or C-D Roadways	On Freeways, Multilane Highways, or C-D Roadways
A	0-10	0-12	0-10
B	>10-20	>12-24	>10-20
C	>20-28	>24-32	>20-28
D	>28-35	>32-36	>28-35
E	>35	>36	>35
F	Demand Exceeds Capacity		

Based on the analysis performed within the HCS7 software, the average density of the merging highway on I-787 is currently 29.9 pc/mi/ln, or LOS 'C' in the morning peak hour and 15.6 pc/mi/ln, or LOS 'B' during the evening peak hours. After adding the proposed traffic projected from the project the operations are anticipated to be LOS 'C' (31.1 pc/mi/ln) and LOS 'B' (16.3 pc/mi/ln) in the 2029 Phase III full build out scenarios in the morning and evening peak hours respectively. Based on the ramp merging analysis the proposed development is projected to have a negligible impact on the traffic operations at this ramp merge.

CONCLUSIONS AND RECOMMENDATIONS

MJ has evaluated the traffic operations within the study area near the proposed Port of Albany project in Albany, NY. Results from the 2029 Build conditions indicate that the proposed project will have negligible impacts with no noticeable increase in delay to the traveling public within the existing study area intersections for the proposed build phases once the recommended mitigation measures are implemented. Access into and out of the proposed development can be provided in a safe and efficient manner with the existing two points of access along with the proposed new driveway configuration and the proposed signal mitigation outlined in this report.

Based on the traffic analysis results, MJ offers the following conclusion and recommendations:

- The development's detailed site plan is not finalized; however, the most traffic intensive alternative was analyzed in this Traffic Impact Study to review the worst-case scenario. This alternative consists of the development of a 1,130,000 SF, two-level warehouse on approximately 69 acres with full build-out of the project estimated by 2029. As noted within the report, follow up analysis may be necessary during the site plan approval process based on the specifics of the initial proposed development on the site.

- Access to the site is proposed via one new access drive restricted to car traffic only, located on NYS Route 144 and via a new vehicular bridge that will span Normanskill Creek which will provide access to Normanskill Street and the existing intersections of NYS Route 32/South Port Road and Church Street/Broadway.

- It is anticipated that the proposed project as outlined will generate a maximum of 465 trips during the AM peak hour and 529 trips during the PM peak hour.

- The capacity analysis indicates that the following study area intersections will operate adequately with the improvements outlined for the full build-out of the proposed development.

    1. NYS Route 32 at US Route 9W:
        a. Traffic signal timing changes *(Monitor for all Phases, timing changes assumed for Phase III thresholds)*
    2. NYS Route 32 at 1st Ave/I-787 Exit 2 Ramp:
        a. Traffic signal timing changes *(Monitor for all Phases, timing changes assumed for Phase III thresholds)*
    3. NYS Route 32 at South Port Road:
        a. Monitor signal timings *(During Phase I)*
        b. Follow up traffic study to assess signal operations *(Prior to Phase II thresholds)*
        c. Construct a dedicated 200' long southbound left-turn lane *(Prior to Phase III thresholds)*
        d. Construction a dedicated 200' long westbound right turn lane *(Prior to Phase III thresholds)*
        e. Install new traffic signal equipment to provide a permissive/protected southbound left turn phase and a westbound right turn lane overlap phase. Potentially coordinate the controller should a traffic signal be installed at NYS Route 144/NYS Route 32 intersection. *(Prior to Phase III thresholds)*
    4. NYS Route 144 at NYS Route 32
        a. Follow up traffic signal warrant analysis based on the proposed site plan (*Initial project approval*)
        b. Signal should be installed and be coordinated with the traffic signal at South Port Road. *(Assumed Prior to Phase II)*
    5. NYS Route 144 at Glenmont Road
        a. Follow up traffic signal warrant analysis based on the proposed site plan (*Initial project approval*)

- The owner/applicant is responsible for the mitigation recommended within this report. Implementation of the recommended mitigation would be required during the site plan approval process when a definitive site layout is proposed to establish the mitigation measures required. Additional traffic assessments may be required at that time depending on the nature and magnitude of the proposed development presented for site plan approval.

- It is recommended that the proposed new access drive be restricted from trucks, operate under stop sign control and provide a single approach lane onto NYS Route 144 for left and right turn movement as a single entrance lane. Reduction in the regulator speed on NYS Route 144 to 45 mph, intersection signage, intersection lighting and vegetation removal are all recommended at this proposed intersection. Final intersection configuration and details for the recommendations will be coordinated with NYSDOT during the NYSDOT highway work permit process.

  The recommended reduction in regulatory speed on NYS Route 144 at the proposed site driveway and vegetation removal along the sight lines would result in the proposed driveway to have adequate sight distance for passenger cars that meets the AASHTO and NYSDOT recommended lengths.

- The proposed truck traffic will not have a noticeable impact on the traveling public as the increase in truck traffic is only a fraction of the existing truck traffic within the study area. Based on the results of the sensitivity analysis, it is recommended that additional truck traffic be restricted to the route via Broadway/Church Street to the North to minimize impacts to the traveling public.

- The proposed impacts to the rail operations will have a negligible, if any, impact to the general public.

- The proposed project will not have any noticeable impacts to the existing pedestrian and bicycle activities in the study area and the proposed South End Bikeway Connector will provide additional accommodations within the study area.

- The accident history analysis showed that the River Road corridor as a whole has accident rates similar to the statewide average for a similar roadway; while the individual lower volume 'T' intersection had elevated accident rates. It is recommended that during the site plan review process, the developer work with the Town and Bethlehem Police Department to coordinate any proposed roadway safety improvement initiatives to ensure there is consistency throughout the corridor to avoid driver confusion and increase driver awareness of approaching unsignalized intersections.

- In general, the existing roadway infrastructure within the study area has adequate capacity to accommodate the proposed traffic anticipated by the development after implementing the recommended mitigation improvements.

REFERENCES:

- Trip Generation, 10th Edition. Institute of Transportation Engineers. Washington, D.C. 2017.
- Trip Generation Handbook, Second Edition. Institute of Transportation Engineers. Washington, D.C. June 2004.
- Highway Capacity Manual 2010, Fifth Edition. Transportation Research Board. National Research Council, Washington, D.C. 2010.
- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). Federal Highway Administration. 2009.
- "South Albany Truck Traffic" Creighton Manning. 2017.
- "S. Pearl St. Heavy Vehicle Travel Pattern Study". Capital District Transportation Committee. 2018.
- "Albany County Commercial Transportation Access Study" Creighton Manning. 2002.
- "Albany South End Community Air Quality Screening" NYSDEC. 2014.
- "Albany South End Study Progress Update" NYSDEC. 2018.
- "Traffic Control Plan for Superload Transport" CHA, Inc. 2018.

APPENDICES

APPENDIX A **TRAFFIC COUNT DATA**

APPENDIX B **TRAFFIC CALCULATIONS**

APPENDIX C **SYNCHRO ANALYSIS PRINTOUTS**

APPENDIX D **SIGNAL WARRANT WORKSHEETS**

APPENDIX A

TRAFFIC COUNT DATA

- Intersection Turn Movement Counts
  - Tuesday (02/05/2019)
  - Tuesday (02/26/2019)
  - Thursday (08/15/2019)
  - Wednesday (09/25/2019)

- Automatic Traffic Recorder Data
  - Monday (06/17/2019) to Friday (6/21/2019)
  - Monday (09/30/2019) to Wednesday (10/02/2019)

- NYSDOT Tube Count Data
  - 9W on Ramp to I-787 (02/01/2010)
  - 9W at Mt Hope Drive (10/06/2015)
  - I-787 Off-Ramp (05/01/2014)
  - I-787 On-Ramp (02/01/2010)
  - Glenmont at NYS Route 144 (05/06/2014)
  - NYS Route 32 at NYS Route 144 (04/06/2014)
  - NYS Route 32 Off-Ramp (04/06/2015)
  - NYS Route 32 On-Ramp (03/25/2009)
  - S Pearl Near Port Road (11/03/2010)
  - S Pearl Near Exit 22 (11/03/2010)

TRI-STATE TRAFFIC DATA
www.TSTData.com
184 Baker Rd

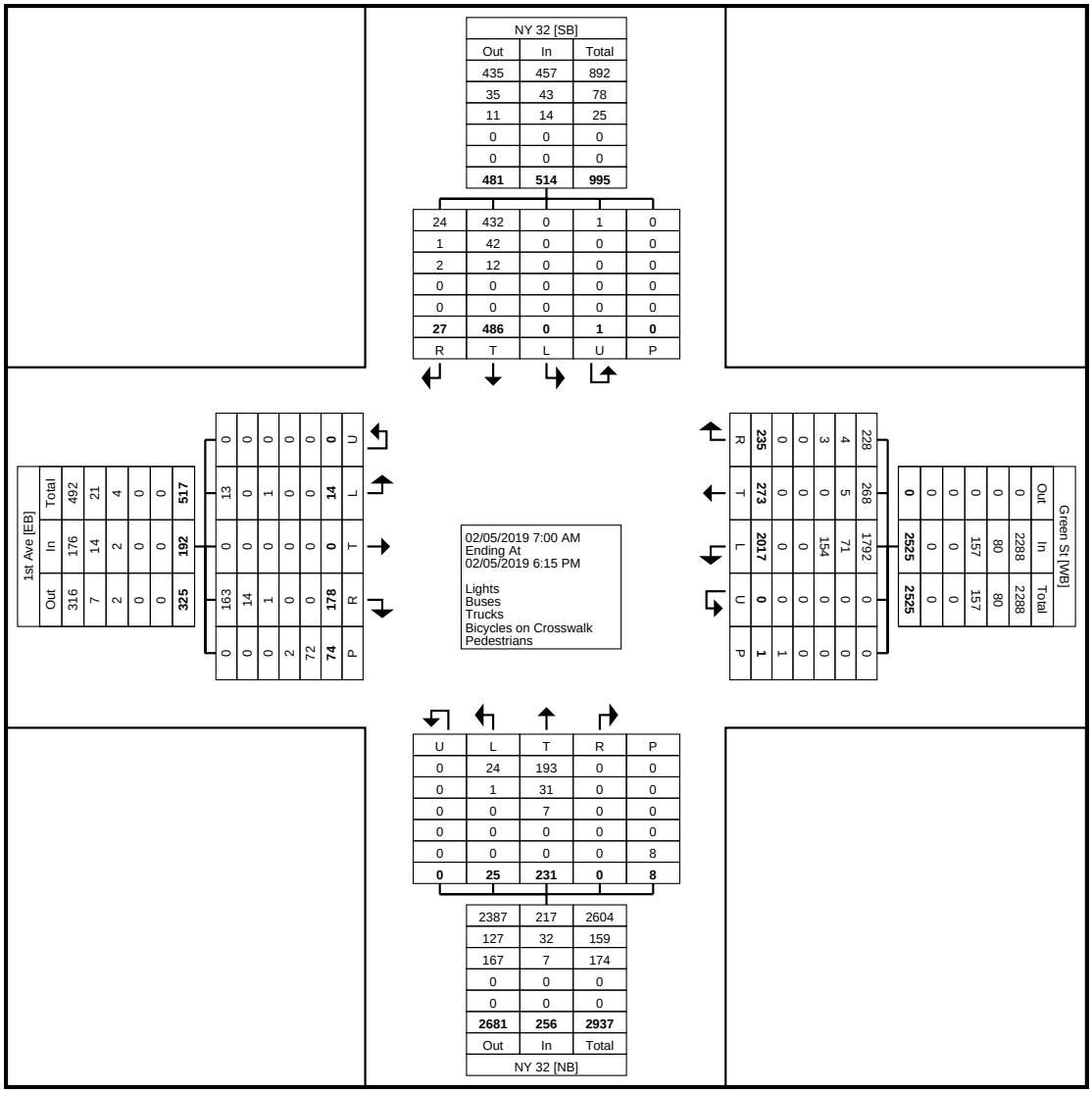
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/Green St/1st Ave
Tuesday, February 5, 2019
Location: 42.635373, -73.762017

Count Name: NY 32 / Green St / 1st Ave
Site Code: Albany, New York
Start Date: 02/05/2019

Turning Movement Data

Start Time	1st Ave Eastbound							Green St Westbound							NY 32 Northbound							NY 32 Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:00 AM	1	0	2	0	0	5	3	80	19	12	0	0	0	111	0	8	0	0	0	0	8	0	9	0	1	1	0	11	133
7:15 AM	0	0	13	0	0	3	13	75	26	11	0	0	0	112	1	16	0	0	0	0	17	0	18	0	1	0	0	19	161
7:30 AM	0	0	13	1	0	8	14	77	18	8	1	0	0	104	5	18	0	0	0	0	23	0	17	0	0	0	0	17	158
7:45 AM	2	0	7	2	0	6	11	86	18	18	0	0	0	122	3	12	0	0	0	0	15	0	27	0	0	0	0	27	175
Hourly Total	3	0	35	3	0	22	41	318	81	49	1	0	0	449	9	54	0	0	0	0	63	0	71	0	2	1	0	74	627
8:00 AM	0	0	10	1	0	6	11	75	7	11	1	0	0	94	2	15	0	0	0	0	17	0	12	2	0	0	0	14	136
8:15 AM	1	0	7	2	0	4	10	99	12	19	2	0	0	132	2	13	0	0	0	0	15	0	21	1	0	0	0	22	179
8:30 AM	0	0	3	1	0	3	4	78	11	33	0	0	0	122	0	15	0	0	0	0	15	0	29	1	0	0	0	30	171
8:45 AM	3	0	4	0	0	3	7	68	2	9	1	0	0	80	0	20	0	0	0	0	20	0	23	1	2	0	0	26	133
Hourly Total	4	0	24	4	0	16	32	320	32	72	4	0	0	428	4	63	0	0	0	0	67	0	85	5	2	0	0	92	619
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	0	20	1	0	2	22	170	25	14	0	0	0	209	2	17	0	0	0	1	19	0	41	0	0	0	0	41	291
4:15 PM	2	0	18	5	0	2	25	168	16	7	1	0	0	192	2	14	0	0	0	0	16	0	40	2	0	0	0	42	275
4:30 PM	1	0	12	0	0	8	13	183	15	16	0	0	0	214	0	14	0	0	0	0	14	0	40	2	0	0	0	42	283
4:45 PM	0	0	7	0	0	5	7	206	34	14	0	0	0	254	1	12	0	0	0	4	13	0	44	3	1	0	0	48	322
Hourly Total	4	0	57	6	0	17	67	727	90	51	1	0	0	869	5	57	0	0	0	5	62	0	165	7	1	0	0	173	1171
5:00 PM	1	0	8	0	0	3	9	178	16	12	0	0	1	206	1	17	0	0	0	3	18	0	49	1	0	0	0	50	283
5:15 PM	0	0	15	0	0	5	15	220	26	12	0	0	0	258	3	12	0	0	0	0	15	0	49	2	1	0	0	52	340
5:30 PM	1	0	12	2	0	6	15	128	18	12	0	0	0	158	3	18	0	0	0	0	21	0	34	3	0	0	0	37	231
5:45 PM	1	0	10	2	0	5	13	126	10	19	2	0	0	157	0	10	0	0	0	0	10	0	33	3	0	0	0	36	216
Hourly Total	3	0	45	4	0	19	52	652	70	55	2	0	1	779	7	57	0	0	0	3	64	0	165	9	1	0	0	175	1070
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	14	0	161	17	0	74	192	2017	273	227	8	0	1	2525	25	231	0	0	0	8	256	0	486	21	6	1	0	514	3487
Approach %	7.3	0.0	83.9	8.9	0.0	-	-	79.9	10.8	9.0	0.3	0.0	-	-	9.8	90.2	0.0	0.0	0.0	-	-	0.0	94.6	4.1	1.2	0.2	-	-	-
Total %	0.4	0.0	4.6	0.5	0.0	-	5.5	57.8	7.8	6.5	0.2	0.0	-	72.4	0.7	6.6	0.0	0.0	0.0	-	7.3	0.0	13.9	0.6	0.2	0.0	-	14.7	-
Lights	13	0	146	17	0	-	176	1792	268	221	7	0	-	2288	24	193	0	0	0	-	217	0	432	18	6	1	-	457	3138
% Lights	92.9	-	90.7	100.0	-	-	91.7	88.8	98.2	97.4	87.5	-	-	90.6	96.0	83.5	-	-	-	-	84.8	-	88.9	85.7	100.0	100.0	-	88.9	90.0
Buses	0	0	14	0	0	-	14	71	5	4	0	0	-	80	1	31	0	0	0	-	32	0	42	1	0	0	-	43	169
% Buses	0.0	-	8.7	0.0	-	-	7.3	3.5	1.8	1.8	0.0	-	-	3.2	4.0	13.4	-	-	-	-	12.5	-	8.6	4.8	0.0	0.0	-	8.4	4.8
Trucks	1	0	1	0	0	-	2	154	0	2	1	0	-	157	0	7	0	0	0	-	7	0	12	2	0	0	-	14	180
% Trucks	7.1	-	0.6	0.0	-	-	1.0	7.6	0.0	0.9	12.5	-	-	6.2	0.0	3.0	-	-	-	-	2.7	-	2.5	9.5	0.0	0.0	-	2.7	5.2
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	2.7	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	72	-	-	-	-	-	-	1	-	-	-	-	-	-	8	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	97.3	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/Green St/1st Ave
Tuesday, February 5, 2019
Location: 42.635373, -73.762017

Count Name: NY 32 / Green St / 1st Ave
Site Code: Albany, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (7:45 AM)

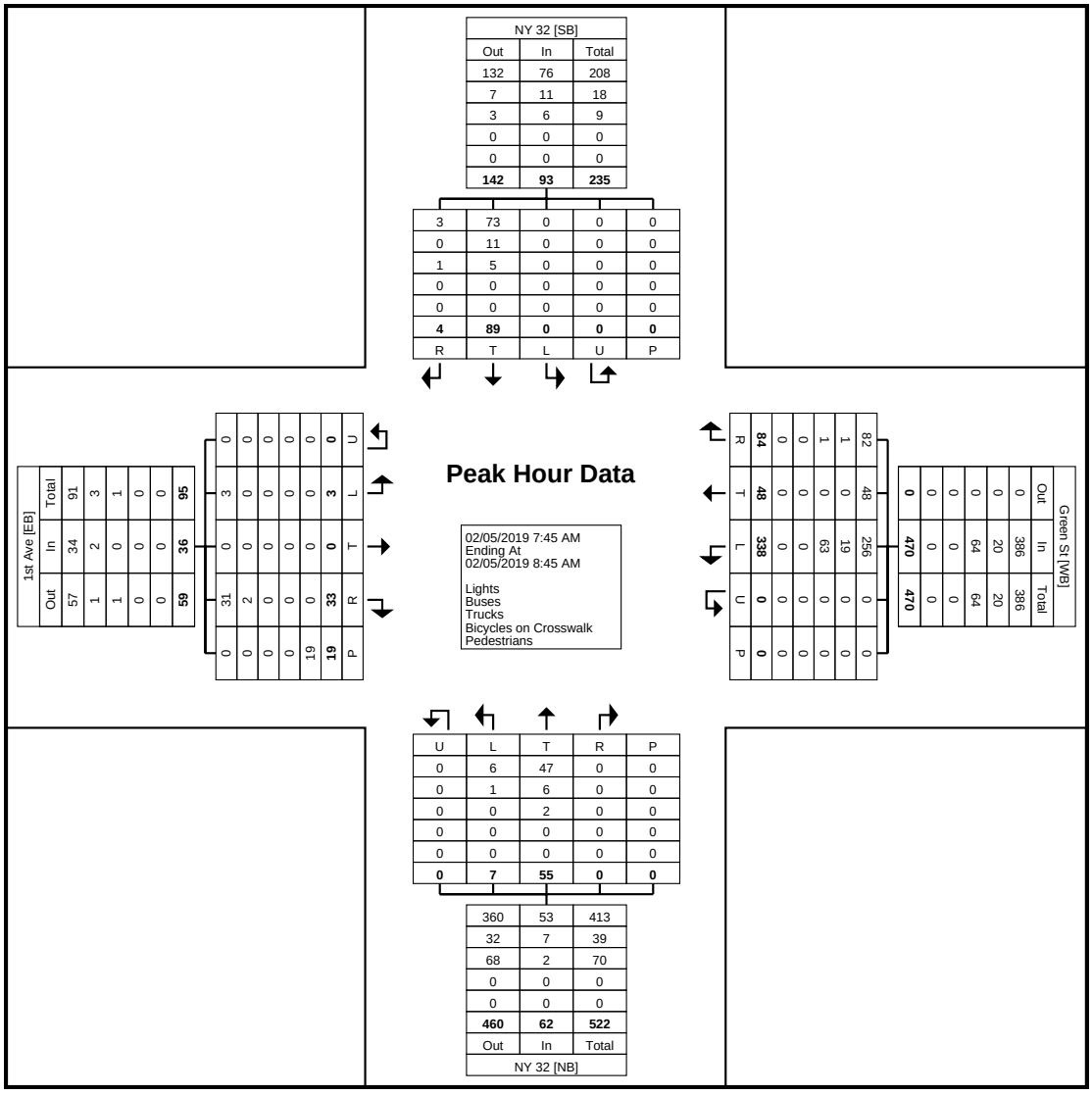
Start Time	1st Ave Eastbound							Green St Westbound							NY 32 Northbound							NY 32 Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:45 AM	2	0	7	2	0	6	11	86	18	18	0	0	0	122	3	12	0	0	0	0	15	0	27	0	0	0	0	27	175
8:00 AM	0	0	10	1	0	6	11	75	7	11	1	0	0	94	2	15	0	0	0	0	17	0	12	2	0	0	0	14	136
8:15 AM	1	0	7	2	0	4	10	99	12	19	2	0	0	132	2	13	0	0	0	0	15	0	21	1	0	0	0	22	179
8:30 AM	0	0	3	1	0	3	4	78	11	33	0	0	0	122	0	15	0	0	0	0	15	0	29	1	0	0	0	30	171
Total	3	0	27	6	0	19	36	338	48	81	3	0	0	470	7	55	0	0	0	0	62	0	89	4	0	0	0	93	661
Approach %	8.3	0.0	75.0	16.7	0.0	-	-	71.9	10.2	17.2	0.6	0.0	-	-	11.3	88.7	0.0	0.0	0.0	-	-	0.0	95.7	4.3	0.0	0.0	-	-	-
Total %	0.5	0.0	4.1	0.9	0.0	-	5.4	51.1	7.3	12.3	0.5	0.0	-	71.1	1.1	8.3	0.0	0.0	0.0	-	9.4	0.0	13.5	0.6	0.0	0.0	-	14.1	-
PHF	0.375	0.000	0.675	0.750	0.000	-	0.818	0.854	0.667	0.614	0.375	0.000	-	0.890	0.583	0.917	0.000	0.000	0.000	-	0.912	0.000	0.767	0.500	0.000	0.000	-	0.775	0.923
Lights	3	0	25	6	0	-	34	256	48	80	2	0	-	386	6	47	0	0	0	-	53	0	73	3	0	0	-	76	549
% Lights	100.0	-	92.6	100.0	-	-	94.4	75.7	100.0	98.8	66.7	-	-	82.1	85.7	85.5	-	-	-	-	85.5	-	82.0	75.0	-	-	-	81.7	83.1
Buses	0	0	2	0	0	-	2	19	0	1	0	0	-	20	1	6	0	0	0	-	7	0	11	0	0	0	-	11	40
% Buses	0.0	-	7.4	0.0	-	-	5.6	5.6	0.0	1.2	0.0	-	-	4.3	14.3	10.9	-	-	-	-	11.3	-	12.4	0.0	-	-	-	11.8	6.1
Trucks	0	0	0	0	0	-	0	63	0	0	1	0	-	64	0	2	0	0	0	-	2	0	5	1	0	0	-	6	72
% Trucks	0.0	-	0.0	0.0	-	-	0.0	18.6	0.0	0.0	33.3	-	-	13.6	0.0	3.6	-	-	-	-	3.2	-	5.6	25.0	-	-	-	6.5	10.9
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	19	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/Green St/1st Ave
Tuesday, February 5, 2019
Location: 42.635373, -73.762017

Count Name: NY 32 / Green St / 1st Ave
Site Code: Albany, New York
Start Date: 02/05/2019



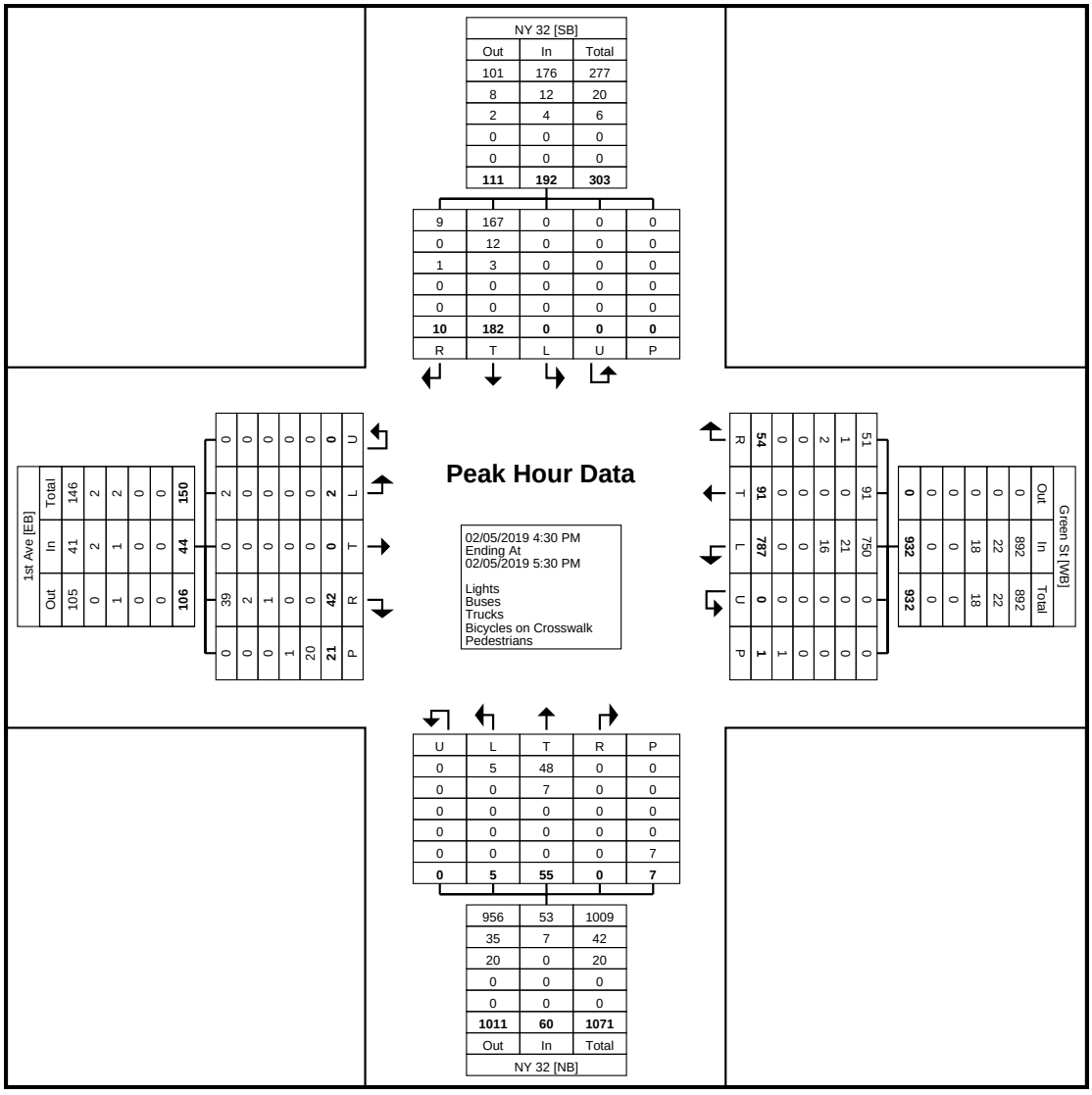
Turning Movement Peak Hour Data Plot (7:45 AM)

Turning Movement Peak Hour Data (4:30 PM)

Start Time	1st Ave Eastbound							Green St Westbound							NY 32 Northbound							NY 32 Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
4:30 PM	1	0	12	0	0	8	13	183	15	16	0	0	0	214	0	14	0	0	0	0	14	0	40	2	0	0	0	42	283
4:45 PM	0	0	7	0	0	5	7	206	34	14	0	0	0	254	1	12	0	0	0	4	13	0	44	3	1	0	0	48	322
5:00 PM	1	0	8	0	0	3	9	178	16	12	0	0	1	206	1	17	0	0	0	3	18	0	49	1	0	0	0	50	283
5:15 PM	0	0	15	0	0	5	15	220	26	12	0	0	0	258	3	12	0	0	0	0	15	0	49	2	1	0	0	52	340
Total	2	0	42	0	0	21	44	787	91	54	0	0	1	932	5	55	0	0	0	7	60	0	182	8	2	0	0	192	1228
Approach %	4.5	0.0	95.5	0.0	0.0	-	-	84.4	9.8	5.8	0.0	0.0	-	-	8.3	91.7	0.0	0.0	0.0	-	-	0.0	94.8	4.2	1.0	0.0	-	-	-
Total %	0.2	0.0	3.4	0.0	0.0	-	3.6	64.1	7.4	4.4	0.0	0.0	-	75.9	0.4	4.5	0.0	0.0	0.0	-	4.9	0.0	14.8	0.7	0.2	0.0	-	15.6	-
PHF	0.500	0.000	0.700	0.000	0.000	-	0.733	0.894	0.669	0.844	0.000	0.000	-	0.903	0.417	0.809	0.000	0.000	0.000	-	0.833	0.000	0.929	0.667	0.500	0.000	-	0.923	0.903
Lights	2	0	39	0	0	-	41	750	91	51	0	0	-	892	5	48	0	0	0	-	53	0	167	7	2	0	-	176	1162
% Lights	100.0	-	92.9	-	-	-	93.2	95.3	100.0	94.4	-	-	-	95.7	100.0	87.3	-	-	-	-	88.3	-	91.8	87.5	100.0	-	-	91.7	94.6
Buses	0	0	2	0	0	-	2	21	0	1	0	0	-	22	0	7	0	0	0	-	7	0	12	0	0	0	-	12	43
% Buses	0.0	-	4.8	-	-	-	4.5	2.7	0.0	1.9	-	-	-	2.4	0.0	12.7	-	-	-	-	11.7	-	6.6	0.0	0.0	-	-	6.3	3.5
Trucks	0	0	1	0	0	-	1	16	0	2	0	0	-	18	0	0	0	0	0	-	0	0	3	1	0	0	-	4	23
% Trucks	0.0	-	2.4	-	-	-	2.3	2.0	0.0	3.7	-	-	-	1.9	0.0	0.0	-	-	-	-	0.0	-	1.6	12.5	0.0	-	-	2.1	1.9
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	4.8	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	20	-	-	-	-	-	-	1	-	-	-	-	-	-	7	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	95.2	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



Turning Movement Peak Hour Data Plot (4:30 PM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

Count Name: NY 32 / NY 144
Site Code: Glenmont, New York
Start Date: 02/05/2019

Turning Movement Data

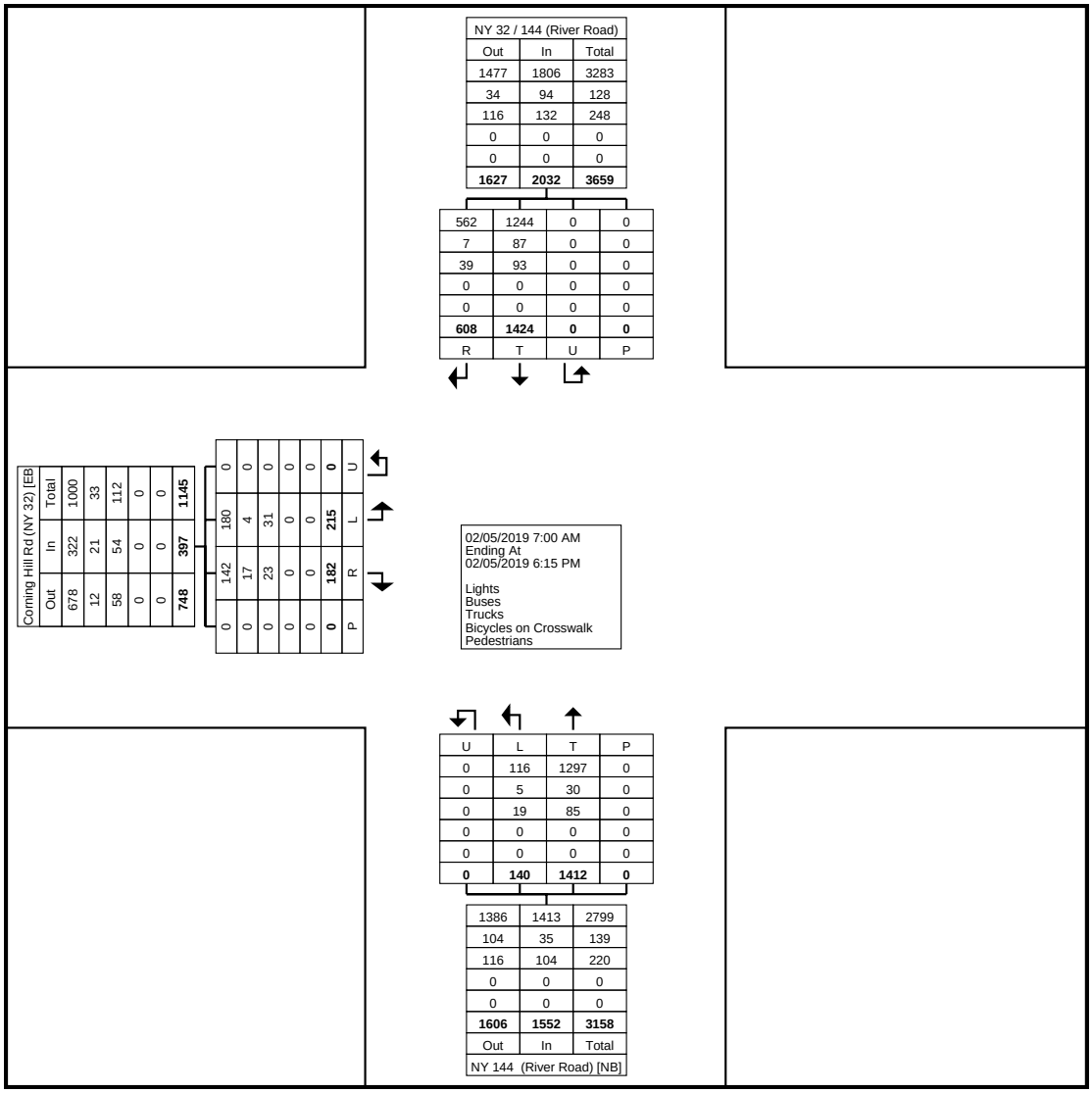
Start Time	Corning Hill Rd (NY 32) Eastbound					NY 144 (River Road) Northbound					NY 32 / 144 (River Road) Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	17	6	0	0	23	10	94	0	0	104	43	10	0	0	53	180
7:15 AM	20	4	0	0	24	8	121	0	0	129	40	17	0	0	57	210
7:30 AM	27	12	0	0	39	15	170	0	0	185	38	18	0	0	56	280
7:45 AM	22	11	0	0	33	14	164	0	0	178	57	6	0	0	63	274
Hourly Total	86	33	0	0	119	47	549	0	0	596	178	51	0	0	229	944
8:00 AM	21	13	0	0	34	7	122	0	0	129	43	10	0	0	53	216
8:15 AM	22	7	0	0	29	14	130	0	0	144	53	13	0	0	66	239
8:30 AM	18	13	0	0	31	5	102	0	0	107	38	16	0	0	54	192
8:45 AM	16	5	0	0	21	4	108	0	0	112	35	20	0	0	55	188
Hourly Total	77	38	0	0	115	30	462	0	0	492	169	59	0	0	228	835
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	8	7	0	0	15	7	59	0	0	66	104	64	0	0	168	249
4:15 PM	2	19	0	0	21	5	60	0	0	65	140	54	0	0	194	280
4:30 PM	8	16	0	0	24	9	45	0	0	54	142	59	0	0	201	279
4:45 PM	7	14	0	0	21	12	56	0	0	68	143	87	0	0	230	319
Hourly Total	25	56	0	0	81	33	220	0	0	253	529	264	0	0	793	1127
5:00 PM	9	15	0	0	24	9	49	0	0	58	131	67	0	0	198	280
5:15 PM	3	16	0	0	19	10	48	0	0	58	166	74	0	0	240	317
5:30 PM	7	11	0	0	18	5	49	0	0	54	139	53	0	0	192	264
5:45 PM	8	13	0	0	21	6	35	0	0	41	112	40	0	0	152	214
Hourly Total	27	55	0	0	82	30	181	0	0	211	548	234	0	0	782	1075
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	215	182	0	0	397	140	1412	0	0	1552	1424	608	0	0	2032	3981
Approach %	54.2	45.8	0.0	-	-	9.0	91.0	0.0	-	-	70.1	29.9	0.0	-	-	-
Total %	5.4	4.6	0.0	-	10.0	3.5	35.5	0.0	-	39.0	35.8	15.3	0.0	-	51.0	-
Lights	180	142	0	-	322	116	1297	0	-	1413	1244	562	0	-	1806	3541
% Lights	83.7	78.0	-	-	81.1	82.9	91.9	-	-	91.0	87.4	92.4	-	-	88.9	88.9
Buses	4	17	0	-	21	5	30	0	-	35	87	7	0	-	94	150
% Buses	1.9	9.3	-	-	5.3	3.6	2.1	-	-	2.3	6.1	1.2	-	-	4.6	3.8
Trucks	31	23	0	-	54	19	85	0	-	104	93	39	0	-	132	290
% Trucks	14.4	12.6	-	-	13.6	13.6	6.0	-	-	6.7	6.5	6.4	-	-	6.5	7.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

Count Name: NY 32 / NY 144
Site Code: Glenmont, New York
Start Date: 02/05/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

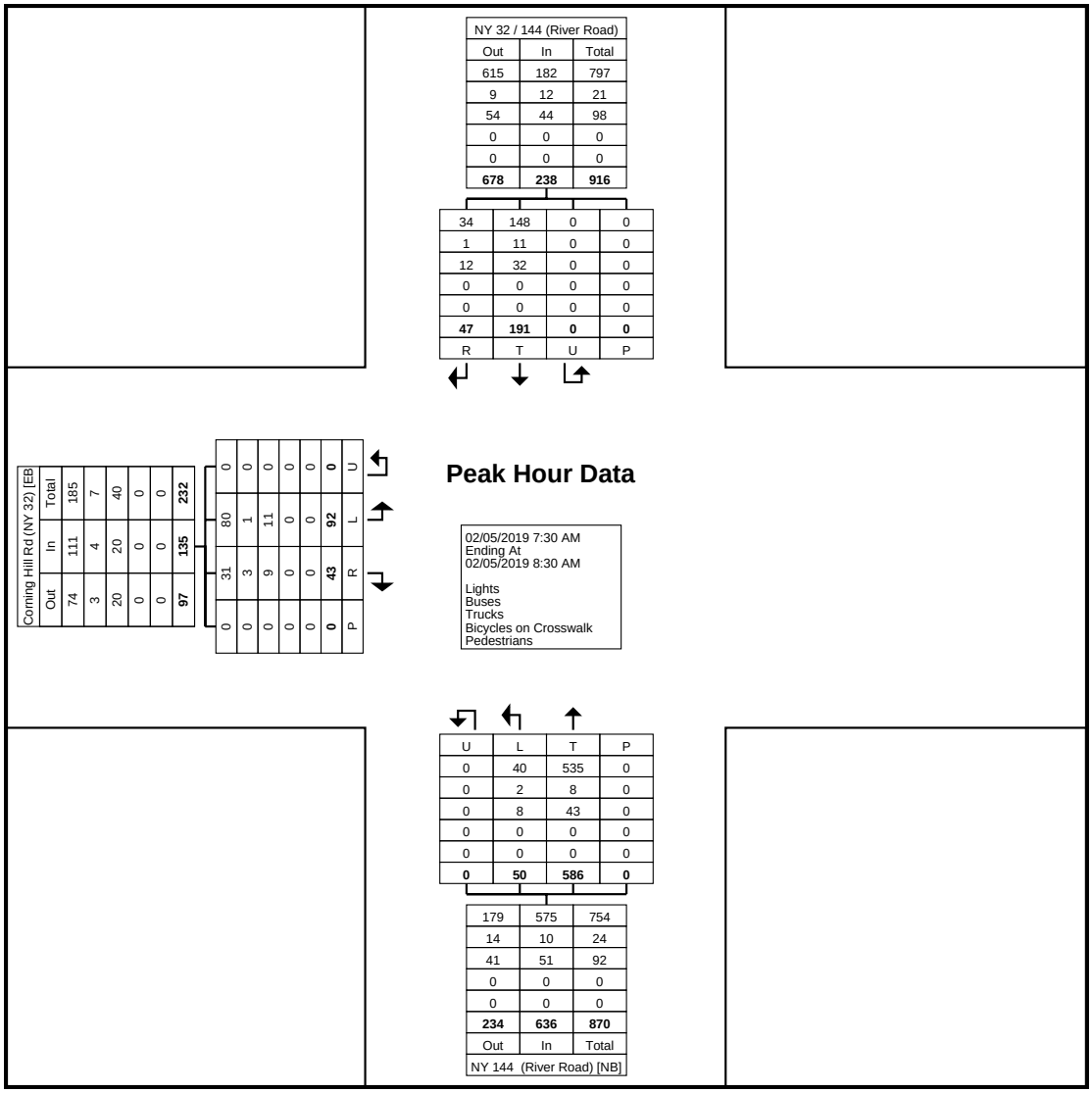
Count Name: NY 32 / NY 144
Site Code: Glenmont, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Corning Hill Rd (NY 32) Eastbound					NY 144 (River Road) Northbound					NY 32 / 144 (River Road) Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	27	12	0	0	39	15	170	0	0	185	38	18	0	0	56	280
7:45 AM	22	11	0	0	33	14	164	0	0	178	57	6	0	0	63	274
8:00 AM	21	13	0	0	34	7	122	0	0	129	43	10	0	0	53	216
8:15 AM	22	7	0	0	29	14	130	0	0	144	53	13	0	0	66	239
Total	92	43	0	0	135	50	586	0	0	636	191	47	0	0	238	1009
Approach %	68.1	31.9	0.0	-	-	7.9	92.1	0.0	-	-	80.3	19.7	0.0	-	-	-
Total %	9.1	4.3	0.0	-	13.4	5.0	58.1	0.0	-	63.0	18.9	4.7	0.0	-	23.6	-
PHF	0.852	0.827	0.000	-	0.865	0.833	0.862	0.000	-	0.859	0.838	0.653	0.000	-	0.902	0.901
Lights	80	31	0	-	111	40	535	0	-	575	148	34	0	-	182	868
% Lights	87.0	72.1	-	-	82.2	80.0	91.3	-	-	90.4	77.5	72.3	-	-	76.5	86.0
Buses	1	3	0	-	4	2	8	0	-	10	11	1	0	-	12	26
% Buses	1.1	7.0	-	-	3.0	4.0	1.4	-	-	1.6	5.8	2.1	-	-	5.0	2.6
Trucks	11	9	0	-	20	8	43	0	-	51	32	12	0	-	44	115
% Trucks	12.0	20.9	-	-	14.8	16.0	7.3	-	-	8.0	16.8	25.5	-	-	18.5	11.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

Count Name: NY 32 / NY 144
Site Code: Glenmont, New York
Start Date: 02/05/2019



Turning Movement Peak Hour Data Plot (7:30 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

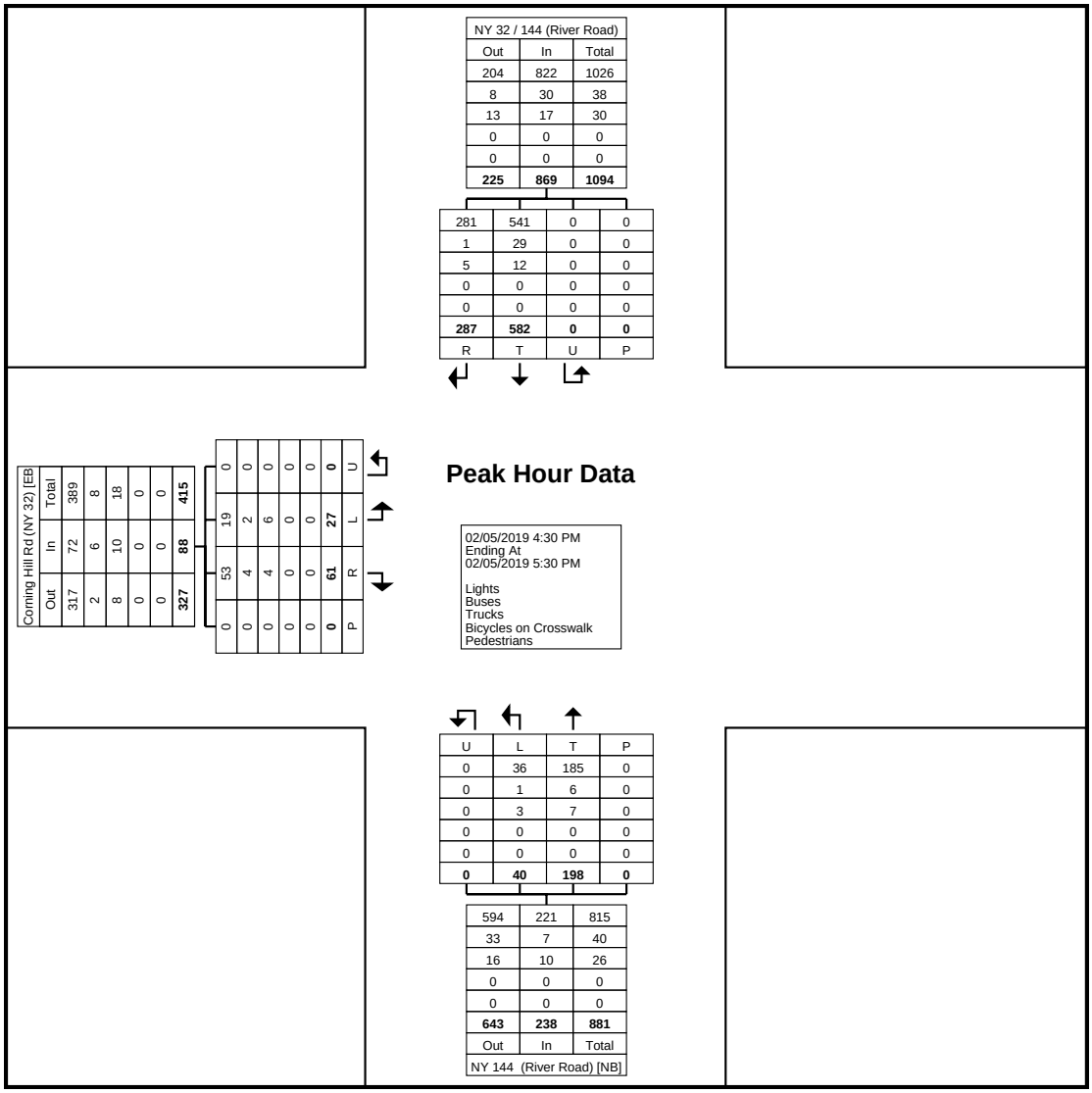
Count Name: NY 32 / NY 144
Site Code: Glenmont, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Corning Hill Rd (NY 32) Eastbound					NY 144 (River Road) Northbound					NY 32 / 144 (River Road) Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	8	16	0	0	24	9	45	0	0	54	142	59	0	0	201	279
4:45 PM	7	14	0	0	21	12	56	0	0	68	143	87	0	0	230	319
5:00 PM	9	15	0	0	24	9	49	0	0	58	131	67	0	0	198	280
5:15 PM	3	16	0	0	19	10	48	0	0	58	166	74	0	0	240	317
Total	27	61	0	0	88	40	198	0	0	238	582	287	0	0	869	1195
Approach %	30.7	69.3	0.0	-	-	16.8	83.2	0.0	-	-	67.0	33.0	0.0	-	-	-
Total %	2.3	5.1	0.0	-	7.4	3.3	16.6	0.0	-	19.9	48.7	24.0	0.0	-	72.7	-
PHF	0.750	0.953	0.000	-	0.917	0.833	0.884	0.000	-	0.875	0.877	0.825	0.000	-	0.905	0.937
Lights	19	53	0	-	72	36	185	0	-	221	541	281	0	-	822	1115
% Lights	70.4	86.9	-	-	81.8	90.0	93.4	-	-	92.9	93.0	97.9	-	-	94.6	93.3
Buses	2	4	0	-	6	1	6	0	-	7	29	1	0	-	30	43
% Buses	7.4	6.6	-	-	6.8	2.5	3.0	-	-	2.9	5.0	0.3	-	-	3.5	3.6
Trucks	6	4	0	-	10	3	7	0	-	10	12	5	0	-	17	37
% Trucks	22.2	6.6	-	-	11.4	7.5	3.5	-	-	4.2	2.1	1.7	-	-	2.0	3.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

Count Name: NY 32 / NY 144
Site Code: Glenmont, New York
Start Date: 02/05/2019



Turning Movement Peak Hour Data Plot (4:30 PM)

www.TSTData.com
184 Baker Rd

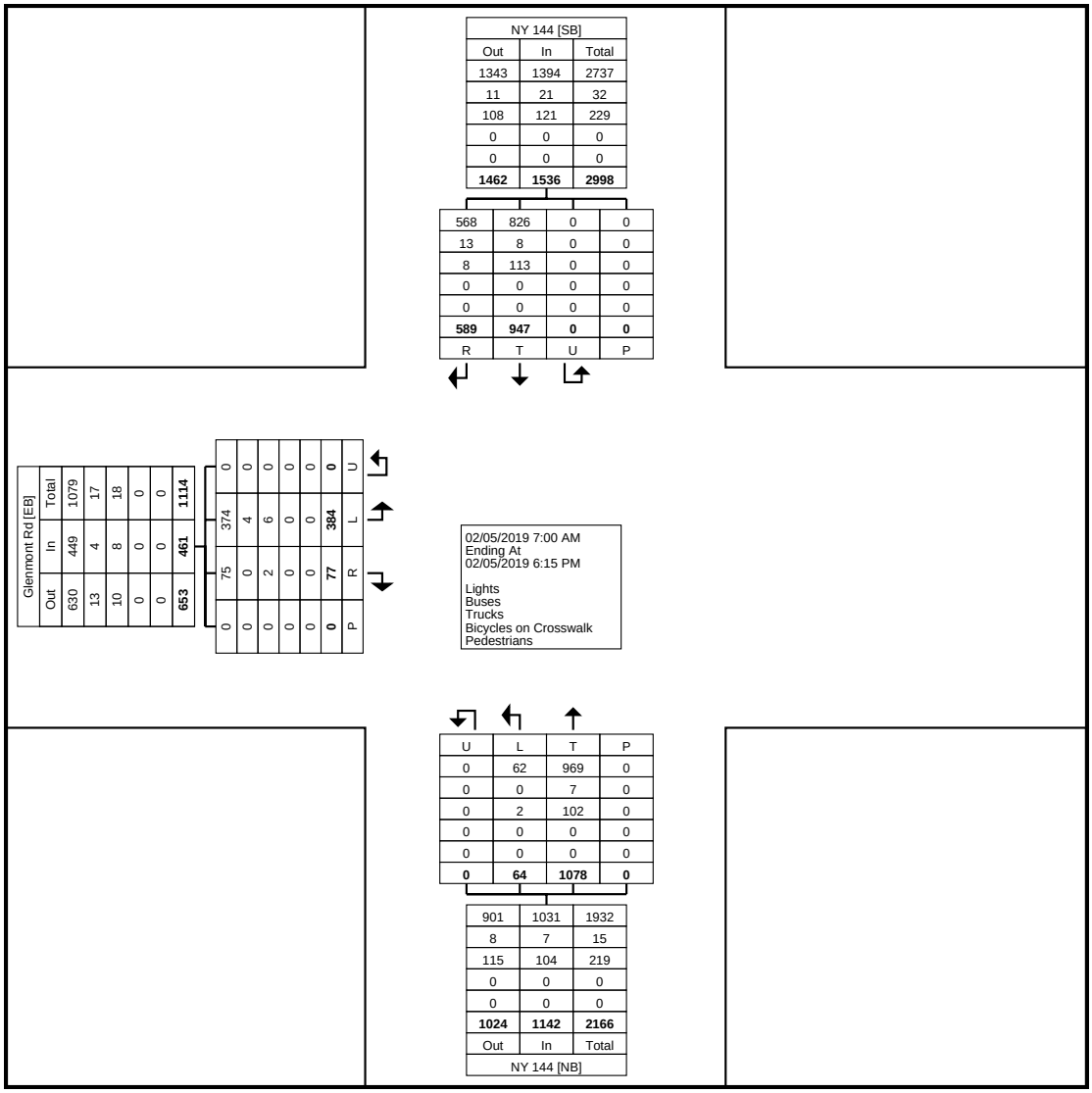
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 144 / Glenmont Road
Tuesday, February 5, 2019
Location: 42.604997, -73.769906

Count Name: NY 144 / Glenmont Rd
Site Code: Glenmont, New York
Start Date: 02/05/2019

Turning Movement Data

Start Time	Glenmont Rd Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	22	5	0	0	27	2	70	0	0	72	45	9	0	0	54	153
7:15 AM	27	1	0	0	28	2	131	0	0	133	32	12	0	0	44	205
7:30 AM	43	1	0	0	44	4	148	0	0	152	41	10	0	0	51	247
7:45 AM	44	6	0	0	50	7	105	0	0	112	49	17	0	0	66	228
Hourly Total	136	13	0	0	149	15	454	0	0	469	167	48	0	0	215	833
8:00 AM	39	7	0	0	46	4	101	0	0	105	35	17	0	0	52	203
8:15 AM	45	2	0	0	47	3	68	0	0	71	39	11	0	0	50	168
8:30 AM	48	4	0	0	52	5	76	0	0	81	27	16	0	0	43	176
8:45 AM	23	3	0	0	26	1	67	0	0	68	20	12	0	0	32	126
Hourly Total	155	16	0	0	171	13	312	0	0	325	121	56	0	0	177	673
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	11	8	0	0	19	2	51	0	0	53	64	50	0	0	114	186
4:15 PM	11	5	0	0	16	4	39	0	0	43	89	68	0	0	157	216
4:30 PM	19	8	0	0	27	3	32	0	0	35	89	61	0	0	150	212
4:45 PM	13	10	0	0	23	5	51	0	0	56	87	57	0	0	144	223
Hourly Total	54	31	0	0	85	14	173	0	0	187	329	236	0	0	565	837
5:00 PM	8	6	0	0	14	3	45	0	0	48	74	60	0	0	134	196
5:15 PM	13	6	0	0	19	9	40	0	0	49	112	78	0	0	190	258
5:30 PM	13	3	0	0	16	4	31	0	0	35	76	63	0	0	139	190
5:45 PM	5	2	0	0	7	6	23	0	0	29	67	48	0	0	115	151
Hourly Total	39	17	0	0	56	22	139	0	0	161	329	249	0	0	578	795
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	384	77	0	0	461	64	1078	0	0	1142	947	589	0	0	1536	3139
Approach %	83.3	16.7	0.0	-	-	5.6	94.4	0.0	-	-	61.7	38.3	0.0	-	-	-
Total %	12.2	2.5	0.0	-	14.7	2.0	34.3	0.0	-	36.4	30.2	18.8	0.0	-	48.9	-
Lights	374	75	0	-	449	62	969	0	-	1031	826	568	0	-	1394	2874
% Lights	97.4	97.4	-	-	97.4	96.9	89.9	-	-	90.3	87.2	96.4	-	-	90.8	91.6
Buses	4	0	0	-	4	0	7	0	-	7	8	13	0	-	21	32
% Buses	1.0	0.0	-	-	0.9	0.0	0.6	-	-	0.6	0.8	2.2	-	-	1.4	1.0
Trucks	6	2	0	-	8	2	102	0	-	104	113	8	0	-	121	233
% Trucks	1.6	2.6	-	-	1.7	3.1	9.5	-	-	9.1	11.9	1.4	-	-	7.9	7.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

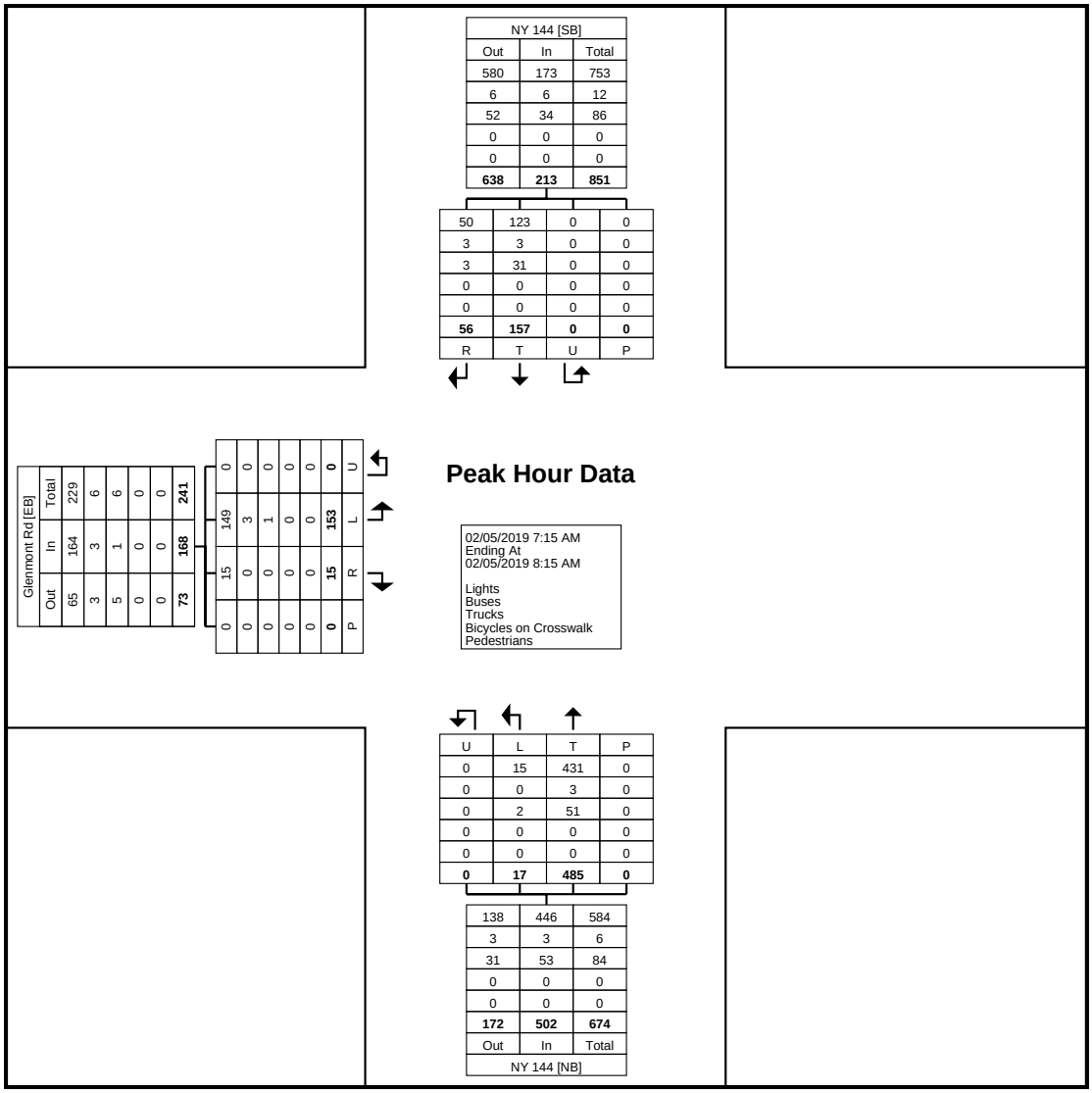
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 144 / Glenmont Road
Tuesday, February 5, 2019
Location: 42.604997, -73.769906

Count Name: NY 144 / Glenmont Rd
Site Code: Glenmont, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Glenmont Rd Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:15 AM	27	1	0	0	28	2	131	0	0	133	32	12	0	0	44	205
7:30 AM	43	1	0	0	44	4	148	0	0	152	41	10	0	0	51	247
7:45 AM	44	6	0	0	50	7	105	0	0	112	49	17	0	0	66	228
8:00 AM	39	7	0	0	46	4	101	0	0	105	35	17	0	0	52	203
Total	153	15	0	0	168	17	485	0	0	502	157	56	0	0	213	883
Approach %	91.1	8.9	0.0	-	-	3.4	96.6	0.0	-	-	73.7	26.3	0.0	-	-	-
Total %	17.3	1.7	0.0	-	19.0	1.9	54.9	0.0	-	56.9	17.8	6.3	0.0	-	24.1	-
PHF	0.869	0.536	0.000	-	0.840	0.607	0.819	0.000	-	0.826	0.801	0.824	0.000	-	0.807	0.894
Lights	149	15	0	-	164	15	431	0	-	446	123	50	0	-	173	783
% Lights	97.4	100.0	-	-	97.6	88.2	88.9	-	-	88.8	78.3	89.3	-	-	81.2	88.7
Buses	3	0	0	-	3	0	3	0	-	3	3	3	0	-	6	12
% Buses	2.0	0.0	-	-	1.8	0.0	0.6	-	-	0.6	1.9	5.4	-	-	2.8	1.4
Trucks	1	0	0	-	1	2	51	0	-	53	31	3	0	-	34	88
% Trucks	0.7	0.0	-	-	0.6	11.8	10.5	-	-	10.6	19.7	5.4	-	-	16.0	10.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (7:15 AM)

www.TSTData.com
184 Baker Rd

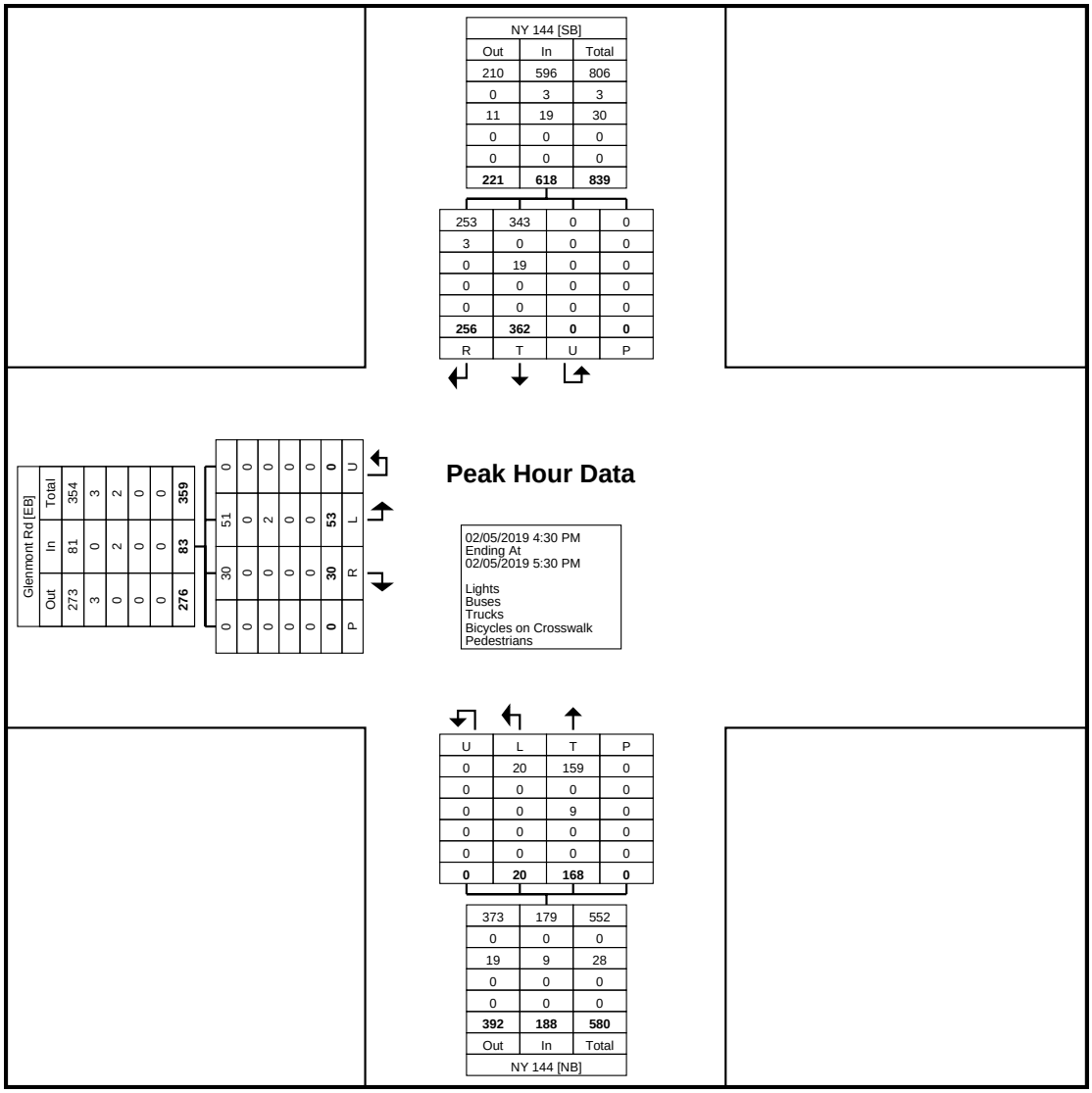
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 144 / Glenmont Road
Tuesday, February 5, 2019
Location: 42.604997, -73.769906

Count Name: NY 144 / Glenmont Rd
Site Code: Glenmont, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Glenmont Rd Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	19	8	0	0	27	3	32	0	0	35	89	61	0	0	150	212
4:45 PM	13	10	0	0	23	5	51	0	0	56	87	57	0	0	144	223
5:00 PM	8	6	0	0	14	3	45	0	0	48	74	60	0	0	134	196
5:15 PM	13	6	0	0	19	9	40	0	0	49	112	78	0	0	190	258
Total	53	30	0	0	83	20	168	0	0	188	362	256	0	0	618	889
Approach %	63.9	36.1	0.0	-	-	10.6	89.4	0.0	-	-	58.6	41.4	0.0	-	-	-
Total %	6.0	3.4	0.0	-	9.3	2.2	18.9	0.0	-	21.1	40.7	28.8	0.0	-	69.5	-
PHF	0.697	0.750	0.000	-	0.769	0.556	0.824	0.000	-	0.839	0.808	0.821	0.000	-	0.813	0.861
Lights	51	30	0	-	81	20	159	0	-	179	343	253	0	-	596	856
% Lights	96.2	100.0	-	-	97.6	100.0	94.6	-	-	95.2	94.8	98.8	-	-	96.4	96.3
Buses	0	0	0	-	0	0	0	0	-	0	0	3	0	-	3	3
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	1.2	-	-	0.5	0.3
Trucks	2	0	0	-	2	0	9	0	-	9	19	0	0	-	19	30
% Trucks	3.8	0.0	-	-	2.4	0.0	5.4	-	-	4.8	5.2	0.0	-	-	3.1	3.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (4:30 PM)

Albany, NY
NY 144 / NY State Thruway Access
Tuesday, February 5, 2019
Location: 42.534276, -73.778231

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: NY 144 / New York State Thruway
Site Code: Bethlehem, New York
Start Date: 02/05/2019

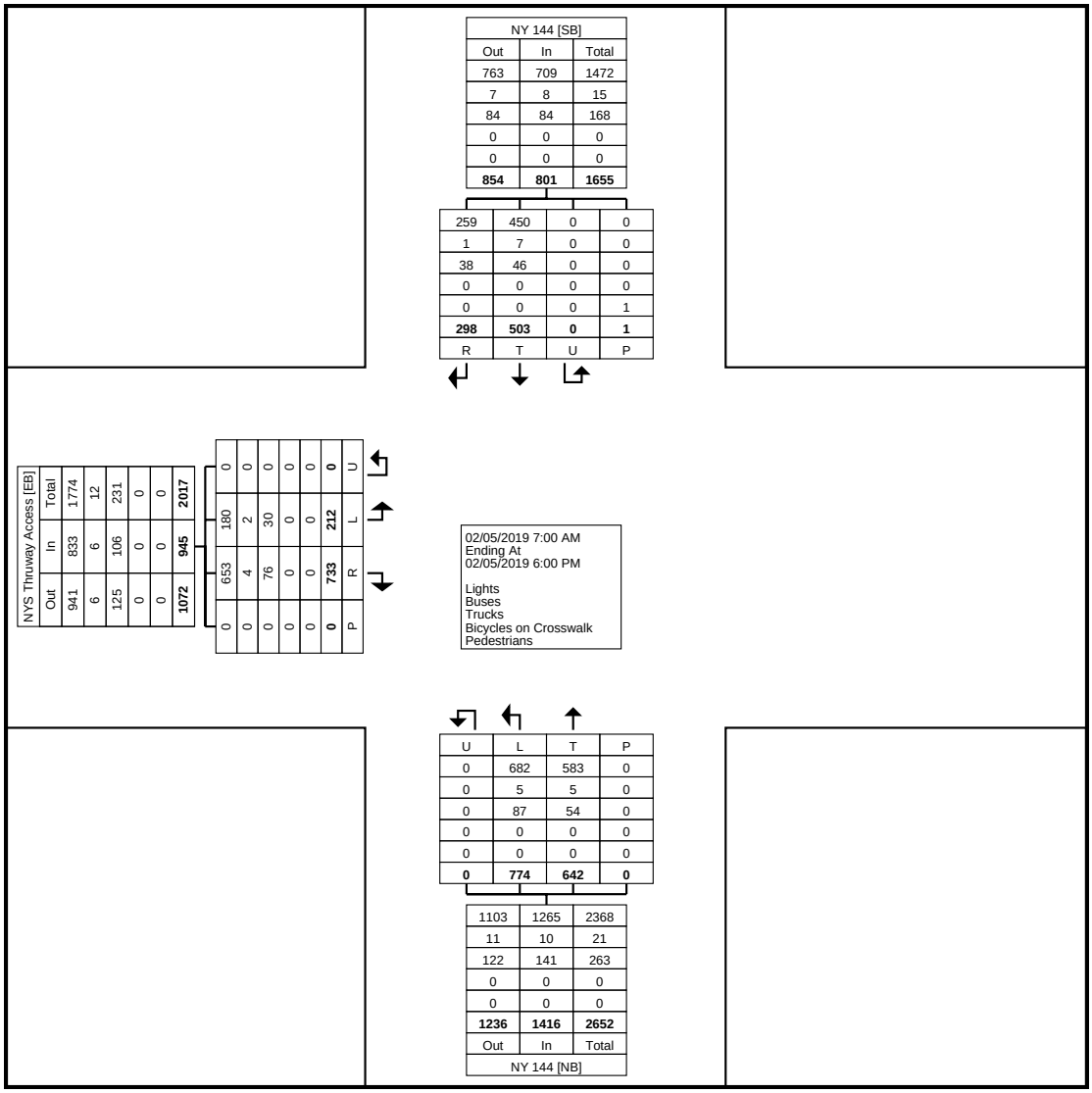
Turning Movement Data

Start Time	NYS Thruway Access Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	11	49	0	0	60	87	64	0	0	151	11	20	0	0	31	242
7:15 AM	10	45	0	0	55	74	86	0	0	160	14	29	0	0	43	258
7:30 AM	16	36	0	0	52	68	92	0	0	160	11	33	0	0	44	256
7:45 AM	16	32	0	0	48	57	56	0	0	113	14	33	0	0	47	208
Hourly Total	53	162	0	0	215	286	298	0	0	584	50	115	0	0	165	964
8:00 AM	8	30	0	0	38	74	40	0	0	114	16	28	0	0	44	196
8:15 AM	13	27	0	0	40	53	54	0	0	107	22	19	0	0	41	188
8:30 AM	17	33	0	0	50	55	37	0	0	92	17	9	0	0	26	168
8:45 AM	10	33	0	0	43	28	33	0	0	61	9	12	0	0	21	125
Hourly Total	48	123	0	0	171	210	164	0	0	374	64	68	0	0	132	677
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	11	41	0	0	52	46	26	0	0	72	44	10	0	0	54	178
4:15 PM	13	56	0	0	69	34	22	0	0	56	58	13	0	0	71	196
4:30 PM	12	61	0	0	73	58	27	0	0	85	57	23	0	1	80	238
4:45 PM	17	58	0	0	75	26	29	0	0	55	35	14	0	0	49	179
Hourly Total	53	216	0	0	269	164	104	0	0	268	194	60	0	1	254	791
5:00 PM	12	55	0	0	67	37	21	0	0	58	46	18	0	0	64	189
5:15 PM	18	76	0	0	94	29	25	0	0	54	59	20	0	0	79	227
5:30 PM	12	54	0	0	66	19	16	0	0	35	58	10	0	0	68	169
5:45 PM	16	47	0	0	63	29	14	0	0	43	32	7	0	0	39	145
Hourly Total	58	232	0	0	290	114	76	0	0	190	195	55	0	0	250	730
Grand Total	212	733	0	0	945	774	642	0	0	1416	503	298	0	1	801	3162
Approach %	22.4	77.6	0.0	-	-	54.7	45.3	0.0	-	-	62.8	37.2	0.0	-	-	-
Total %	6.7	23.2	0.0	-	29.9	24.5	20.3	0.0	-	44.8	15.9	9.4	0.0	-	25.3	-
Lights	180	653	0	-	833	682	583	0	-	1265	450	259	0	-	709	2807
% Lights	84.9	89.1	-	-	88.1	88.1	90.8	-	-	89.3	89.5	86.9	-	-	88.5	88.8
Buses	2	4	0	-	6	5	5	0	-	10	7	1	0	-	8	24
% Buses	0.9	0.5	-	-	0.6	0.6	0.8	-	-	0.7	1.4	0.3	-	-	1.0	0.8
Trucks	30	76	0	-	106	87	54	0	-	141	46	38	0	-	84	331
% Trucks	14.2	10.4	-	-	11.2	11.2	8.4	-	-	10.0	9.1	12.8	-	-	10.5	10.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Albany, NY
NY 144 / NY State Thruway Access
Tuesday, February 5, 2019
Location: 42.534276, -73.778231

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



Turning Movement Data Plot

TRI-STATE TRAFFIC DATA

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
NY 144 / NY State Thruway Access
Tuesday, February 5, 2019
Location: 42.534276, -73.778231

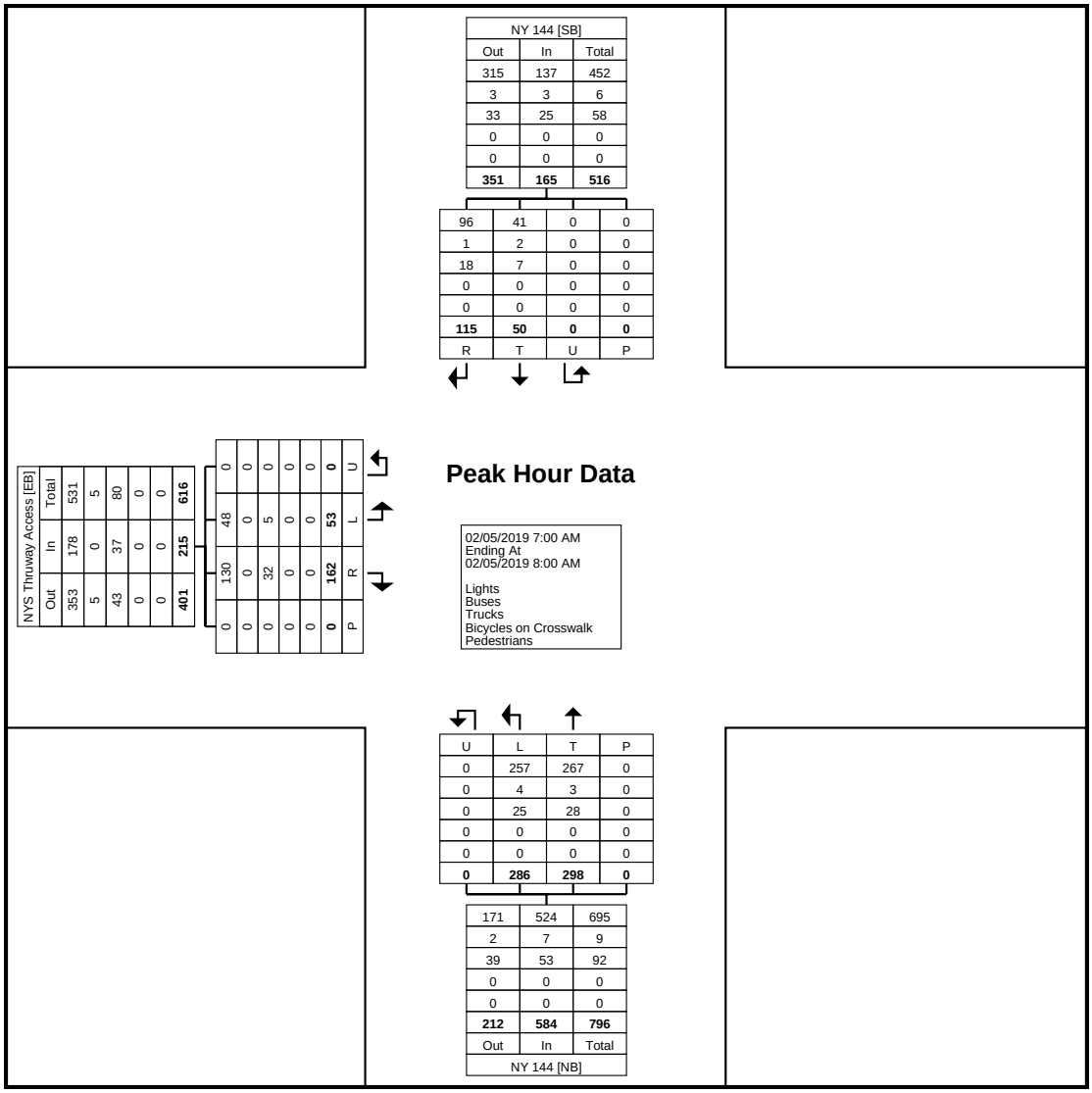
Count Name: NY 144 / New York State Thruway
Site Code: Bethlehem, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (7:00 AM)

Start Time	NYS Thruway Access Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	11	49	0	0	60	87	64	0	0	151	11	20	0	0	31	242
7:15 AM	10	45	0	0	55	74	86	0	0	160	14	29	0	0	43	258
7:30 AM	16	36	0	0	52	68	92	0	0	160	11	33	0	0	44	256
7:45 AM	16	32	0	0	48	57	56	0	0	113	14	33	0	0	47	208
Total	53	162	0	0	215	286	298	0	0	584	50	115	0	0	165	964
Approach %	24.7	75.3	0.0	-	-	49.0	51.0	0.0	-	-	30.3	69.7	0.0	-	-	-
Total %	5.5	16.8	0.0	-	22.3	29.7	30.9	0.0	-	60.6	5.2	11.9	0.0	-	17.1	-
PHF	0.828	0.827	0.000	-	0.896	0.822	0.810	0.000	-	0.913	0.893	0.871	0.000	-	0.878	0.934
Lights	48	130	0	-	178	257	267	0	-	524	41	96	0	-	137	839
% Lights	90.6	80.2	-	-	82.8	89.9	89.6	-	-	89.7	82.0	83.5	-	-	83.0	87.0
Buses	0	0	0	-	0	4	3	0	-	7	2	1	0	-	3	10
% Buses	0.0	0.0	-	-	0.0	1.4	1.0	-	-	1.2	4.0	0.9	-	-	1.8	1.0
Trucks	5	32	0	-	37	25	28	0	-	53	7	18	0	-	25	115
% Trucks	9.4	19.8	-	-	17.2	8.7	9.4	-	-	9.1	14.0	15.7	-	-	15.2	11.9
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



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

Albany, NY
NY 144 / NY State Thruway Access
Tuesday, February 5, 2019
Location: 42.534276, -73.778231

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

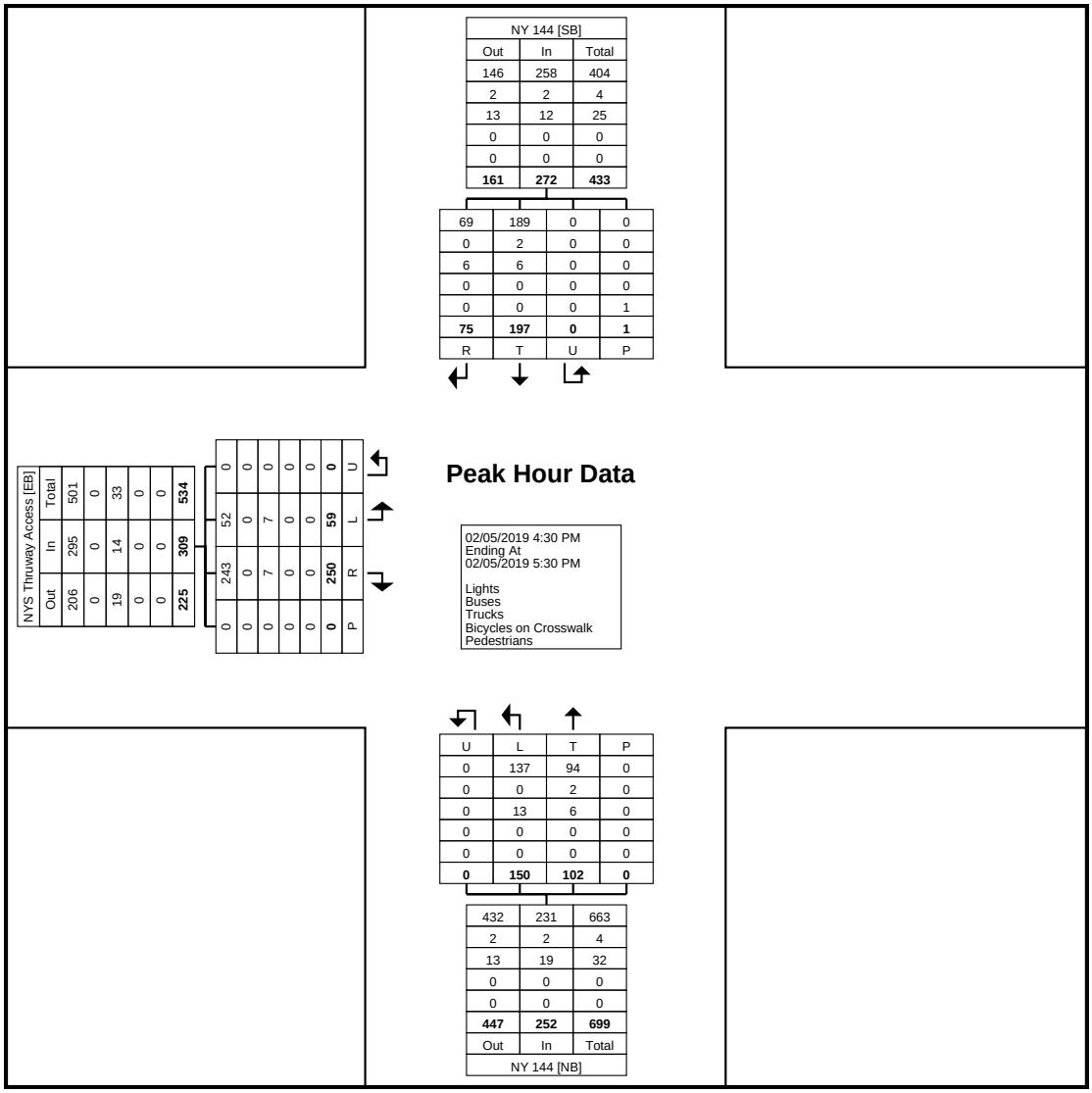
Count Name: NY 144 / New York State Thruway
Site Code: Bethlehem, New York
Start Date: 02/05/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	NYS Thruway Access Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	12	61	0	0	73	58	27	0	0	85	57	23	0	1	80	238
4:45 PM	17	58	0	0	75	26	29	0	0	55	35	14	0	0	49	179
5:00 PM	12	55	0	0	67	37	21	0	0	58	46	18	0	0	64	189
5:15 PM	18	76	0	0	94	29	25	0	0	54	59	20	0	0	79	227
Total	59	250	0	0	309	150	102	0	0	252	197	75	0	1	272	833
Approach %	19.1	80.9	0.0	-	-	59.5	40.5	0.0	-	-	72.4	27.6	0.0	-	-	-
Total %	7.1	30.0	0.0	-	37.1	18.0	12.2	0.0	-	30.3	23.6	9.0	0.0	-	32.7	-
PHF	0.819	0.822	0.000	-	0.822	0.647	0.879	0.000	-	0.741	0.835	0.815	0.000	-	0.850	0.875
Lights	52	243	0	-	295	137	94	0	-	231	189	69	0	-	258	784
% Lights	88.1	97.2	-	-	95.5	91.3	92.2	-	-	91.7	95.9	92.0	-	-	94.9	94.1
Buses	0	0	0	-	0	0	2	0	-	2	2	0	0	-	2	4
% Buses	0.0	0.0	-	-	0.0	0.0	2.0	-	-	0.8	1.0	0.0	-	-	0.7	0.5
Trucks	7	7	0	-	14	13	6	0	-	19	6	6	0	-	12	45
% Trucks	11.9	2.8	-	-	4.5	8.7	5.9	-	-	7.5	3.0	8.0	-	-	4.4	5.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



Turning Movement Peak Hour Data Plot (4:30 PM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

Count Name: US 9W / NY 32
Site Code: Glenmont, New York
Start Date: 02/06/2019

Turning Movement Data

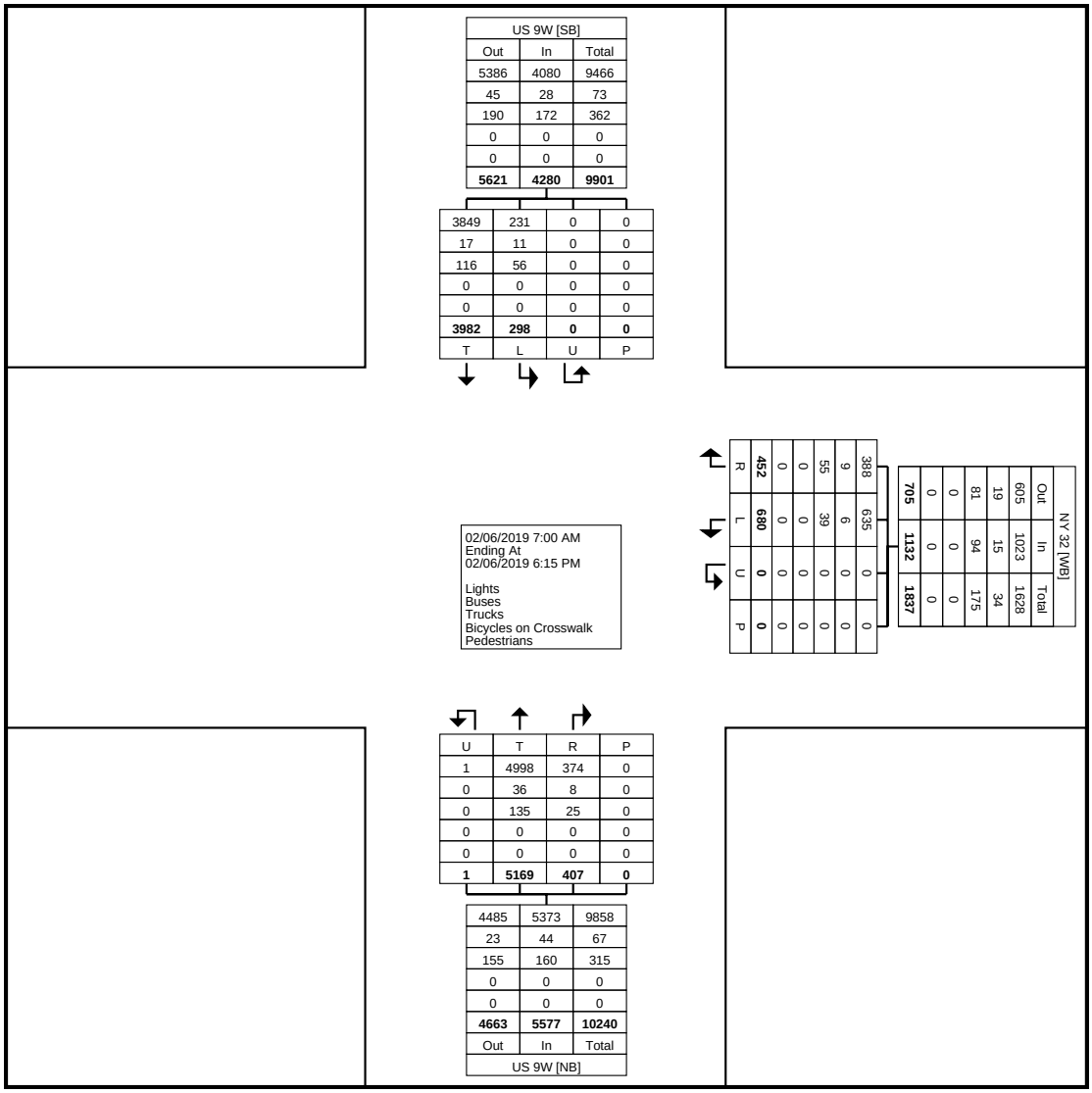
Start Time	NY 32 Westbound					US 9W Northbound					US 9W Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	19	37	0	0	56	320	33	0	0	353	16	162	0	0	178	587
7:15 AM	16	39	0	0	55	455	31	0	0	486	15	160	0	0	175	716
7:30 AM	22	30	0	0	52	485	35	0	0	520	19	159	0	0	178	750
7:45 AM	23	41	0	0	64	492	41	0	0	533	18	183	0	0	201	798
Hourly Total	80	147	0	0	227	1752	140	0	0	1892	68	664	0	0	732	2851
8:00 AM	17	32	0	0	49	394	50	0	0	444	25	182	0	0	207	700
8:15 AM	22	35	0	0	57	459	22	0	0	481	29	214	0	0	243	781
8:30 AM	8	38	0	0	46	419	28	0	0	447	17	134	0	0	151	644
8:45 AM	27	21	0	0	48	315	22	0	0	337	16	166	0	0	182	567
Hourly Total	74	126	0	0	200	1587	122	0	0	1709	87	696	0	0	783	2692
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	56	36	0	0	92	234	14	0	0	248	16	292	0	0	308	648
4:15 PM	56	25	0	0	81	230	18	0	0	248	19	346	0	0	365	694
4:30 PM	63	17	0	0	80	272	19	0	0	291	19	312	0	0	331	702
4:45 PM	77	20	0	0	97	249	26	1	0	276	15	305	0	0	320	693
Hourly Total	252	98	0	0	350	985	77	1	0	1063	69	1255	0	0	1324	2737
5:00 PM	66	28	0	0	94	221	20	0	0	241	26	331	0	0	357	692
5:15 PM	86	21	0	0	107	248	19	0	0	267	16	298	0	0	314	688
5:30 PM	71	17	0	0	88	198	16	0	0	214	23	335	0	0	358	660
5:45 PM	51	15	0	0	66	178	13	0	0	191	9	402	0	0	411	668
Hourly Total	274	81	0	0	355	845	68	0	0	913	74	1366	0	0	1440	2708
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	680	452	0	0	1132	5169	407	1	0	5577	298	3982	0	0	4280	10989
Approach %	60.1	39.9	0.0	-	-	92.7	7.3	0.0	-	-	7.0	93.0	0.0	-	-	-
Total %	6.2	4.1	0.0	-	10.3	47.0	3.7	0.0	-	50.8	2.7	36.2	0.0	-	38.9	-
Lights	635	388	0	-	1023	4998	374	1	-	5373	231	3849	0	-	4080	10476
% Lights	93.4	85.8	-	-	90.4	96.7	91.9	100.0	-	96.3	77.5	96.7	-	-	95.3	95.3
Buses	6	9	0	-	15	36	8	0	-	44	11	17	0	-	28	87
% Buses	0.9	2.0	-	-	1.3	0.7	2.0	0.0	-	0.8	3.7	0.4	-	-	0.7	0.8
Trucks	39	55	0	-	94	135	25	0	-	160	56	116	0	-	172	426
% Trucks	5.7	12.2	-	-	8.3	2.6	6.1	0.0	-	2.9	18.8	2.9	-	-	4.0	3.9
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

Count Name: US 9W / NY 32
Site Code: Glenmont, New York
Start Date: 02/06/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

Count Name: US 9W / NY 32
Site Code: Glenmont, New York
Start Date: 02/06/2019

Turning Movement Peak Hour Data (7:30 AM)

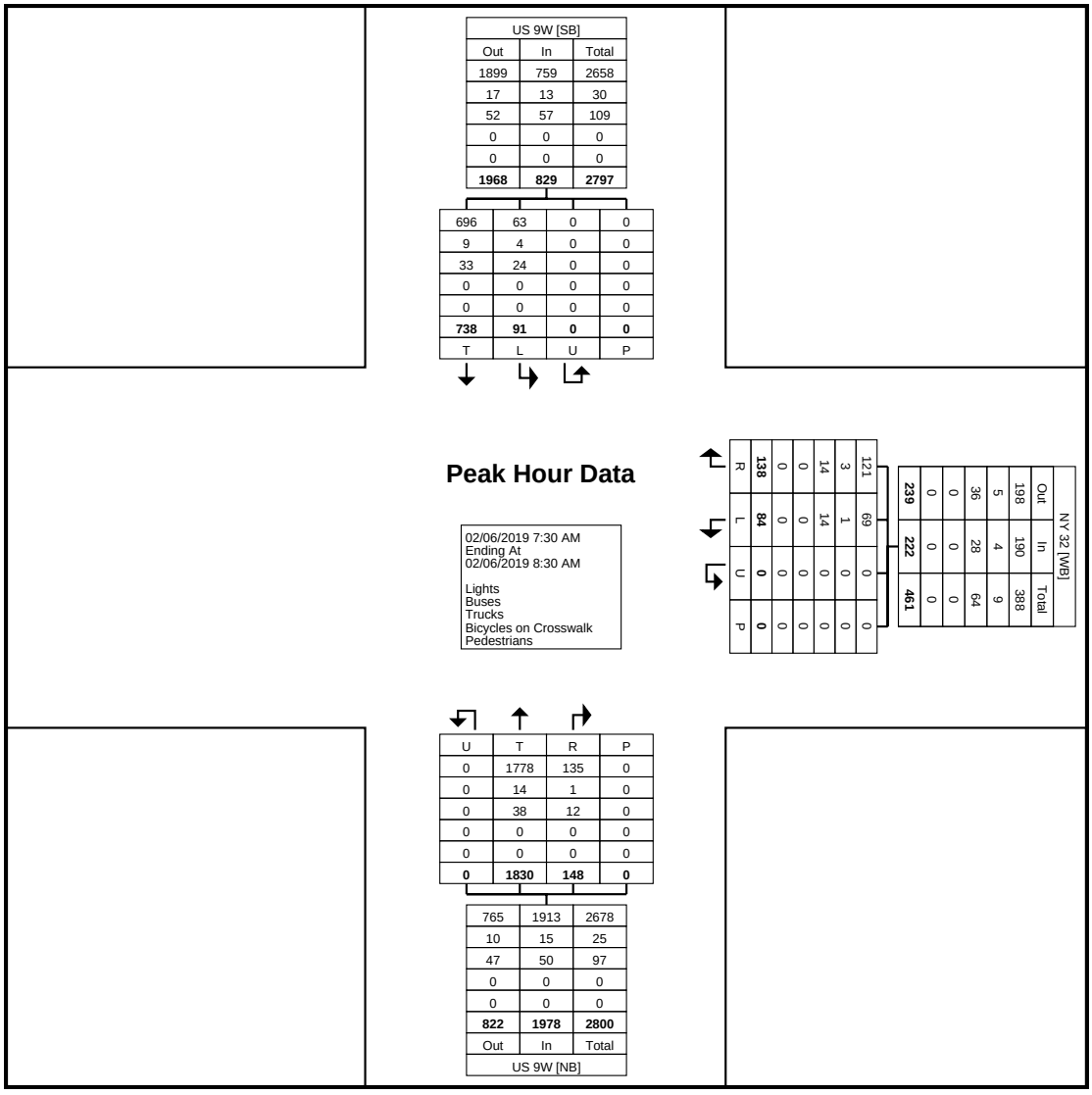
Start Time	NY 32 Westbound					US 9W Northbound					US 9W Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	22	30	0	0	52	485	35	0	0	520	19	159	0	0	178	750
7:45 AM	23	41	0	0	64	492	41	0	0	533	18	183	0	0	201	798
8:00 AM	17	32	0	0	49	394	50	0	0	444	25	182	0	0	207	700
8:15 AM	22	35	0	0	57	459	22	0	0	481	29	214	0	0	243	781
Total	84	138	0	0	222	1830	148	0	0	1978	91	738	0	0	829	3029
Approach %	37.8	62.2	0.0	-	-	92.5	7.5	0.0	-	-	11.0	89.0	0.0	-	-	-
Total %	2.8	4.6	0.0	-	7.3	60.4	4.9	0.0	-	65.3	3.0	24.4	0.0	-	27.4	-
PHF	0.913	0.841	0.000	-	0.867	0.930	0.740	0.000	-	0.928	0.784	0.862	0.000	-	0.853	0.949
Lights	69	121	0	-	190	1778	135	0	-	1913	63	696	0	-	759	2862
% Lights	82.1	87.7	-	-	85.6	97.2	91.2	-	-	96.7	69.2	94.3	-	-	91.6	94.5
Buses	1	3	0	-	4	14	1	0	-	15	4	9	0	-	13	32
% Buses	1.2	2.2	-	-	1.8	0.8	0.7	-	-	0.8	4.4	1.2	-	-	1.6	1.1
Trucks	14	14	0	-	28	38	12	0	-	50	24	33	0	-	57	135
% Trucks	16.7	10.1	-	-	12.6	2.1	8.1	-	-	2.5	26.4	4.5	-	-	6.9	4.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

Count Name: US 9W / NY 32
Site Code: Glenmont, New York
Start Date: 02/06/2019



Turning Movement Peak Hour Data Plot (7:30 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

Count Name: US 9W / NY 32
Site Code: Glenmont, New York
Start Date: 02/06/2019

Turning Movement Peak Hour Data (4:15 PM)

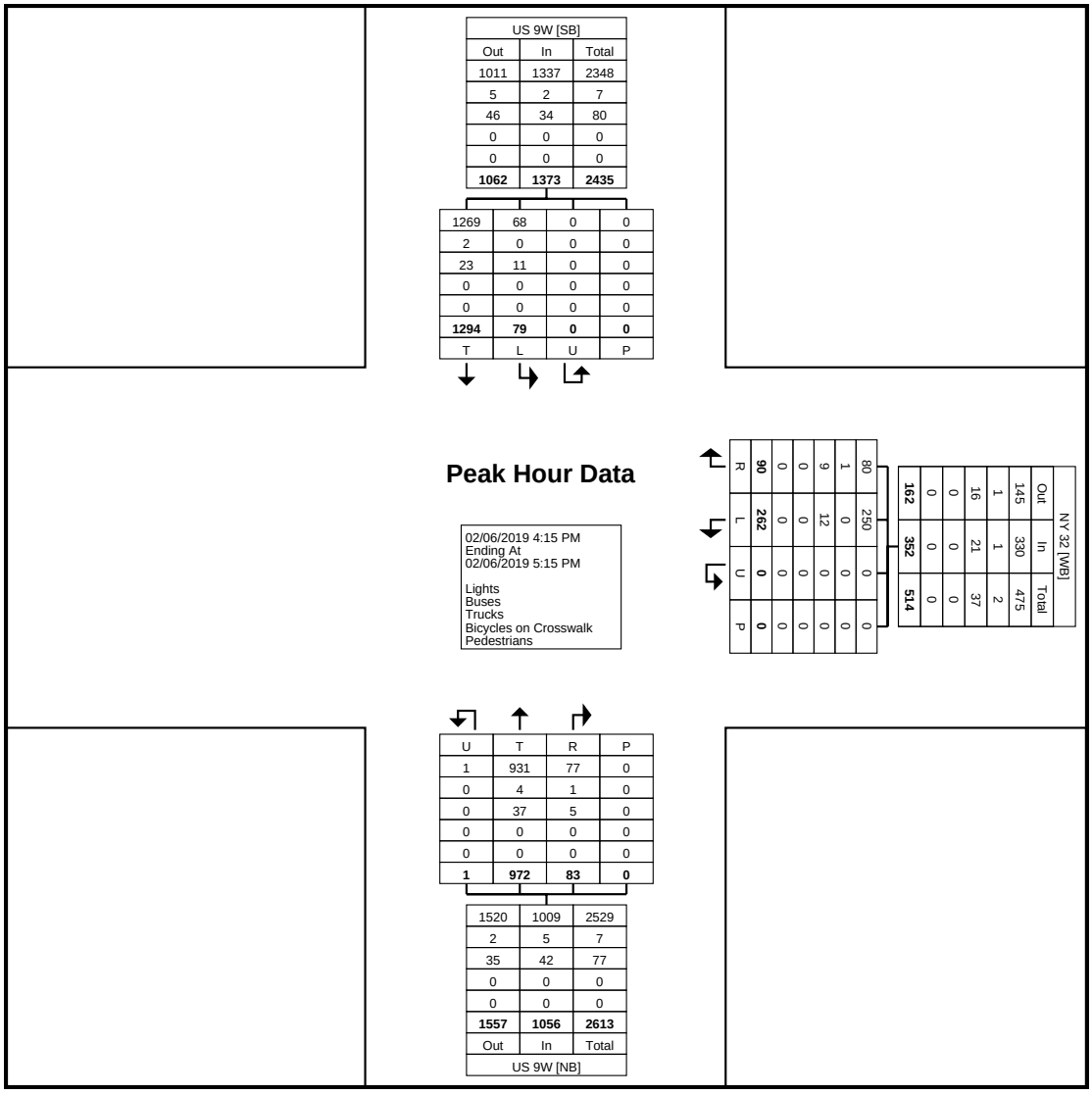
Start Time	NY 32 Westbound					US 9W Northbound					US 9W Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
4:15 PM	56	25	0	0	81	230	18	0	0	248	19	346	0	0	365	694
4:30 PM	63	17	0	0	80	272	19	0	0	291	19	312	0	0	331	702
4:45 PM	77	20	0	0	97	249	26	1	0	276	15	305	0	0	320	693
5:00 PM	66	28	0	0	94	221	20	0	0	241	26	331	0	0	357	692
Total	262	90	0	0	352	972	83	1	0	1056	79	1294	0	0	1373	2781
Approach %	74.4	25.6	0.0	-	-	92.0	7.9	0.1	-	-	5.8	94.2	0.0	-	-	-
Total %	9.4	3.2	0.0	-	12.7	35.0	3.0	0.0	-	38.0	2.8	46.5	0.0	-	49.4	-
PHF	0.851	0.804	0.000	-	0.907	0.893	0.798	0.250	-	0.907	0.760	0.935	0.000	-	0.940	0.990
Lights	250	80	0	-	330	931	77	1	-	1009	68	1269	0	-	1337	2676
% Lights	95.4	88.9	-	-	93.8	95.8	92.8	100.0	-	95.5	86.1	98.1	-	-	97.4	96.2
Buses	0	1	0	-	1	4	1	0	-	5	0	2	0	-	2	8
% Buses	0.0	1.1	-	-	0.3	0.4	1.2	0.0	-	0.5	0.0	0.2	-	-	0.1	0.3
Trucks	12	9	0	-	21	37	5	0	-	42	11	23	0	-	34	97
% Trucks	4.6	10.0	-	-	6.0	3.8	6.0	0.0	-	4.0	13.9	1.8	-	-	2.5	3.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

Count Name: US 9W / NY 32
Site Code: Glenmont, New York
Start Date: 02/06/2019



Turning Movement Peak Hour Data Plot (4:15 PM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

Count Name: Broadway/Church St
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Data

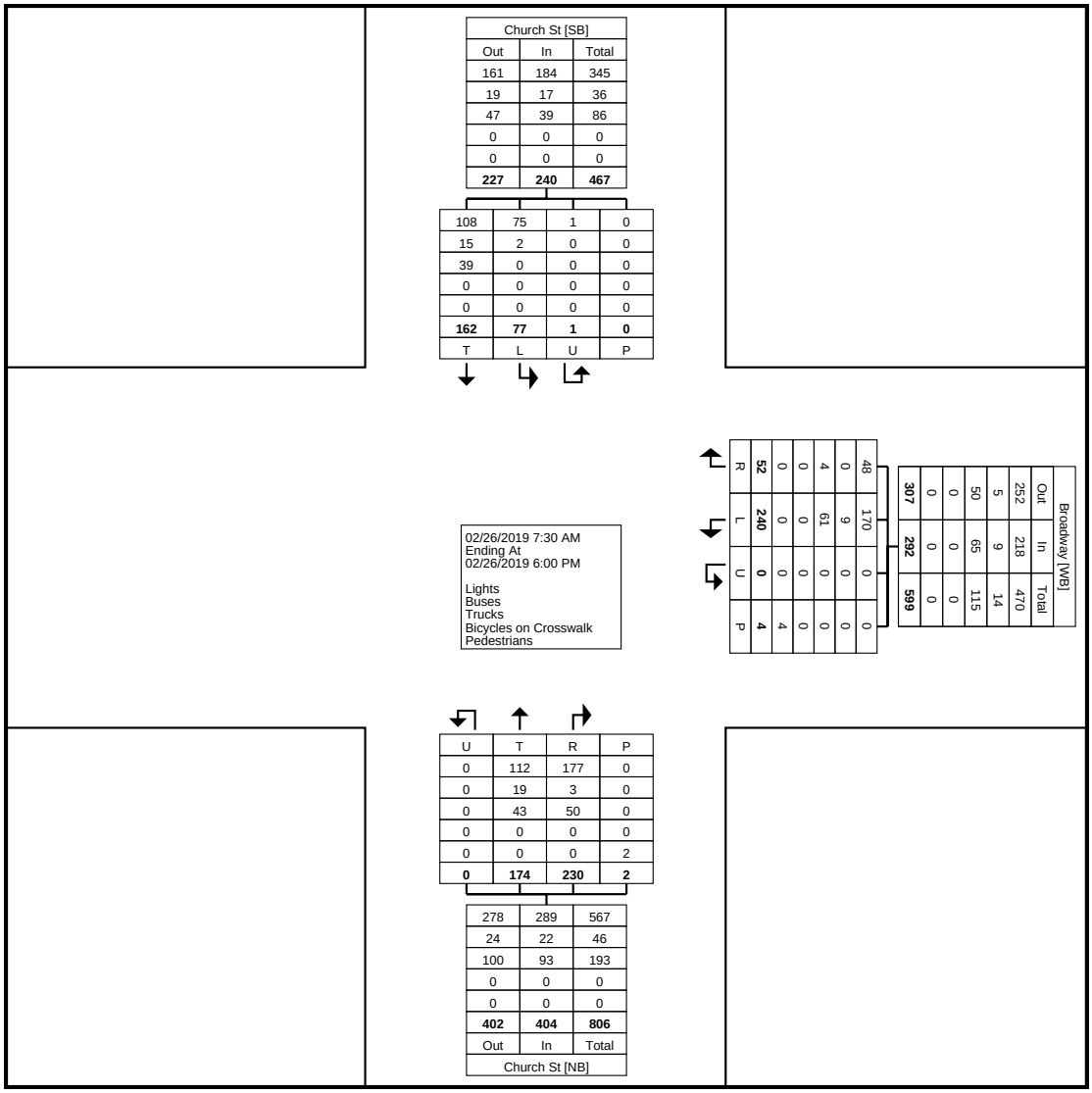
Start Time	Broadway Westbound					Church St Northbound					Church St Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	28	3	0	0	31	9	9	0	0	18	6	14	0	0	20	69
7:45 AM	41	0	0	0	41	14	8	0	1	22	18	16	1	0	35	98
Hourly Total	69	3	0	0	72	23	17	0	1	40	24	30	1	0	55	167
8:00 AM	12	2	0	1	14	10	10	0	0	20	8	4	0	0	12	46
8:15 AM	19	1	0	0	20	5	9	0	1	14	7	13	0	0	20	54
8:30 AM	14	0	0	0	14	5	18	0	0	23	9	16	0	0	25	62
8:45 AM	19	3	0	1	22	14	14	0	0	28	4	14	0	0	18	68
Hourly Total	64	6	0	2	70	34	51	0	1	85	28	47	0	0	75	230
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	11	9	0	0	20	18	27	0	0	45	4	15	0	0	19	84
4:15 PM	12	3	0	0	15	15	28	0	0	43	0	10	0	0	10	68
4:30 PM	19	4	0	0	23	21	6	0	0	27	5	17	0	0	22	72
4:45 PM	12	13	0	0	25	24	25	0	0	49	5	13	0	0	18	92
Hourly Total	54	29	0	0	83	78	86	0	0	164	14	55	0	0	69	316
5:00 PM	21	2	0	0	23	10	40	0	0	50	3	7	0	0	10	83
5:15 PM	19	6	0	2	25	14	17	0	0	31	4	6	0	0	10	66
5:30 PM	11	5	0	0	16	10	14	0	0	24	3	9	0	0	12	52
5:45 PM	2	1	0	0	3	5	5	0	0	10	1	8	0	0	9	22
Hourly Total	53	14	0	2	67	39	76	0	0	115	11	30	0	0	41	223
Grand Total	240	52	0	4	292	174	230	0	2	404	77	162	1	0	240	936
Approach %	82.2	17.8	0.0	-	-	43.1	56.9	0.0	-	-	32.1	67.5	0.4	-	-	-
Total %	25.6	5.6	0.0	-	31.2	18.6	24.6	0.0	-	43.2	8.2	17.3	0.1	-	25.6	-
Lights	170	48	0	-	218	112	177	0	-	289	75	108	1	-	184	691
% Lights	70.8	92.3	-	-	74.7	64.4	77.0	-	-	71.5	97.4	66.7	100.0	-	76.7	73.8
Buses	9	0	0	-	9	19	3	0	-	22	2	15	0	-	17	48
% Buses	3.8	0.0	-	-	3.1	10.9	1.3	-	-	5.4	2.6	9.3	0.0	-	7.1	5.1
Trucks	61	4	0	-	65	43	50	0	-	93	0	39	0	-	39	197
% Trucks	25.4	7.7	-	-	22.3	24.7	21.7	-	-	23.0	0.0	24.1	0.0	-	16.3	21.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	4	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

Count Name: Broadway/Church St
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

Count Name: Broadway/Church St
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (7:30 AM)

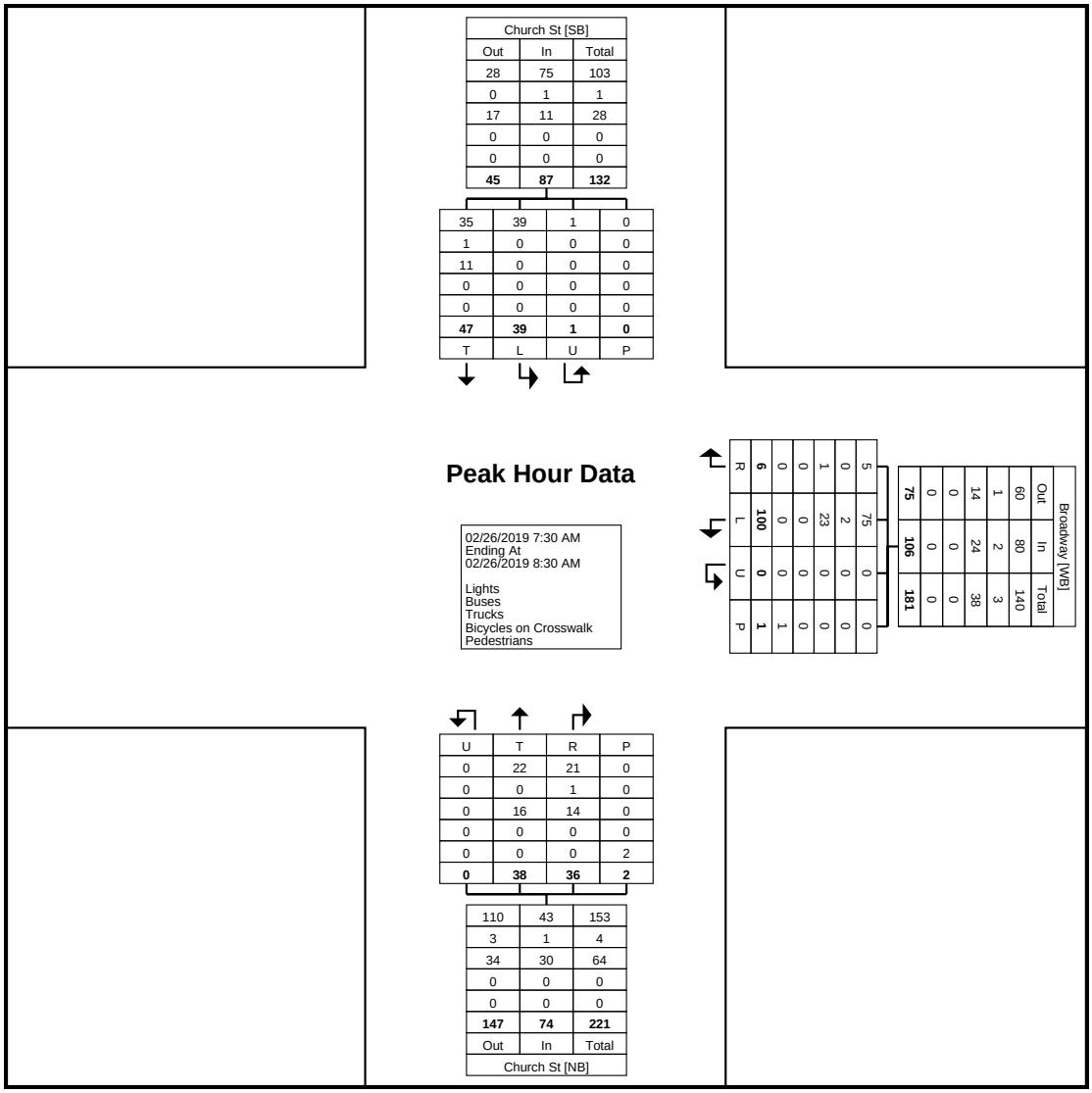
Start Time	Broadway Westbound					Church St Northbound					Church St Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	28	3	0	0	31	9	9	0	0	18	6	14	0	0	20	69
7:45 AM	41	0	0	0	41	14	8	0	1	22	18	16	1	0	35	98
8:00 AM	12	2	0	1	14	10	10	0	0	20	8	4	0	0	12	46
8:15 AM	19	1	0	0	20	5	9	0	1	14	7	13	0	0	20	54
Total	100	6	0	1	106	38	36	0	2	74	39	47	1	0	87	267
Approach %	94.3	5.7	0.0	-	-	51.4	48.6	0.0	-	-	44.8	54.0	1.1	-	-	-
Total %	37.5	2.2	0.0	-	39.7	14.2	13.5	0.0	-	27.7	14.6	17.6	0.4	-	32.6	-
PHF	0.610	0.500	0.000	-	0.646	0.679	0.900	0.000	-	0.841	0.542	0.734	0.250	-	0.621	0.681
Lights	75	5	0	-	80	22	21	0	-	43	39	35	1	-	75	198
% Lights	75.0	83.3	-	-	75.5	57.9	58.3	-	-	58.1	100.0	74.5	100.0	-	86.2	74.2
Buses	2	0	0	-	2	0	1	0	-	1	0	1	0	-	1	4
% Buses	2.0	0.0	-	-	1.9	0.0	2.8	-	-	1.4	0.0	2.1	0.0	-	1.1	1.5
Trucks	23	1	0	-	24	16	14	0	-	30	0	11	0	-	11	65
% Trucks	23.0	16.7	-	-	22.6	42.1	38.9	-	-	40.5	0.0	23.4	0.0	-	12.6	24.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

Count Name: Broadway/Church St
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Peak Hour Data Plot (7:30 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

Count Name: Broadway/Church St
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (4:00 PM)

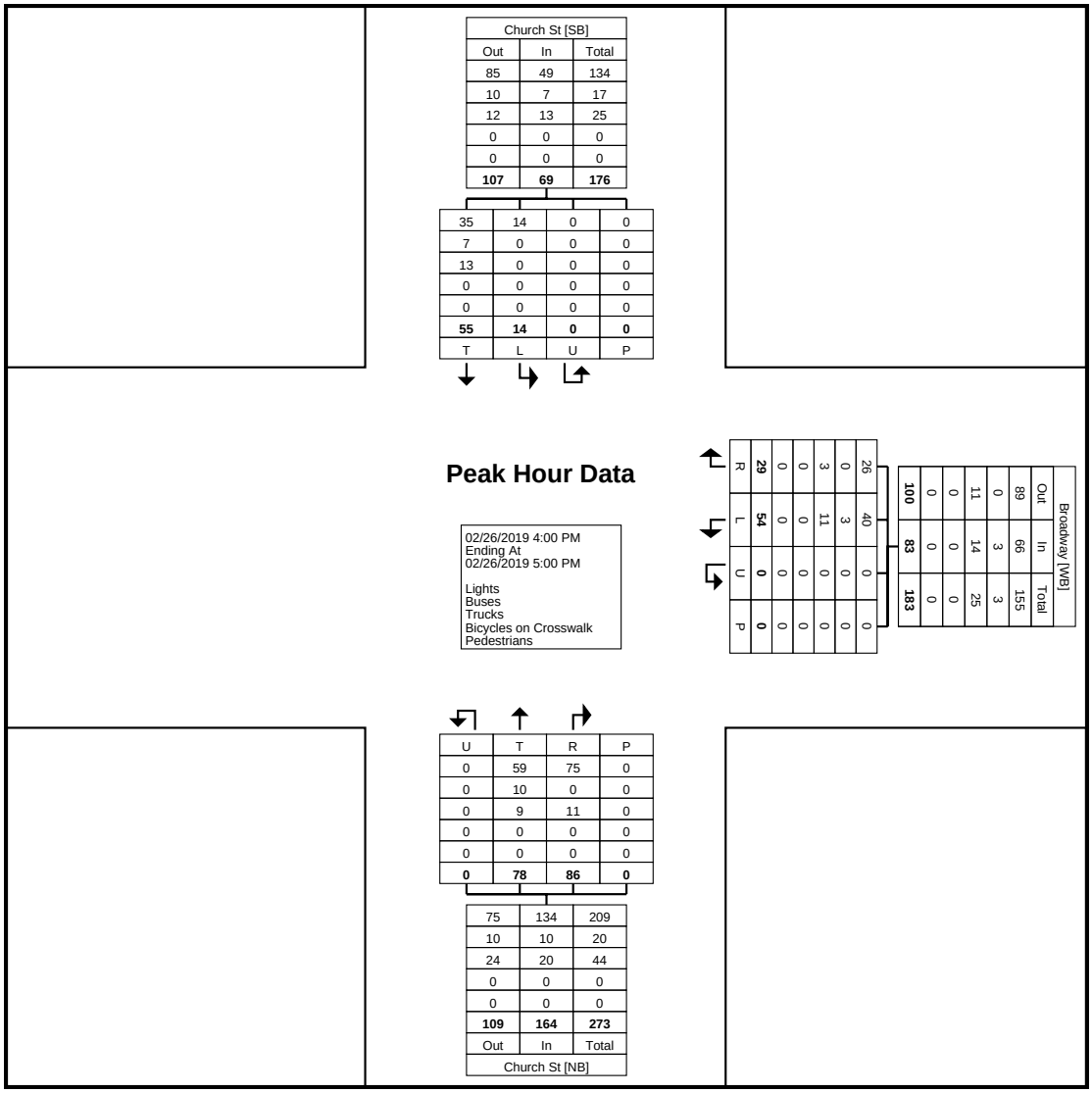
Start Time	Broadway Westbound					Church St Northbound					Church St Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
4:00 PM	11	9	0	0	20	18	27	0	0	45	4	15	0	0	19	84
4:15 PM	12	3	0	0	15	15	28	0	0	43	0	10	0	0	10	68
4:30 PM	19	4	0	0	23	21	6	0	0	27	5	17	0	0	22	72
4:45 PM	12	13	0	0	25	24	25	0	0	49	5	13	0	0	18	92
Total	54	29	0	0	83	78	86	0	0	164	14	55	0	0	69	316
Approach %	65.1	34.9	0.0	-	-	47.6	52.4	0.0	-	-	20.3	79.7	0.0	-	-	-
Total %	17.1	9.2	0.0	-	26.3	24.7	27.2	0.0	-	51.9	4.4	17.4	0.0	-	21.8	-
PHF	0.711	0.558	0.000	-	0.830	0.813	0.768	0.000	-	0.837	0.700	0.809	0.000	-	0.784	0.859
Lights	40	26	0	-	66	59	75	0	-	134	14	35	0	-	49	249
% Lights	74.1	89.7	-	-	79.5	75.6	87.2	-	-	81.7	100.0	63.6	-	-	71.0	78.8
Buses	3	0	0	-	3	10	0	0	-	10	0	7	0	-	7	20
% Buses	5.6	0.0	-	-	3.6	12.8	0.0	-	-	6.1	0.0	12.7	-	-	10.1	6.3
Trucks	11	3	0	-	14	9	11	0	-	20	0	13	0	-	13	47
% Trucks	20.4	10.3	-	-	16.9	11.5	12.8	-	-	12.2	0.0	23.6	-	-	18.8	14.9
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

Count Name: Broadway/Church St
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Peak Hour Data Plot (4:00 PM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Data

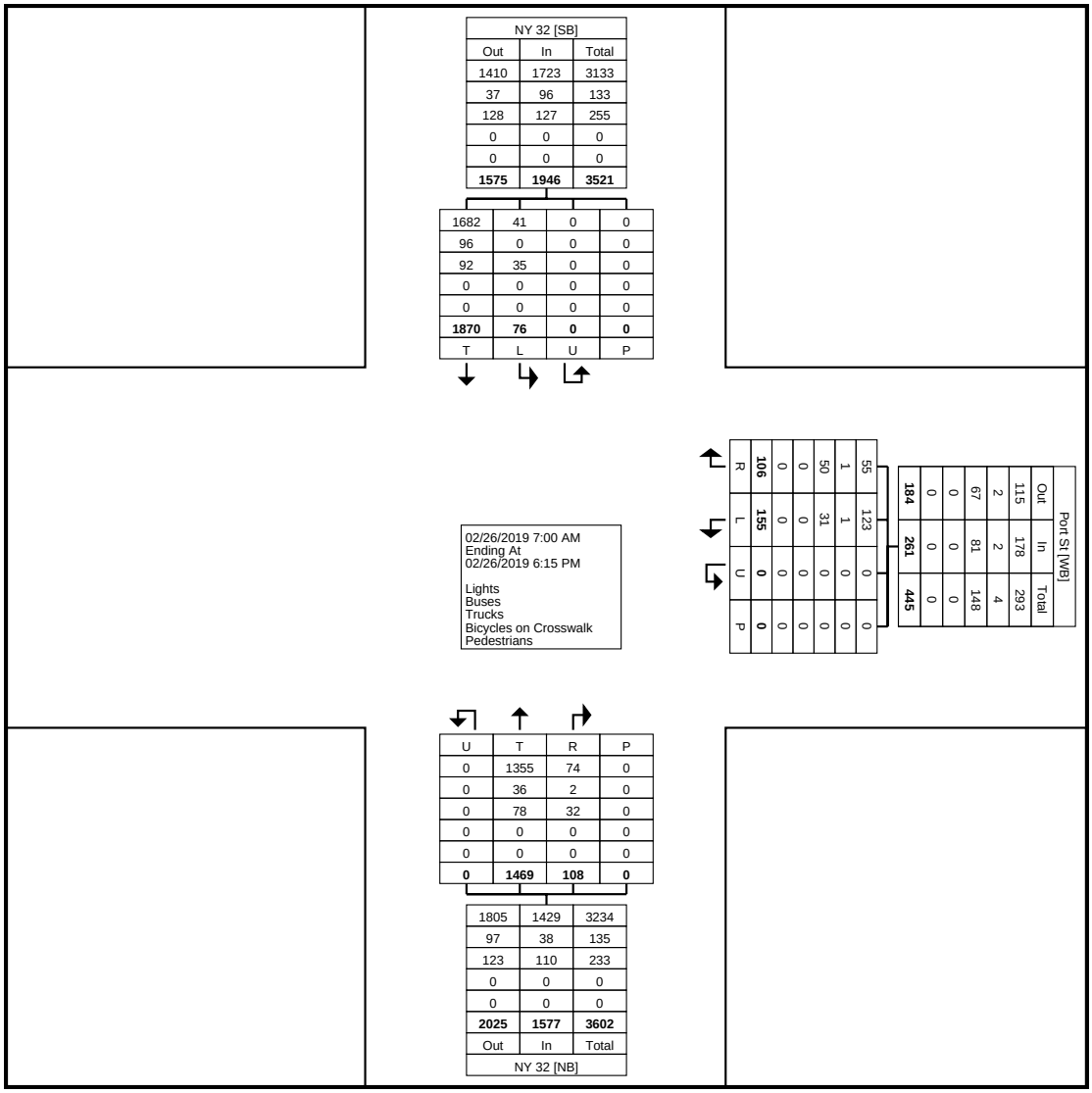
Start Time	Port St Westbound					NY 32 Northbound					NY 32 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	6	3	0	0	9	98	10	0	0	108	7	55	0	0	62	179
7:15 AM	4	10	0	0	14	133	12	0	0	145	6	44	0	0	50	209
7:30 AM	5	2	0	0	7	184	5	0	0	189	9	62	0	0	71	267
7:45 AM	2	7	0	0	9	172	13	0	0	185	6	47	0	0	53	247
Hourly Total	17	22	0	0	39	587	40	0	0	627	28	208	0	0	236	902
8:00 AM	4	8	0	0	12	132	4	0	0	136	12	62	0	0	74	222
8:15 AM	6	11	0	0	17	129	14	0	0	143	4	39	0	0	43	203
8:30 AM	6	13	0	0	19	122	9	0	0	131	12	49	0	0	61	211
8:45 AM	5	7	0	0	12	104	13	0	0	117	9	62	0	0	71	200
Hourly Total	21	39	0	0	60	487	40	0	0	527	37	212	0	0	249	836
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	23	18	0	0	41	50	11	0	0	61	1	170	0	0	171	273
4:15 PM	17	8	0	0	25	41	3	0	0	44	1	181	0	0	182	251
4:30 PM	13	4	0	0	17	54	1	0	0	55	1	192	0	0	193	265
4:45 PM	19	3	0	0	22	80	3	0	0	83	2	199	0	0	201	306
Hourly Total	72	33	0	0	105	225	18	0	0	243	5	742	0	0	747	1095
5:00 PM	15	2	0	0	17	53	6	0	0	59	2	220	0	0	222	298
5:15 PM	17	2	0	0	19	41	2	0	0	43	0	223	0	0	223	285
5:30 PM	9	6	0	0	15	45	2	0	0	47	2	136	0	0	138	200
5:45 PM	4	2	0	0	6	31	0	0	0	31	2	129	0	0	131	168
Hourly Total	45	12	0	0	57	170	10	0	0	180	6	708	0	0	714	951
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	155	106	0	0	261	1469	108	0	0	1577	76	1870	0	0	1946	3784
Approach %	59.4	40.6	0.0	-	-	93.2	6.8	0.0	-	-	3.9	96.1	0.0	-	-	-
Total %	4.1	2.8	0.0	-	6.9	38.8	2.9	0.0	-	41.7	2.0	49.4	0.0	-	51.4	-
Lights	123	55	0	-	178	1355	74	0	-	1429	41	1682	0	-	1723	3330
% Lights	79.4	51.9	-	-	68.2	92.2	68.5	-	-	90.6	53.9	89.9	-	-	88.5	88.0
Buses	1	1	0	-	2	36	2	0	-	38	0	96	0	-	96	136
% Buses	0.6	0.9	-	-	0.8	2.5	1.9	-	-	2.4	0.0	5.1	-	-	4.9	3.6
Trucks	31	50	0	-	81	78	32	0	-	110	35	92	0	-	127	318
% Trucks	20.0	47.2	-	-	31.0	5.3	29.6	-	-	7.0	46.1	4.9	-	-	6.5	8.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

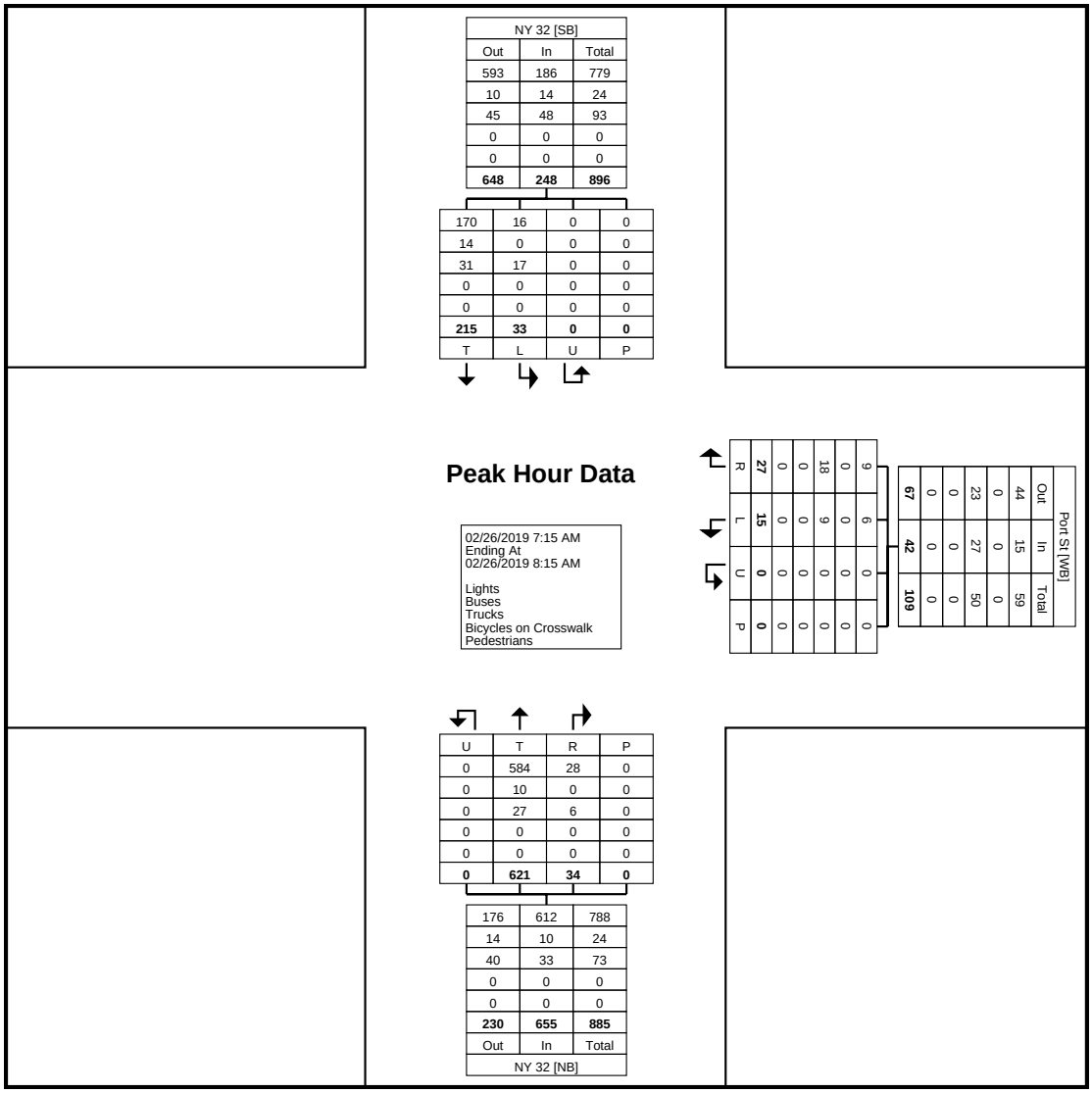
Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Port St Westbound					NY 32 Northbound					NY 32 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:15 AM	4	10	0	0	14	133	12	0	0	145	6	44	0	0	50	209
7:30 AM	5	2	0	0	7	184	5	0	0	189	9	62	0	0	71	267
7:45 AM	2	7	0	0	9	172	13	0	0	185	6	47	0	0	53	247
8:00 AM	4	8	0	0	12	132	4	0	0	136	12	62	0	0	74	222
Total	15	27	0	0	42	621	34	0	0	655	33	215	0	0	248	945
Approach %	35.7	64.3	0.0	-	-	94.8	5.2	0.0	-	-	13.3	86.7	0.0	-	-	-
Total %	1.6	2.9	0.0	-	4.4	65.7	3.6	0.0	-	69.3	3.5	22.8	0.0	-	26.2	-
PHF	0.750	0.675	0.000	-	0.750	0.844	0.654	0.000	-	0.866	0.688	0.867	0.000	-	0.838	0.885
Lights	6	9	0	-	15	584	28	0	-	612	16	170	0	-	186	813
% Lights	40.0	33.3	-	-	35.7	94.0	82.4	-	-	93.4	48.5	79.1	-	-	75.0	86.0
Buses	0	0	0	-	0	10	0	0	-	10	0	14	0	-	14	24
% Buses	0.0	0.0	-	-	0.0	1.6	0.0	-	-	1.5	0.0	6.5	-	-	5.6	2.5
Trucks	9	18	0	-	27	27	6	0	-	33	17	31	0	-	48	108
% Trucks	60.0	66.7	-	-	64.3	4.3	17.6	-	-	5.0	51.5	14.4	-	-	19.4	11.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Peak Hour Data Plot (7:15 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (4:30 PM)

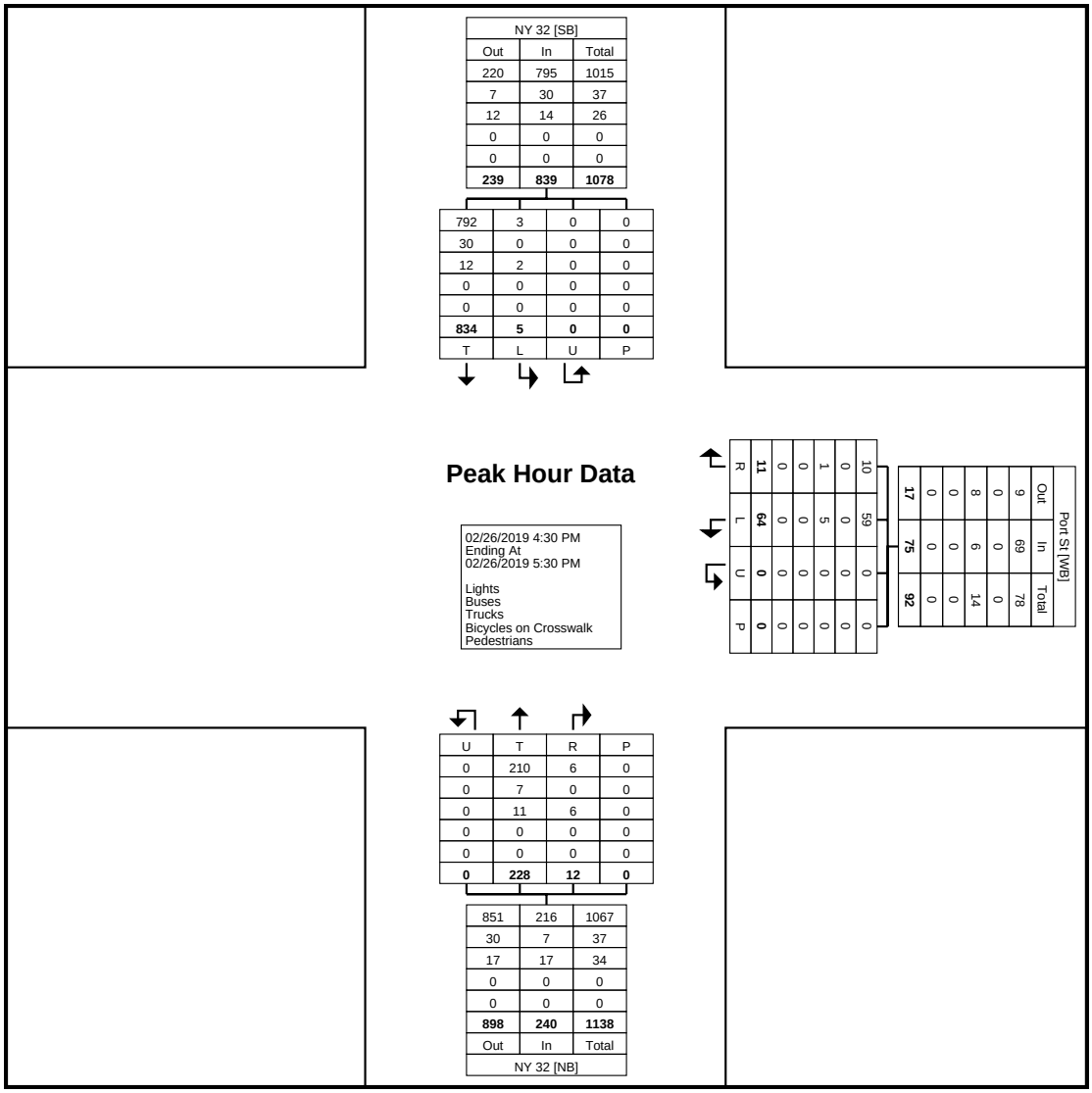
Start Time	Port St Westbound					NY 32 Northbound					NY 32 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
4:30 PM	13	4	0	0	17	54	1	0	0	55	1	192	0	0	193	265
4:45 PM	19	3	0	0	22	80	3	0	0	83	2	199	0	0	201	306
5:00 PM	15	2	0	0	17	53	6	0	0	59	2	220	0	0	222	298
5:15 PM	17	2	0	0	19	41	2	0	0	43	0	223	0	0	223	285
Total	64	11	0	0	75	228	12	0	0	240	5	834	0	0	839	1154
Approach %	85.3	14.7	0.0	-	-	95.0	5.0	0.0	-	-	0.6	99.4	0.0	-	-	-
Total %	5.5	1.0	0.0	-	6.5	19.8	1.0	0.0	-	20.8	0.4	72.3	0.0	-	72.7	-
PHF	0.842	0.688	0.000	-	0.852	0.713	0.500	0.000	-	0.723	0.625	0.935	0.000	-	0.941	0.943
Lights	59	10	0	-	69	210	6	0	-	216	3	792	0	-	795	1080
% Lights	92.2	90.9	-	-	92.0	92.1	50.0	-	-	90.0	60.0	95.0	-	-	94.8	93.6
Buses	0	0	0	-	0	7	0	0	-	7	0	30	0	-	30	37
% Buses	0.0	0.0	-	-	0.0	3.1	0.0	-	-	2.9	0.0	3.6	-	-	3.6	3.2
Trucks	5	1	0	-	6	11	6	0	-	17	2	12	0	-	14	37
% Trucks	7.8	9.1	-	-	8.0	4.8	50.0	-	-	7.1	40.0	1.4	-	-	1.7	3.2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Peak Hour Data Plot (4:30 PM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 144/Clapper Road
Tuesday, February 26,2019
Location: 42.552503, -73.769465

Count Name: NY 144/Clapper Rd
Site Code: Bethlehem, New York
Start Date: 02/26/2019

Turning Movement Data

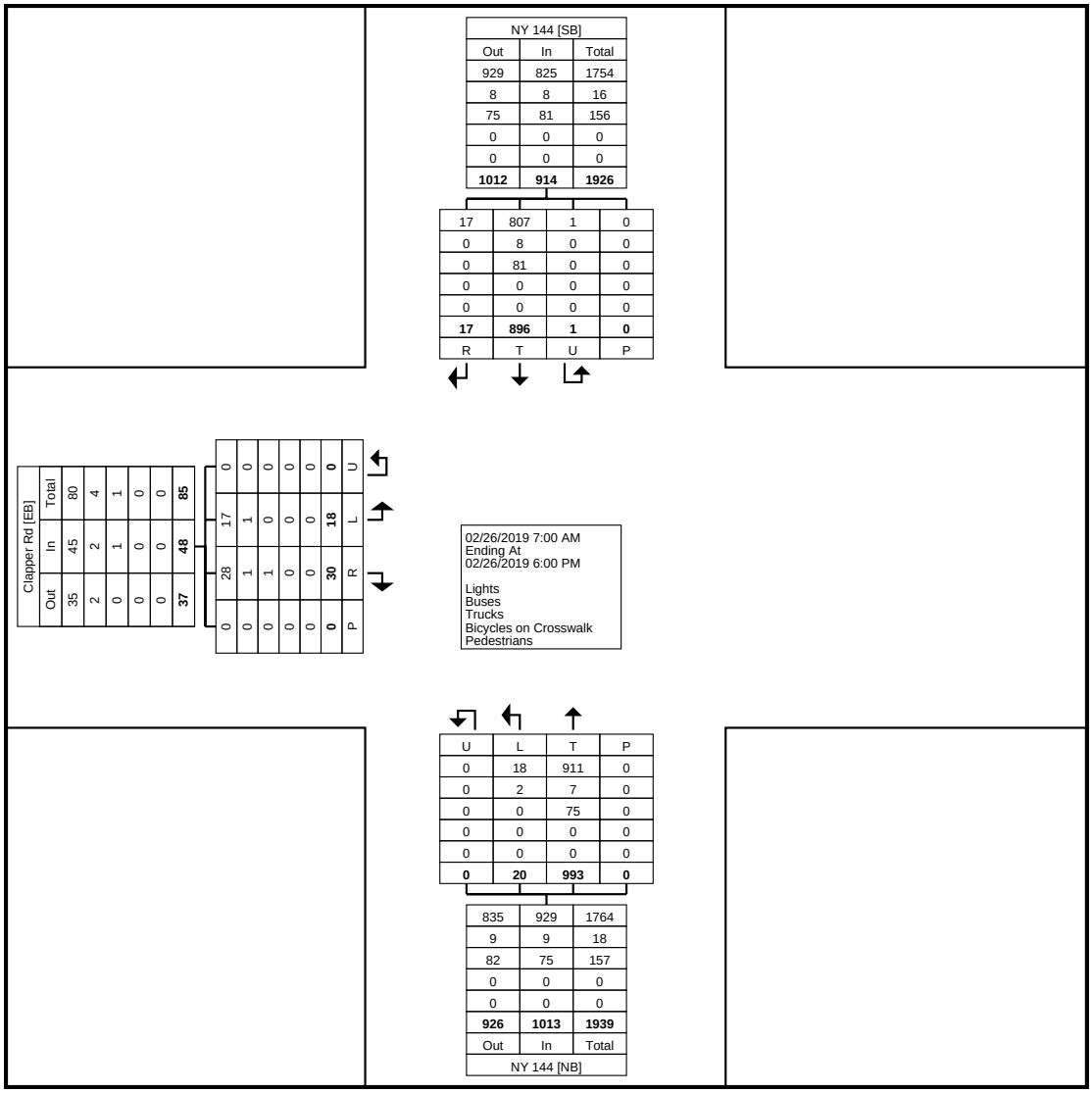
Start Time	Clapper Rd Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	1	0	0	2	0	88	0	0	88	29	1	0	0	30	120
7:15 AM	1	4	0	0	5	1	98	0	0	99	31	0	0	0	31	135
7:30 AM	1	3	0	0	4	0	148	0	0	148	38	0	0	0	38	190
7:45 AM	3	4	0	0	7	1	94	0	0	95	36	0	0	0	36	138
Hourly Total	6	12	0	0	18	2	428	0	0	430	134	1	0	0	135	583
8:00 AM	0	2	0	0	2	1	84	0	0	85	37	1	0	0	38	125
8:15 AM	1	2	0	0	3	2	86	0	0	88	32	0	0	0	32	123
8:30 AM	2	5	0	0	7	3	70	0	0	73	23	1	0	0	24	104
8:45 AM	2	1	0	0	3	1	45	0	0	46	22	1	0	0	23	72
Hourly Total	5	10	0	0	15	7	285	0	0	292	114	3	0	0	117	424
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	1	0	0	2	1	47	0	0	48	65	4	1	0	70	120
4:15 PM	0	1	0	0	1	2	21	0	0	23	96	1	0	0	97	121
4:30 PM	2	1	0	0	3	0	50	0	0	50	90	1	0	0	91	144
4:45 PM	0	0	0	0	0	0	46	0	0	46	90	2	0	0	92	138
Hourly Total	3	3	0	0	6	3	164	0	0	167	341	8	1	0	350	523
5:00 PM	1	0	0	0	1	4	32	0	0	36	81	2	0	0	83	120
5:15 PM	1	1	0	0	2	1	31	0	0	32	104	0	0	0	104	138
5:30 PM	0	1	0	0	1	1	29	0	0	30	68	3	0	0	71	102
5:45 PM	2	3	0	0	5	2	24	0	0	26	54	0	0	0	54	85
Hourly Total	4	5	0	0	9	8	116	0	0	124	307	5	0	0	312	445
Grand Total	18	30	0	0	48	20	993	0	0	1013	896	17	1	0	914	1975
Approach %	37.5	62.5	0.0	-	-	2.0	98.0	0.0	-	-	98.0	1.9	0.1	-	-	-
Total %	0.9	1.5	0.0	-	2.4	1.0	50.3	0.0	-	51.3	45.4	0.9	0.1	-	46.3	-
Lights	17	28	0	-	45	18	911	0	-	929	807	17	1	-	825	1799
% Lights	94.4	93.3	-	-	93.8	90.0	91.7	-	-	91.7	90.1	100.0	100.0	-	90.3	91.1
Buses	1	1	0	-	2	2	7	0	-	9	8	0	0	-	8	19
% Buses	5.6	3.3	-	-	4.2	10.0	0.7	-	-	0.9	0.9	0.0	0.0	-	0.9	1.0
Trucks	0	1	0	-	1	0	75	0	-	75	81	0	0	-	81	157
% Trucks	0.0	3.3	-	-	2.1	0.0	7.6	-	-	7.4	9.0	0.0	0.0	-	8.9	7.9
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 144/Clapper Road
Tuesday, February 26,2019
Location: 42.552503, -73.769465

Count Name: NY 144/Clapper Rd
Site Code: Bethlehem, New York
Start Date: 02/26/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 144/Clapper Road
Tuesday, February 26,2019
Location: 42.552503, -73.769465

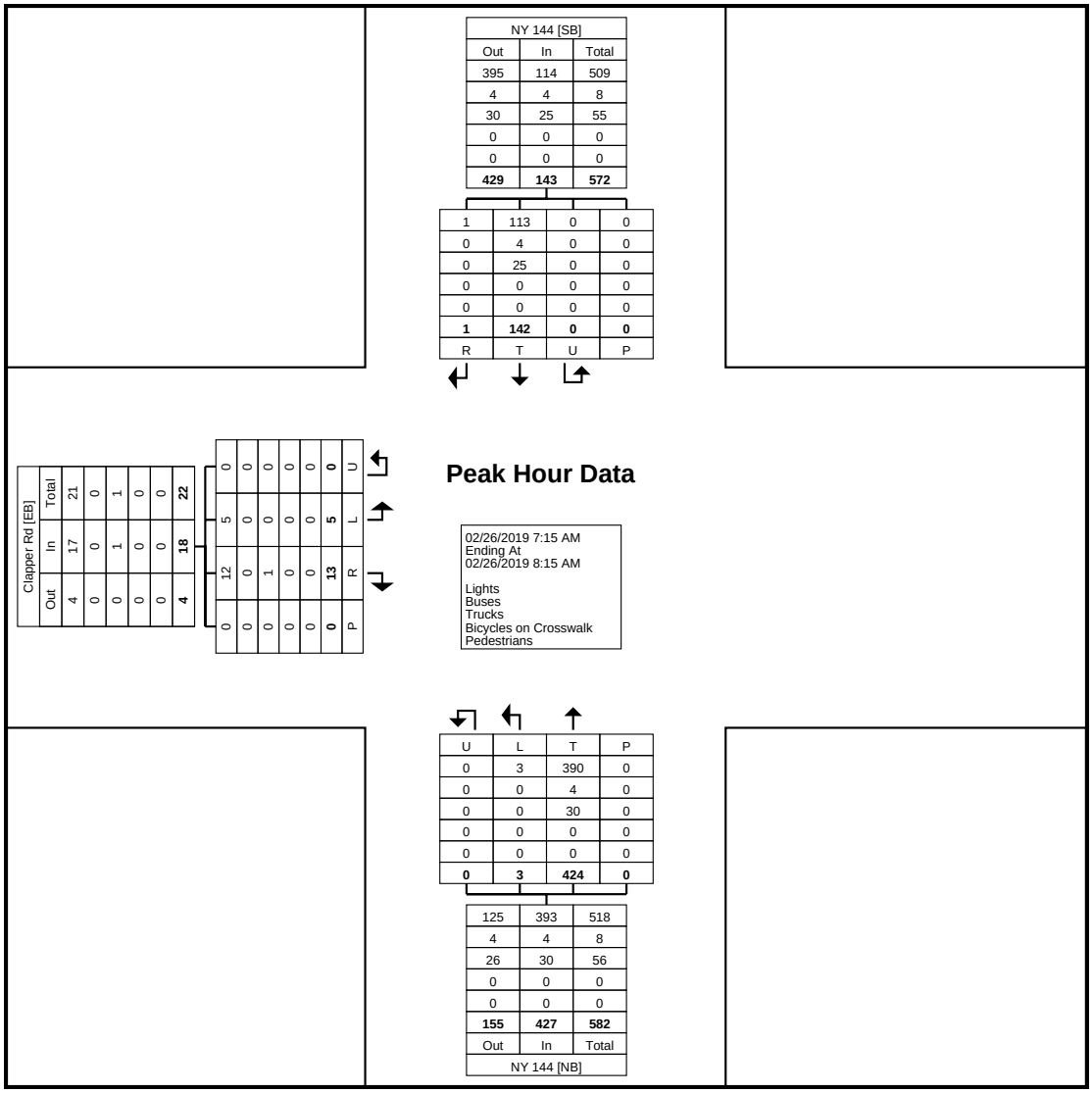
Count Name: NY 144/Clapper Rd
Site Code: Bethlehem, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Clapper Rd Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:15 AM	1	4	0	0	5	1	98	0	0	99	31	0	0	0	31	135
7:30 AM	1	3	0	0	4	0	148	0	0	148	38	0	0	0	38	190
7:45 AM	3	4	0	0	7	1	94	0	0	95	36	0	0	0	36	138
8:00 AM	0	2	0	0	2	1	84	0	0	85	37	1	0	0	38	125
Total	5	13	0	0	18	3	424	0	0	427	142	1	0	0	143	588
Approach %	27.8	72.2	0.0	-	-	0.7	99.3	0.0	-	-	99.3	0.7	0.0	-	-	-
Total %	0.9	2.2	0.0	-	3.1	0.5	72.1	0.0	-	72.6	24.1	0.2	0.0	-	24.3	-
PHF	0.417	0.813	0.000	-	0.643	0.750	0.716	0.000	-	0.721	0.934	0.250	0.000	-	0.941	0.774
Lights	5	12	0	-	17	3	390	0	-	393	113	1	0	-	114	524
% Lights	100.0	92.3	-	-	94.4	100.0	92.0	-	-	92.0	79.6	100.0	-	-	79.7	89.1
Buses	0	0	0	-	0	0	4	0	-	4	4	0	0	-	4	8
% Buses	0.0	0.0	-	-	0.0	0.0	0.9	-	-	0.9	2.8	0.0	-	-	2.8	1.4
Trucks	0	1	0	-	1	0	30	0	-	30	25	0	0	-	25	56
% Trucks	0.0	7.7	-	-	5.6	0.0	7.1	-	-	7.0	17.6	0.0	-	-	17.5	9.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



Turning Movement Peak Hour Data Plot (7:15 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
NY 144/Clapper Road
Tuesday, February 26,2019
Location: 42.552503, -73.769465

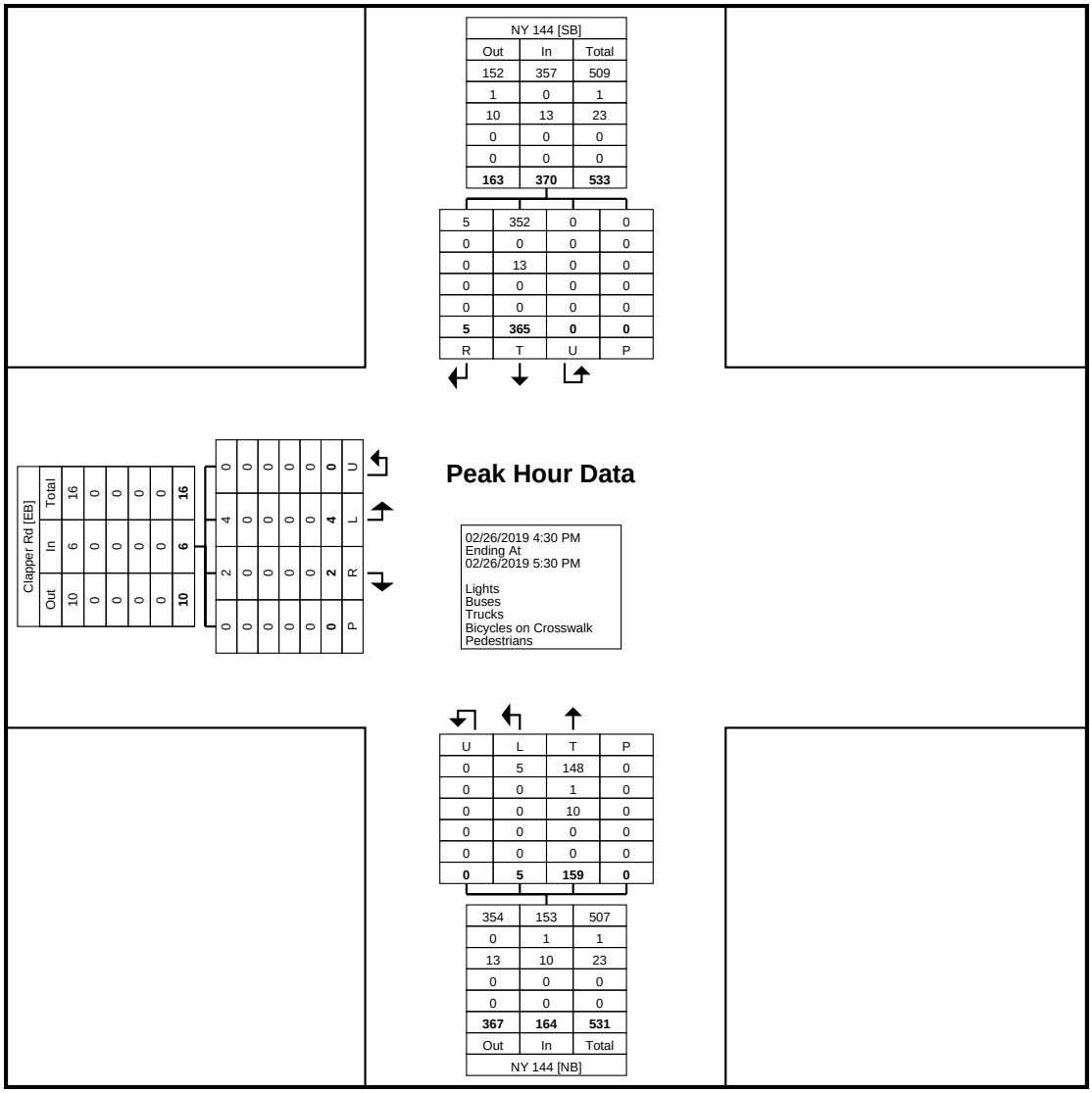
Count Name: NY 144/Clapper Rd
Site Code: Bethlehem, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Clapper Rd Eastbound					NY 144 Northbound					NY 144 Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	2	1	0	0	3	0	50	0	0	50	90	1	0	0	91	144
4:45 PM	0	0	0	0	0	0	46	0	0	46	90	2	0	0	92	138
5:00 PM	1	0	0	0	1	4	32	0	0	36	81	2	0	0	83	120
5:15 PM	1	1	0	0	2	1	31	0	0	32	104	0	0	0	104	138
Total	4	2	0	0	6	5	159	0	0	164	365	5	0	0	370	540
Approach %	66.7	33.3	0.0	-	-	3.0	97.0	0.0	-	-	98.6	1.4	0.0	-	-	-
Total %	0.7	0.4	0.0	-	1.1	0.9	29.4	0.0	-	30.4	67.6	0.9	0.0	-	68.5	-
PHF	0.500	0.500	0.000	-	0.500	0.313	0.795	0.000	-	0.820	0.877	0.625	0.000	-	0.889	0.938
Lights	4	2	0	-	6	5	148	0	-	153	352	5	0	-	357	516
% Lights	100.0	100.0	-	-	100.0	100.0	93.1	-	-	93.3	96.4	100.0	-	-	96.5	95.6
Buses	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Buses	0.0	0.0	-	-	0.0	0.0	0.6	-	-	0.6	0.0	0.0	-	-	0.0	0.2
Trucks	0	0	0	-	0	0	10	0	-	10	13	0	0	-	13	23
% Trucks	0.0	0.0	-	-	0.0	0.0	6.3	-	-	6.1	3.6	0.0	-	-	3.5	4.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



Turning Movement Peak Hour Data Plot (4:30 PM)

TRI-STATE TRAFFIC DATA
www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
US 9W/Glenmont Road
Tuesday, February 26, 2019
Location: 42.601883, -73.791855

Count Name: US 9W/Glenmont Rd
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Data

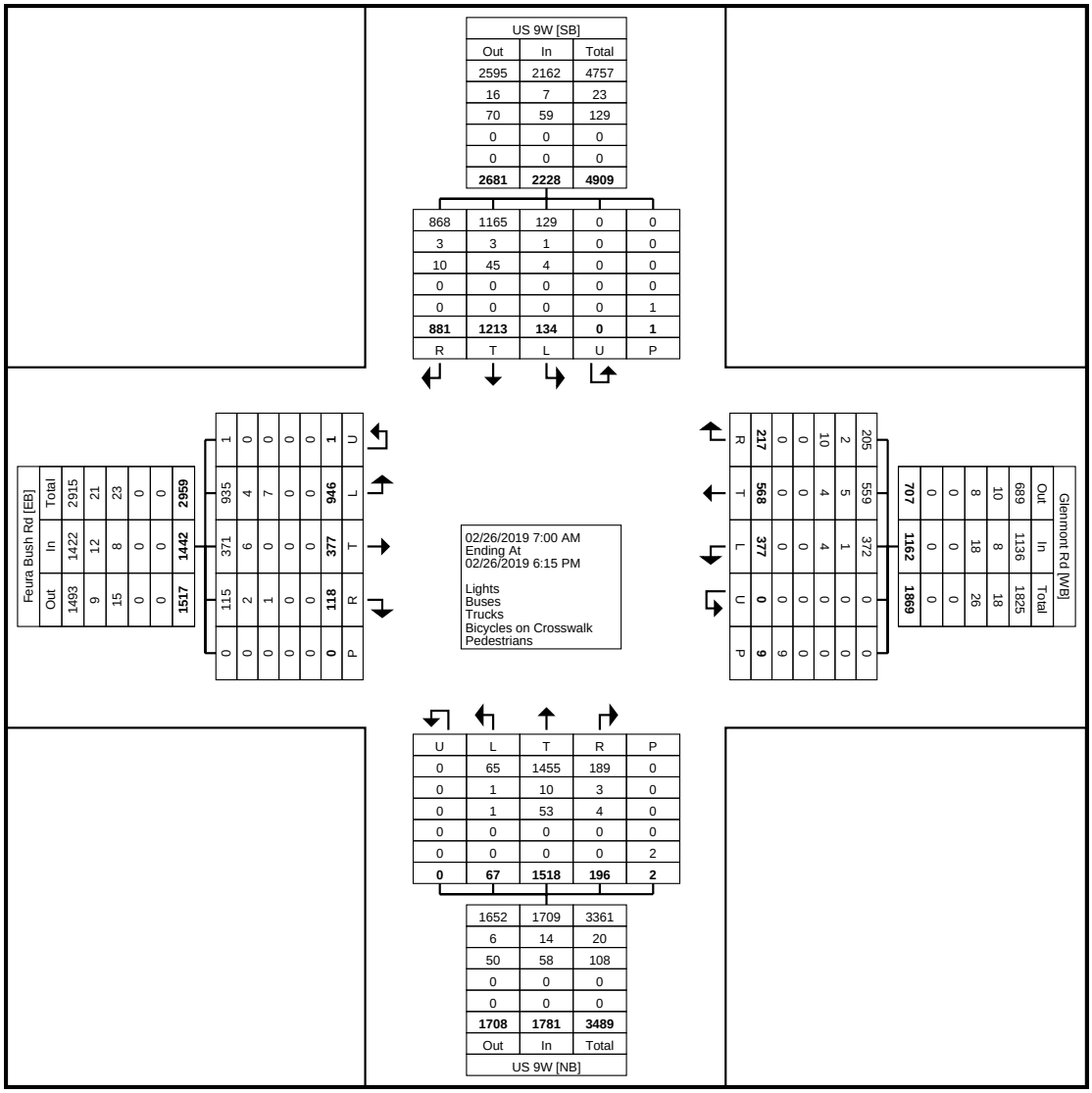
Start Time	Feura Bush Rd Eastbound							Glenmont Rd Westbound							US 9W Northbound							US 9W Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:00 AM	51	16	3	0	0	0	70	10	20	4	4	0	0	38	4	110	9	0	0	0	123	1	54	10	4	0	0	69	300
7:15 AM	82	13	8	1	0	0	104	5	19	5	6	0	0	35	4	123	10	4	0	0	141	3	56	14	1	0	0	74	354
7:30 AM	69	29	6	0	0	0	104	7	15	9	4	0	1	35	5	133	9	0	0	0	147	1	51	16	3	0	0	71	357
7:45 AM	75	35	6	2	0	0	118	9	13	7	11	0	0	40	3	120	13	3	0	0	139	5	43	15	8	0	0	71	368
Hourly Total	277	93	23	3	0	0	396	31	67	25	25	0	1	148	16	486	41	7	0	0	550	10	204	55	16	0	0	285	1379
8:00 AM	72	27	5	2	0	0	106	8	17	6	8	0	2	39	3	130	11	1	0	1	145	9	50	22	5	0	0	86	376
8:15 AM	77	21	6	1	0	0	105	13	16	7	6	0	0	42	5	116	18	2	0	0	141	10	56	25	13	0	0	104	392
8:30 AM	59	23	7	1	0	0	90	9	9	8	6	0	0	32	2	107	18	0	0	1	127	3	41	19	9	0	1	72	321
8:45 AM	64	17	10	0	0	0	91	14	22	19	2	0	0	57	4	110	13	1	0	0	128	8	40	16	11	0	0	75	351
Hourly Total	272	88	28	4	0	0	392	44	64	40	22	0	2	170	14	463	60	4	0	2	541	30	187	82	38	0	1	337	1440
9:00 AM	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 PM	44	28	5	4	0	0	81	29	48	12	0	0	2	89	2	87	11	0	0	0	100	8	98	52	27	0	0	185	455
4:15 PM	47	29	7	1	0	0	84	31	53	10	4	0	3	98	6	69	6	1	0	0	82	18	116	28	35	0	0	197	461
4:30 PM	48	15	1	3	0	0	67	47	51	8	3	0	0	109	2	55	11	2	0	0	70	13	101	52	24	0	0	190	436
4:45 PM	50	32	10	0	0	0	92	35	55	8	1	0	1	99	10	81	6	1	0	0	98	14	99	58	22	0	0	193	482
Hourly Total	189	104	23	8	0	0	324	142	207	38	8	0	6	395	20	292	34	4	0	0	350	53	414	190	108	0	0	765	1834
5:00 PM	43	23	3	6	1	0	76	48	58	15	3	0	0	124	3	69	12	0	0	0	84	12	106	74	17	0	0	209	493
5:15 PM	44	30	3	1	0	0	78	40	61	14	1	0	0	116	5	61	16	2	0	0	84	10	116	70	30	0	0	226	504
5:30 PM	63	23	1	5	0	0	92	43	51	12	4	0	0	110	4	76	10	1	0	0	91	9	90	56	41	0	0	196	489
5:45 PM	57	16	4	6	0	0	83	28	60	8	2	0	0	98	5	71	4	1	0	0	81	10	96	81	23	0	0	210	472
Hourly Total	207	92	11	18	1	0	329	159	230	49	10	0	0	448	17	277	42	4	0	0	340	41	408	281	111	0	0	841	1958
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	946	377	85	33	1	0	1442	377	568	152	65	0	9	1162	67	1518	177	19	0	2	1781	134	1213	608	273	0	1	2228	6613
Approach %	65.6	26.1	5.9	2.3	0.1	-	-	32.4	48.9	13.1	5.6	0.0	-	-	3.8	85.2	9.9	1.1	0.0	-	-	6.0	54.4	27.3	12.3	0.0	-	-	-
Total %	14.3	5.7	1.3	0.5	0.0	-	21.8	5.7	8.6	2.3	1.0	0.0	-	17.6	1.0	23.0	2.7	0.3	0.0	-	26.9	2.0	18.3	9.2	4.1	0.0	-	33.7	-
Lights	935	371	82	33	1	-	1422	372	559	143	62	0	-	1136	65	1455	171	18	0	-	1709	129	1165	600	268	0	-	2162	6429
% Lights	98.8	98.4	96.5	100.0	100.0	-	98.6	98.7	98.4	94.1	95.4	-	-	97.8	97.0	95.8	96.6	94.7	-	-	96.0	96.3	96.0	98.7	98.2	-	-	97.0	97.2
Buses	4	6	2	0	0	-	12	1	5	2	0	0	-	8	1	10	3	0	0	-	14	1	3	3	0	0	-	7	41
% Buses	0.4	1.6	2.4	0.0	0.0	-	0.8	0.3	0.9	1.3	0.0	-	-	0.7	1.5	0.7	1.7	0.0	-	-	0.8	0.7	0.2	0.5	0.0	-	-	0.3	0.6
Trucks	7	0	1	0	0	-	8	4	4	7	3	0	-	18	1	53	3	1	0	-	58	4	45	5	5	0	-	59	143
% Trucks	0.7	0.0	1.2	0.0	0.0	-	0.6	1.1	0.7	4.6	4.6	-	-	1.5	1.5	3.5	1.7	5.3	-	-	3.3	3.0	3.7	0.8	1.8	-	-	2.6	2.2
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	9	-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
US 9W/Glenmont Road
Tuesday, February 26, 2019
Location: 42.601883, -73.791855

Count Name: US 9W/Glenmont Rd
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Port of Albany, NY
US 9W/Glenmont Road
Tuesday, February 26, 2019
Location: 42.601883, -73.791855

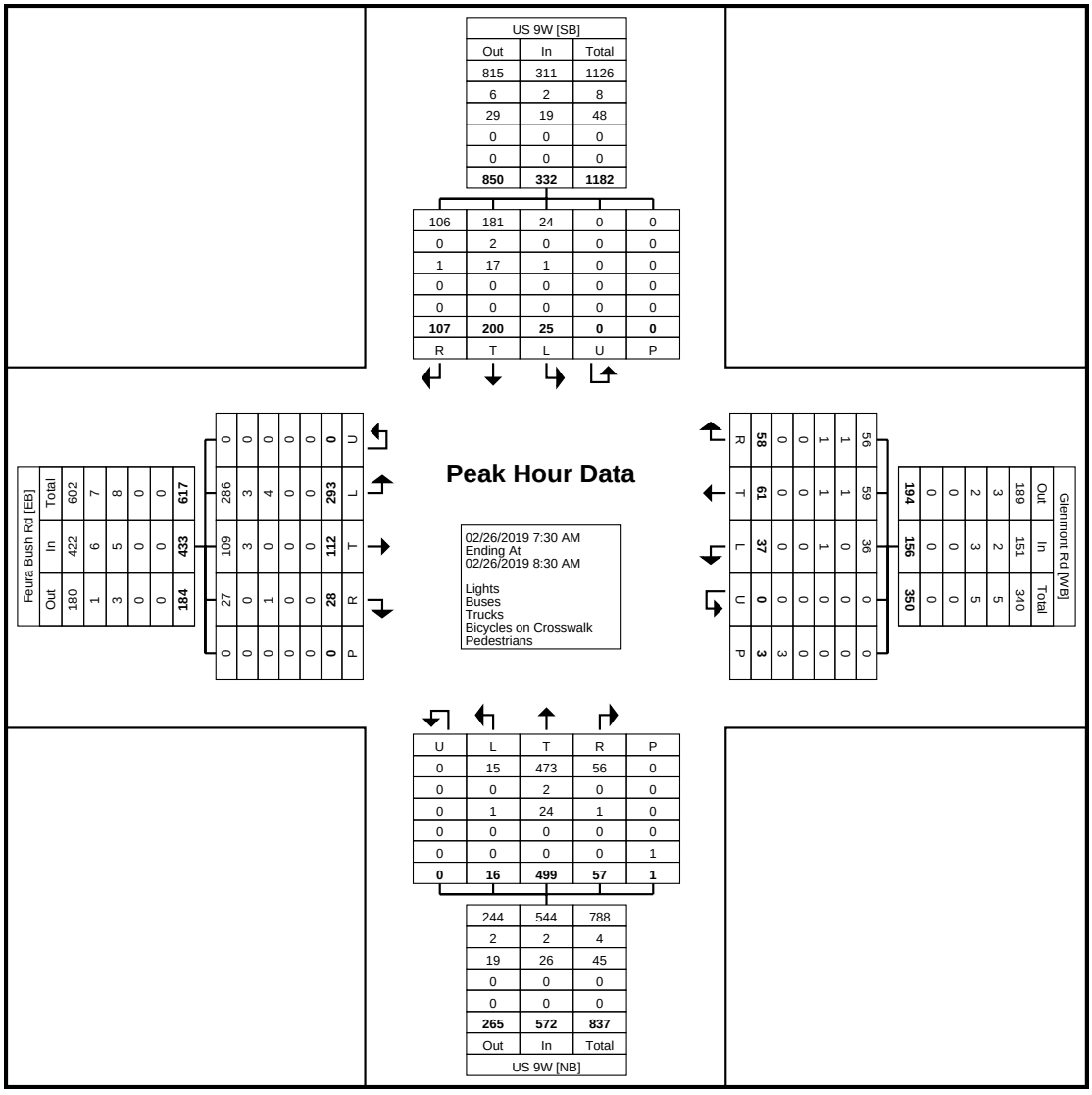
Count Name: US 9W/Glenmont Rd
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Feura Bush Rd Eastbound							Glenmont Rd Westbound							US 9W Northbound							US 9W Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	69	29	6	0	0	0	104	7	15	9	4	0	1	35	5	133	9	0	0	0	147	1	51	16	3	0	0	71	357
7:45 AM	75	35	6	2	0	0	118	9	13	7	11	0	0	40	3	120	13	3	0	0	139	5	43	15	8	0	0	71	368
8:00 AM	72	27	5	2	0	0	106	8	17	6	8	0	2	39	3	130	11	1	0	1	145	9	50	22	5	0	0	86	376
8:15 AM	77	21	6	1	0	0	105	13	16	7	6	0	0	42	5	116	18	2	0	0	141	10	56	25	13	0	0	104	392
Total	293	112	23	5	0	0	433	37	61	29	29	0	3	156	16	499	51	6	0	1	572	25	200	78	29	0	0	332	1493
Approach %	67.7	25.9	5.3	1.2	0.0	-	-	23.7	39.1	18.6	18.6	0.0	-	-	2.8	87.2	8.9	1.0	0.0	-	-	7.5	60.2	23.5	8.7	0.0	-	-	-
Total %	19.6	7.5	1.5	0.3	0.0	-	29.0	2.5	4.1	1.9	1.9	0.0	-	10.4	1.1	33.4	3.4	0.4	0.0	-	38.3	1.7	13.4	5.2	1.9	0.0	-	22.2	-
PHF	0.951	0.800	0.958	0.625	0.000	-	0.917	0.712	0.897	0.806	0.659	0.000	-	0.929	0.800	0.938	0.708	0.500	0.000	-	0.973	0.625	0.893	0.780	0.558	0.000	-	0.798	0.952
Lights	286	109	22	5	0	-	422	36	59	27	29	0	-	151	15	473	50	6	0	-	544	24	181	77	29	0	-	311	1428
% Lights	97.6	97.3	95.7	100.0	-	-	97.5	97.3	96.7	93.1	100.0	-	-	96.8	93.8	94.8	98.0	100.0	-	-	95.1	96.0	90.5	98.7	100.0	-	-	93.7	95.6
Buses	3	3	0	0	0	-	6	0	1	1	0	0	-	2	0	2	0	0	0	-	2	0	2	0	0	0	-	2	12
% Buses	1.0	2.7	0.0	0.0	-	-	1.4	0.0	1.6	3.4	0.0	-	-	1.3	0.0	0.4	0.0	0.0	-	-	0.3	0.0	1.0	0.0	0.0	-	-	0.6	0.8
Trucks	4	0	1	0	0	-	5	1	1	1	0	0	-	3	1	24	1	0	0	-	26	1	17	1	0	0	-	19	53
% Trucks	1.4	0.0	4.3	0.0	-	-	1.2	2.7	1.6	3.4	0.0	-	-	1.9	6.3	4.8	2.0	0.0	-	-	4.5	4.0	8.5	1.3	0.0	-	-	5.7	3.5
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995



Turning Movement Peak Hour Data Plot (7:30 AM)

Port of Albany, NY
US 9W/Glenmont Road
Tuesday, February 26, 2019
Location: 42.601883, -73.791855

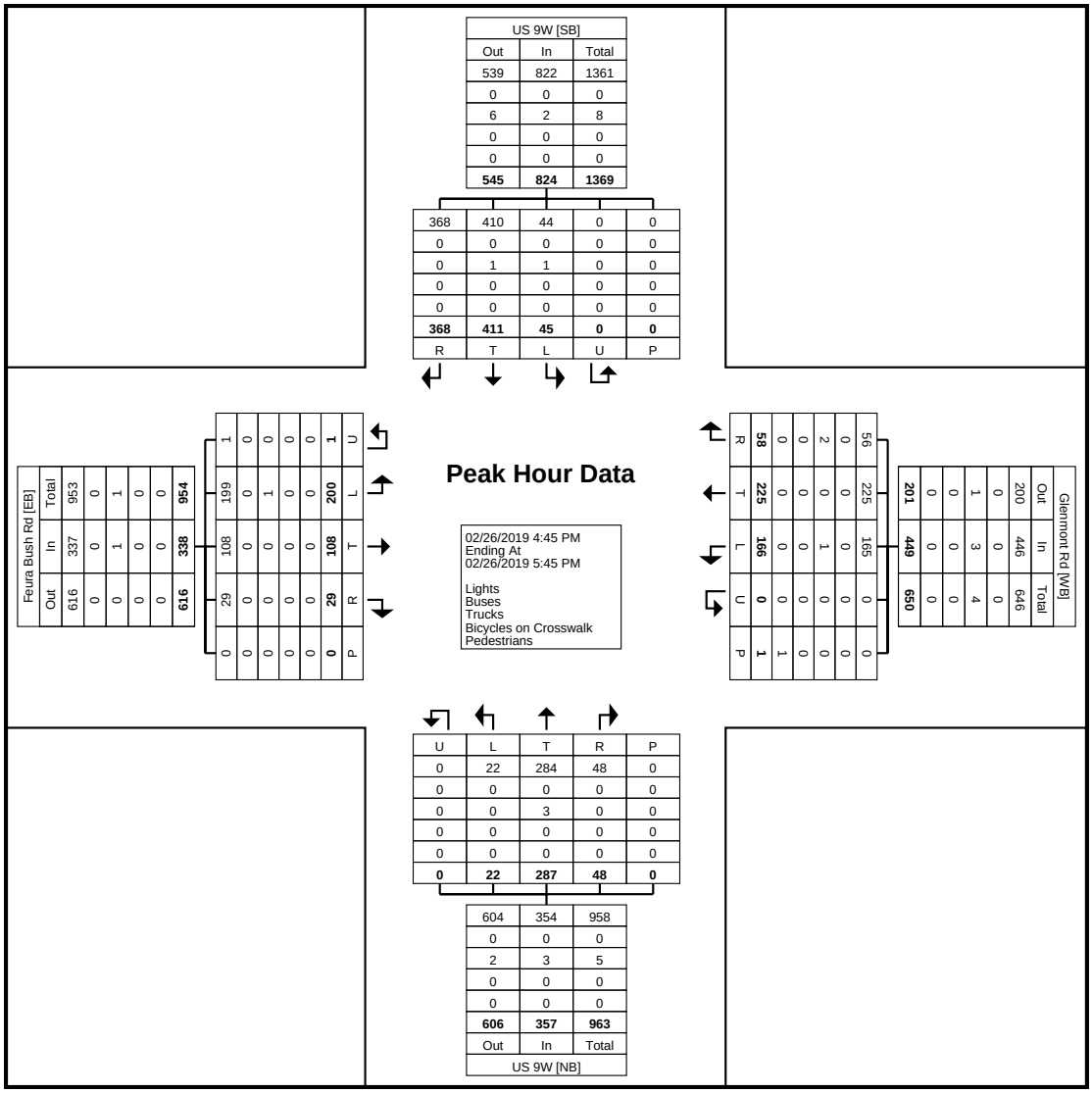
Count Name: US 9W/Glenmont Rd
Site Code: Albany, New York
Start Date: 02/26/2019

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Feura Bush Rd Eastbound							Glenmont Rd Westbound							US 9W Northbound							US 9W Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
4:45 PM	50	32	10	0	0	0	92	35	55	8	1	0	1	99	10	81	6	1	0	0	98	14	99	58	22	0	0	193	482
5:00 PM	43	23	3	6	1	0	76	48	58	15	3	0	0	124	3	69	12	0	0	0	84	12	106	74	17	0	0	209	493
5:15 PM	44	30	3	1	0	0	78	40	61	14	1	0	0	116	5	61	16	2	0	0	84	10	116	70	30	0	0	226	504
5:30 PM	63	23	1	5	0	0	92	43	51	12	4	0	0	110	4	76	10	1	0	0	91	9	90	56	41	0	0	196	489
Total	200	108	17	12	1	0	338	166	225	49	9	0	1	449	22	287	44	4	0	0	357	45	411	258	110	0	0	824	1968
Approach %	59.2	32.0	5.0	3.6	0.3	-	-	37.0	50.1	10.9	2.0	0.0	-	-	6.2	80.4	12.3	1.1	0.0	-	-	5.5	49.9	31.3	13.3	0.0	-	-	-
Total %	10.2	5.5	0.9	0.6	0.1	-	17.2	8.4	11.4	2.5	0.5	0.0	-	22.8	1.1	14.6	2.2	0.2	0.0	-	18.1	2.3	20.9	13.1	5.6	0.0	-	41.9	-
PHF	0.794	0.844	0.425	0.500	0.250	-	0.918	0.865	0.922	0.817	0.563	0.000	-	0.905	0.550	0.886	0.688	0.500	0.000	-	0.911	0.804	0.886	0.872	0.671	0.000	-	0.912	0.976
Lights	199	108	17	12	1	-	337	165	225	48	8	0	-	446	22	284	44	4	0	-	354	44	410	258	110	0	-	822	1959
% Lights	99.5	100.0	100.0	100.0	100.0	-	99.7	99.4	100.0	98.0	88.9	-	-	99.3	100.0	99.0	100.0	100.0	-	-	99.2	97.8	99.8	100.0	100.0	-	-	99.8	99.5
Buses	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Trucks	1	0	0	0	0	-	1	1	0	1	1	0	-	3	0	3	0	0	0	-	3	1	1	0	0	0	-	2	9
% Trucks	0.5	0.0	0.0	0.0	0.0	-	0.3	0.6	0.0	2.0	11.1	-	-	0.7	0.0	1.0	0.0	0.0	-	-	0.8	2.2	0.2	0.0	0.0	-	-	0.2	0.5
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Port of Albany, NY
US 9W/Glenmont Road
Tuesday, February 26, 2019
Location: 42.601883, -73.791855

Count Name: US 9W/Glenmont Rd
Site Code: Albany, New York
Start Date: 02/26/2019



Turning Movement Peak Hour Data Plot (4:45 PM)

McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by GUY
Performed via Count Board

File Name : 9W Off-Ramp - AM
Site Code : 00081519
Start Date : 8/15/2019

Groups Printed- Cars - Trucks

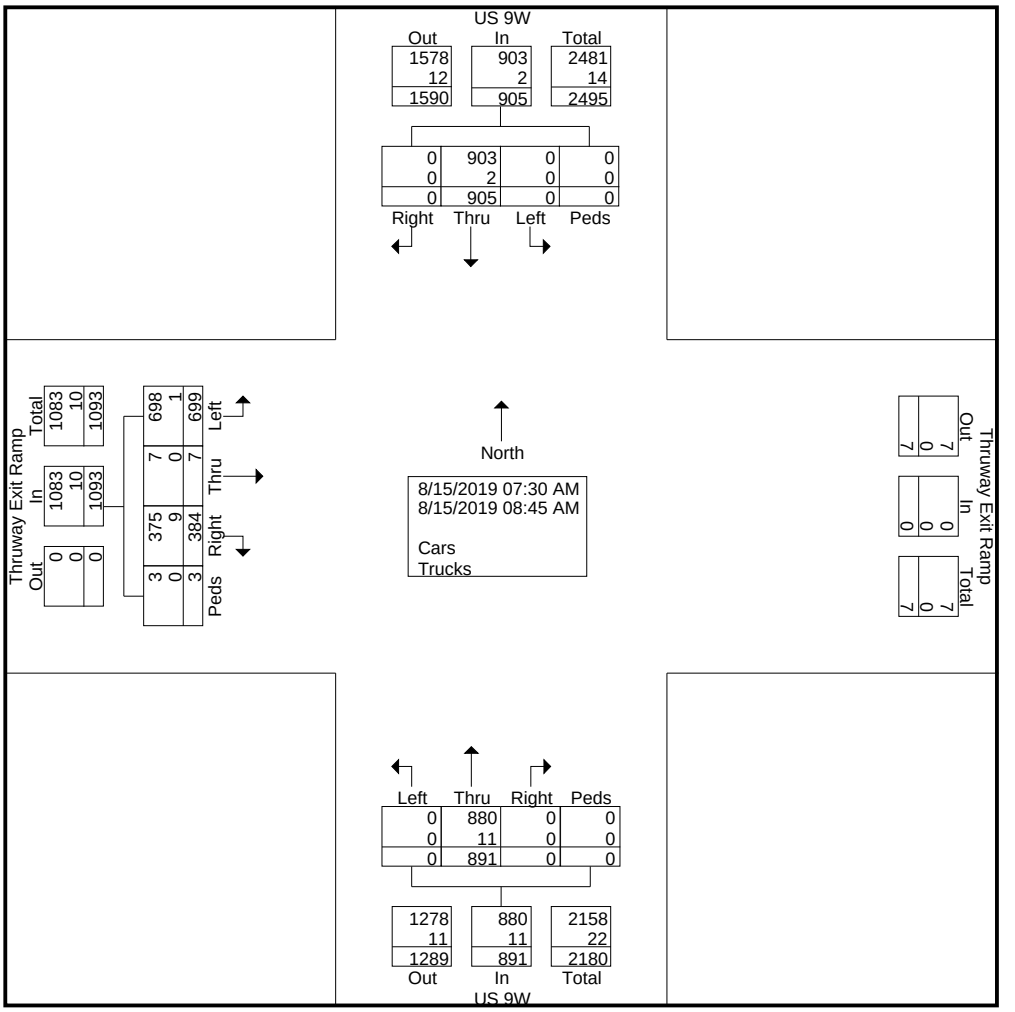
	US 9W From North					US 9W From South					Thruway Exit Ramp From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:30 AM	0	150	0	0	150	0	179	0	0	179	67	0	112	3	182	511
07:45 AM	0	155	0	0	155	0	162	0	0	162	76	0	153	0	229	546
Total	0	305	0	0	305	0	341	0	0	341	143	0	265	3	411	1057
08:00 AM	0	154	0	0	154	0	132	0	0	132	57	0	108	0	165	451
08:15 AM	0	157	0	0	157	0	142	0	0	142	84	0	103	0	187	486
08:30 AM	0	142	0	0	142	0	144	0	0	144	43	5	110	0	158	444
08:45 AM	0	147	0	0	147	0	132	0	0	132	57	2	113	0	172	451
Total	0	600	0	0	600	0	550	0	0	550	241	7	434	0	682	1832
Grand Total	0	905	0	0	905	0	891	0	0	891	384	7	699	3	1093	2889
Apprch %	0	100	0	0		0	100	0	0		35.1	0.6	64	0.3		
Total %	0	31.3	0	0	31.3	0	30.8	0	0	30.8	13.3	0.2	24.2	0.1	37.8	
Cars	0	903	0	0	903	0	880	0	0	880	375	7	698	3	1083	2866
% Cars	0	99.8	0	0	99.8	0	98.8	0	0	98.8	97.7	100	99.9	100	99.1	99.2
Trucks	0	2	0	0	2	0	11	0	0	11	9	0	1	0	10	23
% Trucks	0	0.2	0	0	0.2	0	1.2	0	0	1.2	2.3	0	0.1	0	0.9	0.8

McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424

Traffic Count Data

File Name : 9W Off-Ramp - AM
Site Code : 00081519
Start Date : 8/15/2019
Page No : 2



McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : 9W Off-Ramp - AM
Site Code : 00081519
Start Date : 8/15/2019
Page No : 3

	US 9W From North					US 9W From South					Thruway Exit Ramp From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:30 AM																
07:30 AM	0	150	0	0	150	0	**179**	0	0	**179**	67	0	112	**3**	182	511
07:45 AM	0	155	0	0	155	0	162	0	0	162	76	0	**153**	0	**229**	**546**
08:00 AM	0	154	0	0	154	0	132	0	0	132	57	0	108	0	165	451
08:15 AM	0	**157**	0	0	**157**	0	142	0	0	142	**84**	0	103	0	187	486
Total Volume	0	616	0	0	616	0	615	0	0	615	284	0	476	3	763	1994
% App. Total	0	100	0	0		0	100	0	0		37.2	0	62.4	0.4		
PHF	.000	.981	.000	.000	.981	.000	.859	.000	.000	.859	.845	.000	.778	.250	.833	.913
Cars	0	614	0	0	614	0	604	0	0	604	275	0	475	3	753	1971
% Cars	0	99.7	0	0	99.7	0	98.2	0	0	98.2	96.8	0	99.8	100	98.7	98.8
Trucks	0	2	0	0	2	0	11	0	0	11	9	0	1	0	10	23
% Trucks	0	0.3	0	0	0.3	0	1.8	0	0	1.8	3.2	0	0.2	0	1.3	1.2

Peak Hour Analysis From 07:30 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM					07:30 AM					07:30 AM				
+0 mins.	0	150	0	0	150	0	**179**	0	0	**179**	67	0	112	**3**	182
+15 mins.	0	155	0	0	155	0	162	0	0	162	76	0	**153**	0	**229**
+30 mins.	0	154	0	0	154	0	132	0	0	132	57	0	108	0	165
+45 mins.	0	**157**	0	0	**157**	0	142	0	0	142	**84**	0	103	0	187
Total Volume	0	616	0	0	616	0	615	0	0	615	284	0	476	3	763
% App. Total	0	100	0	0		0	100	0	0		37.2	0	62.4	0.4	
PHF	.000	.981	.000	.000	.981	.000	.859	.000	.000	.859	.845	.000	.778	.250	.833
Cars	0	614	0	0	614	0	604	0	0	604	275	0	475	3	753
% Cars	0	99.7	0	0	99.7	0	98.2	0	0	98.2	96.8	0	99.8	100	98.7
Trucks	0	2	0	0	2	0	11	0	0	11	9	0	1	0	10
% Trucks	0	0.3	0	0	0.3	0	1.8	0	0	1.8	3.2	0	0.2	0	1.3

McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted bu GUY
Performed via Count Board

File Name : 9W Off-Ramp - PM
Site Code : 00081519
Start Date : 8/15/2019
Page No : 1

Groups Printed- Cars - Trucks

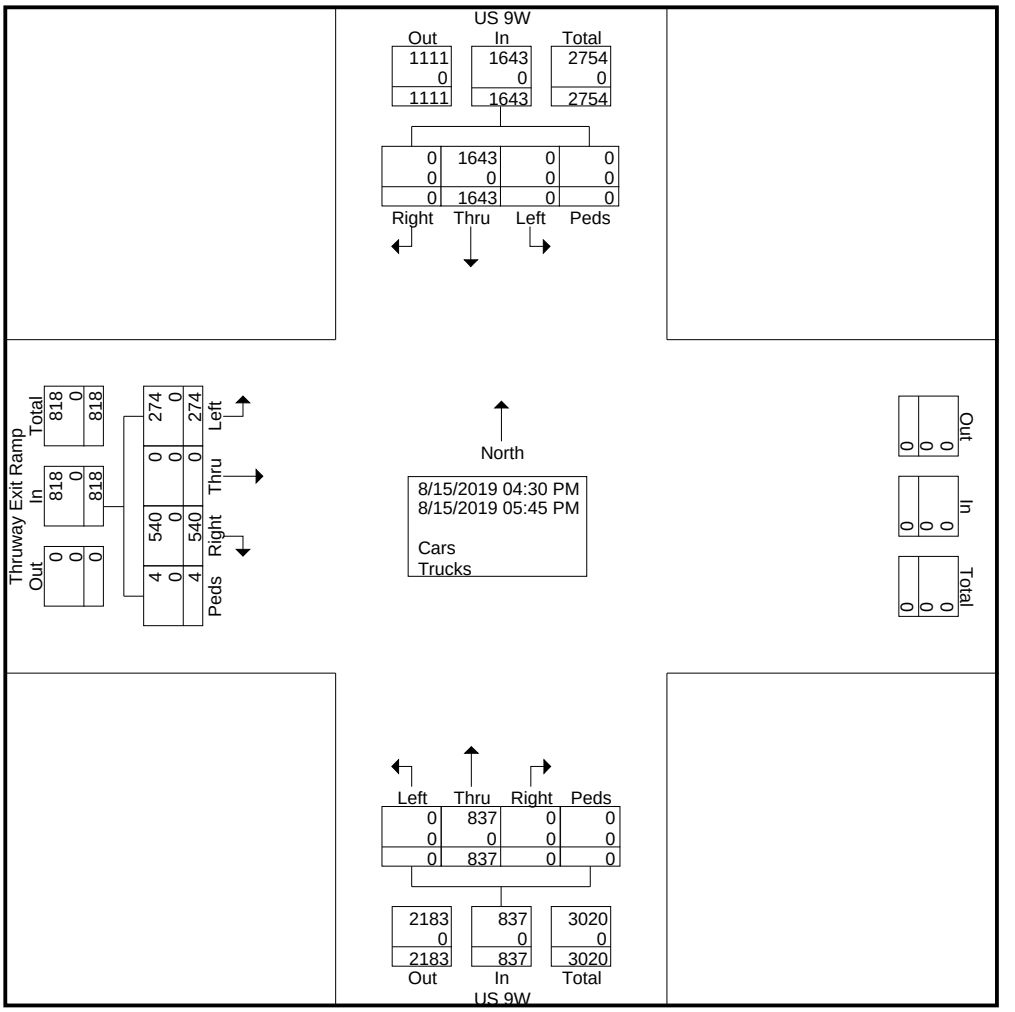
	US 9W From North					US 9W From South					Thruway Exit Ramp From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	0	277	0	0	277	0	173	0	0	173	80	0	42	4	126	576
04:45 PM	0	290	0	0	290	0	166	0	0	166	82	0	46	0	128	584
Total	0	567	0	0	567	0	339	0	0	339	162	0	88	4	254	1160
05:00 PM	0	314	0	0	314	0	143	0	0	143	77	0	56	0	133	590
05:15 PM	0	315	0	0	315	0	136	0	0	136	92	0	43	0	135	586
05:30 PM	0	259	0	0	259	0	111	0	0	111	111	0	42	0	153	523
05:45 PM	0	188	0	0	188	0	108	0	0	108	98	0	45	0	143	439
Total	0	1076	0	0	1076	0	498	0	0	498	378	0	186	0	564	2138
Grand Total	0	1643	0	0	1643	0	837	0	0	837	540	0	274	4	818	3298
Apprch %	0	100	0	0		0	100	0	0		66	0	33.5	0.5		
Total %	0	49.8	0	0	49.8	0	25.4	0	0	25.4	16.4	0	8.3	0.1	24.8	
Cars	0	1643	0	0	1643	0	837	0	0	837	540	0	274	4	818	3298
% Cars	0	100	0	0	100	0	100	0	0	100	100	0	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424

Traffic Count Data

File Name : 9W Off-Ramp - PM
Site Code : 00081519
Start Date : 8/15/2019
Page No : 2

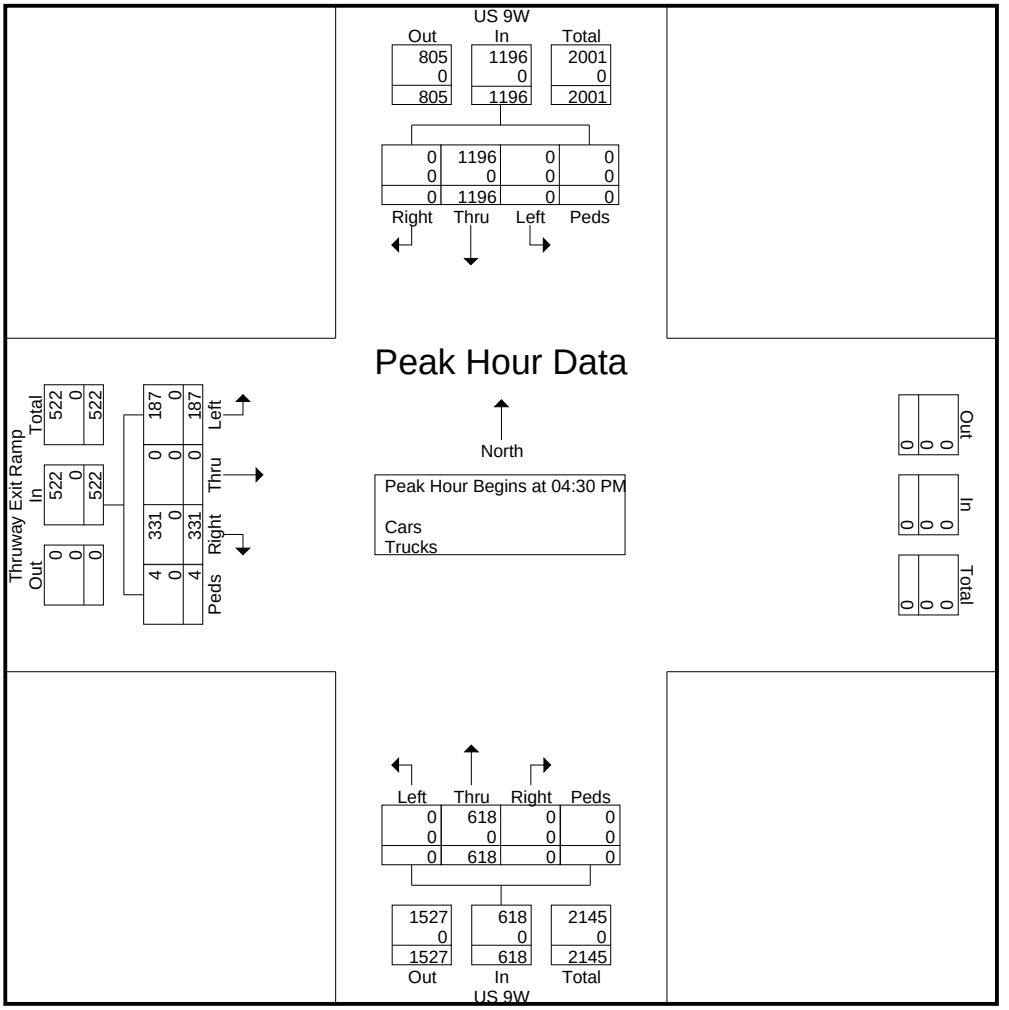


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : 9W Off-Ramp - PM
Site Code : 00081519
Start Date : 8/15/2019
Page No : 3

	US 9W From North					US 9W From South					Thruway Exit Ramp From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	0	277	0	0	277	0	**173**	0	0	**173**	80	0	42	**4**	126	576
04:45 PM	0	290	0	0	290	0	166	0	0	166	82	0	46	0	128	584
05:00 PM	0	314	0	0	314	0	143	0	0	143	77	0	**56**	0	133	**590**
05:15 PM	0	**315**	0	0	**315**	0	136	0	0	136	**92**	0	43	0	**135**	586
Total Volume	0	1196	0	0	1196	0	618	0	0	618	331	0	187	4	522	2336
% App. Total	0	100	0	0		0	100	0	0		63.4	0	35.8	0.8		
PHF	.000	.949	.000	.000	.949	.000	.893	.000	.000	.893	.899	.000	.835	.250	.967	.990
Cars	0	1196	0	0	1196	0	618	0	0	618	331	0	187	4	522	2336
% Cars	0	100	0	0	100	0	100	0	0	100	100	0	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



McFarland Johnson Inc.

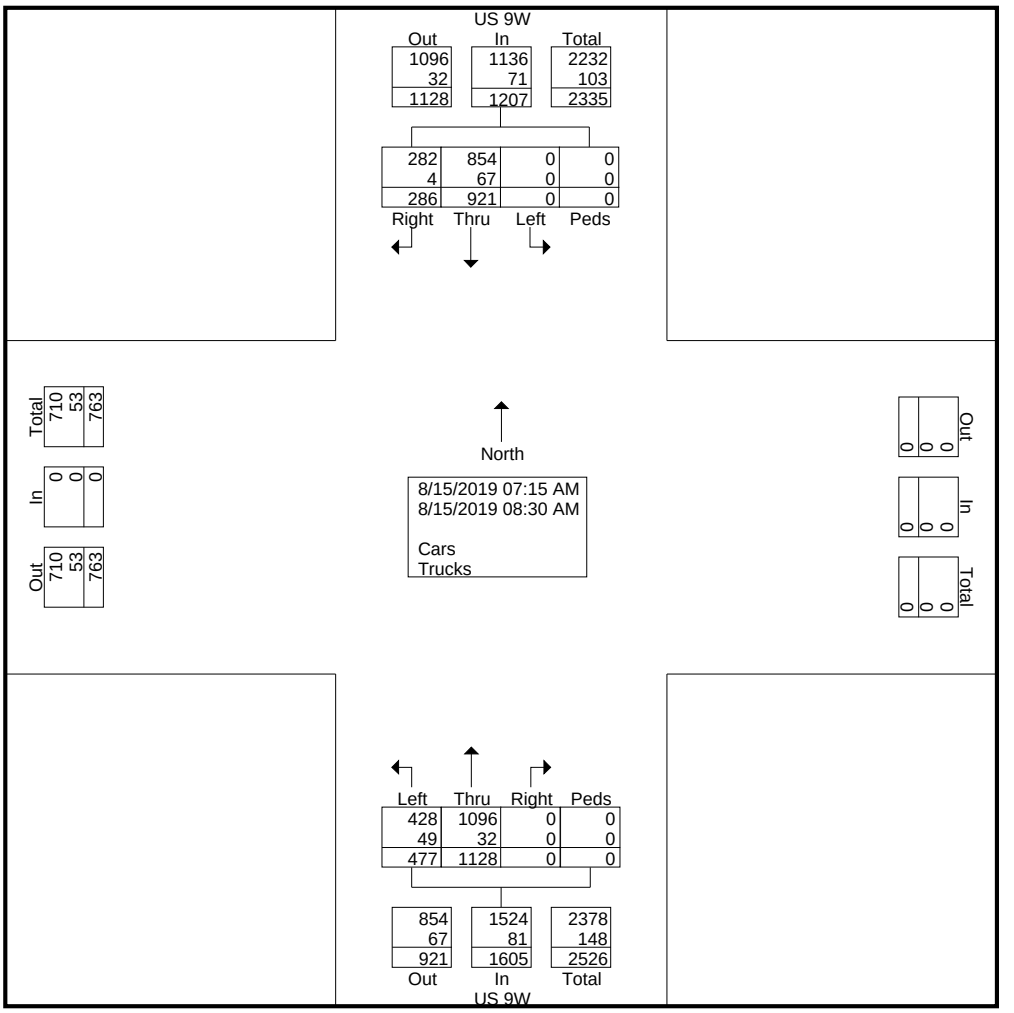
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NSO
Performed via Count Board

File Name : 9w on-ramp - am
Site Code : 08152019
Start Date : 8/15/2019
Page No : 1

Groups Printed- Cars - Trucks

	US 9W From North					US 9W From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:15 AM	44	143	0	0	187	0	219	87	0	306	493
07:30 AM	54	169	0	0	223	0	209	87	0	296	519
07:45 AM	55	156	0	0	211	0	164	81	0	245	456
Total	153	468	0	0	621	0	592	255	0	847	1468
08:00 AM	51	159	0	0	210	0	174	69	0	243	453
08:15 AM	38	142	0	0	180	0	178	84	0	262	442
08:30 AM	44	152	0	0	196	0	184	69	0	253	449
Grand Total	286	921	0	0	1207	0	1128	477	0	1605	2812
Apprch %	23.7	76.3	0	0		0	70.3	29.7	0		
Total %	10.2	32.8	0	0	42.9	0	40.1	17	0	57.1	
Cars	282	854	0	0	1136	0	1096	428	0	1524	2660
% Cars	98.6	92.7	0	0	94.1	0	97.2	89.7	0	95	94.6
Trucks	4	67	0	0	71	0	32	49	0	81	152
% Trucks	1.4	7.3	0	0	5.9	0	2.8	10.3	0	5	5.4

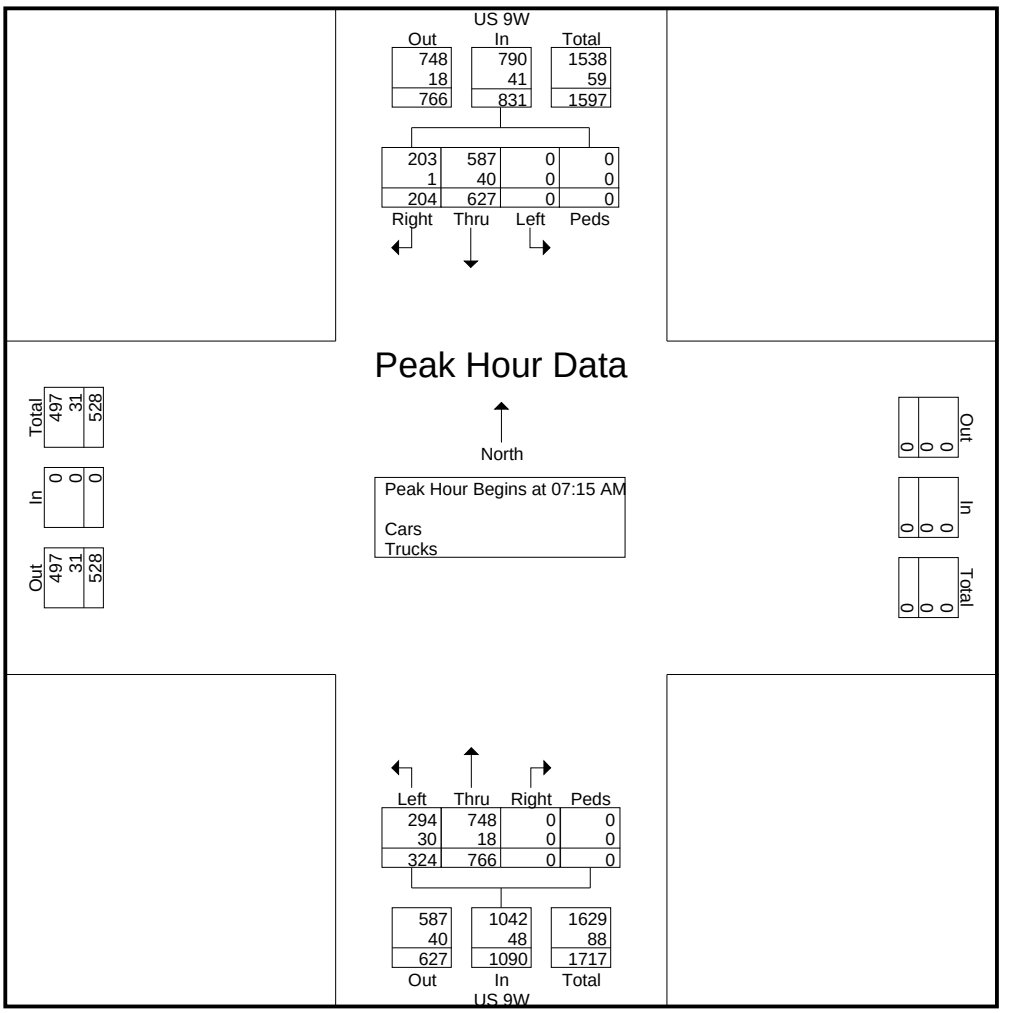


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : 9w on-ramp - am
Site Code : 08152019
Start Date : 8/15/2019
Page No : 2

	US 9W From North					US 9W From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:30 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:15 AM											
07:15 AM	44	143	0	0	187	0	**219**	**87**	0	**306**	493
07:30 AM	54	**169**	0	0	**223**	0	209	87	0	296	**519**
07:45 AM	**55**	156	0	0	211	0	164	81	0	245	456
08:00 AM	51	159	0	0	210	0	174	69	0	243	453
Total Volume	204	627	0	0	831	0	766	324	0	1090	1921
% App. Total	24.5	75.5	0	0		0	70.3	29.7	0		
PHF	.927	.928	.000	.000	.932	.000	.874	.931	.000	.891	.925
Cars	203	587	0	0	790	0	748	294	0	1042	1832
% Cars	99.5	93.6	0	0	95.1	0	97.7	90.7	0	95.6	95.4
Trucks	1	40	0	0	41	0	18	30	0	48	89
% Trucks	0.5	6.4	0	0	4.9	0	2.3	9.3	0	4.4	4.6



McFarland Johnson Inc.

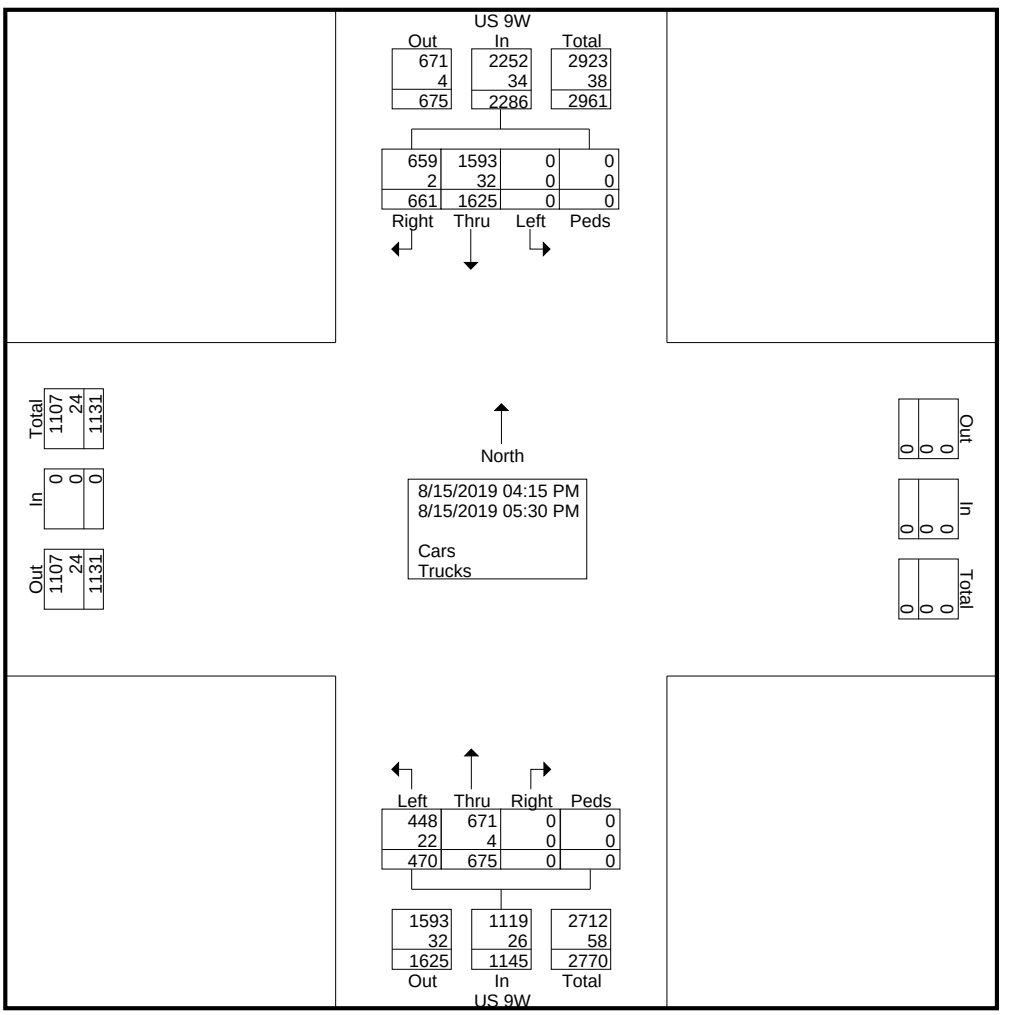
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NSO
Performed via Count Board

File Name : 9w on-ramp - pm
Site Code : 08152019
Start Date : 8/15/2019
Page No : 1

Groups Printed- Cars - Trucks

	US 9W From North					US 9W From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:15 PM	146	278	0	0	424	0	110	111	0	221	645
04:30 PM	136	285	0	0	421	0	121	94	0	215	636
04:45 PM	121	304	0	0	425	0	118	89	0	207	632
Total	403	867	0	0	1270	0	349	294	0	643	1913
05:00 PM	129	312	0	0	441	0	109	67	0	176	617
05:15 PM	71	240	0	0	311	0	108	61	0	169	480
05:30 PM	58	206	0	0	264	0	109	48	0	157	421
Grand Total	661	1625	0	0	2286	0	675	470	0	1145	3431
Apprch %	28.9	71.1	0	0		0	59	41	0		
Total %	19.3	47.4	0	0	66.6	0	19.7	13.7	0	33.4	
Cars	659	1593	0	0	2252	0	671	448	0	1119	3371
% Cars	99.7	98	0	0	98.5	0	99.4	95.3	0	97.7	98.3
Trucks	2	32	0	0	34	0	4	22	0	26	60
% Trucks	0.3	2	0	0	1.5	0	0.6	4.7	0	2.3	1.7

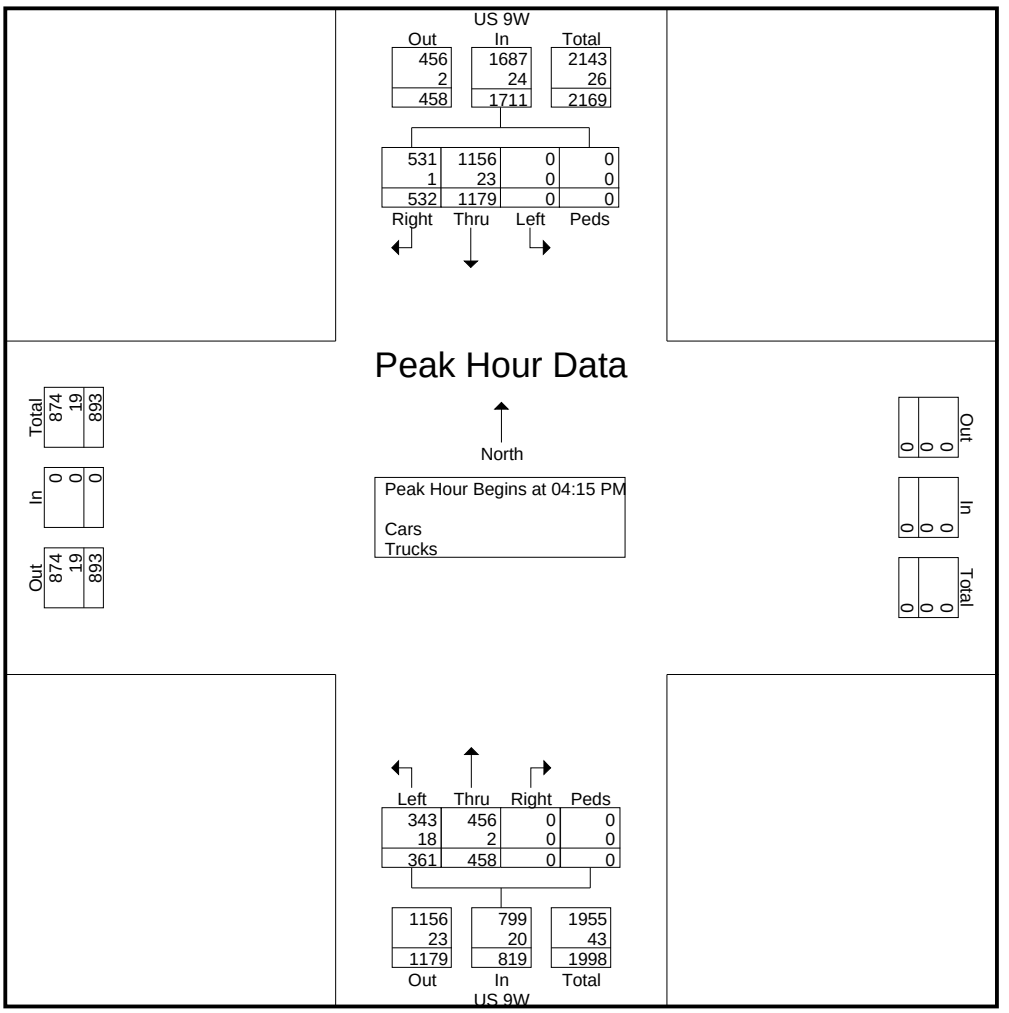


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : 9w on-ramp - pm
Site Code : 08152019
Start Date : 8/15/2019
Page No : 2

	US 9W From North					US 9W From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:30 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:15 PM											
04:15 PM	**146**	278	0	0	424	0	110	**111**	0	**221**	**645**
04:30 PM	136	285	0	0	421	0	**121**	94	0	215	636
04:45 PM	121	304	0	0	425	0	118	89	0	207	632
05:00 PM	129	**312**	0	0	**441**	0	109	67	0	176	617
Total Volume	532	1179	0	0	1711	0	458	361	0	819	2530
% App. Total	31.1	68.9	0	0		0	55.9	44.1	0		
PHF	.911	.945	.000	.000	.970	.000	.946	.813	.000	.926	.981
Cars	531	1156	0	0	1687	0	456	343	0	799	2486
% Cars	99.8	98.0	0	0	98.6	0	99.6	95.0	0	97.6	98.3
Trucks	1	23	0	0	24	0	2	18	0	20	44
% Trucks	0.2	2.0	0	0	1.4	0	0.4	5.0	0	2.4	1.7

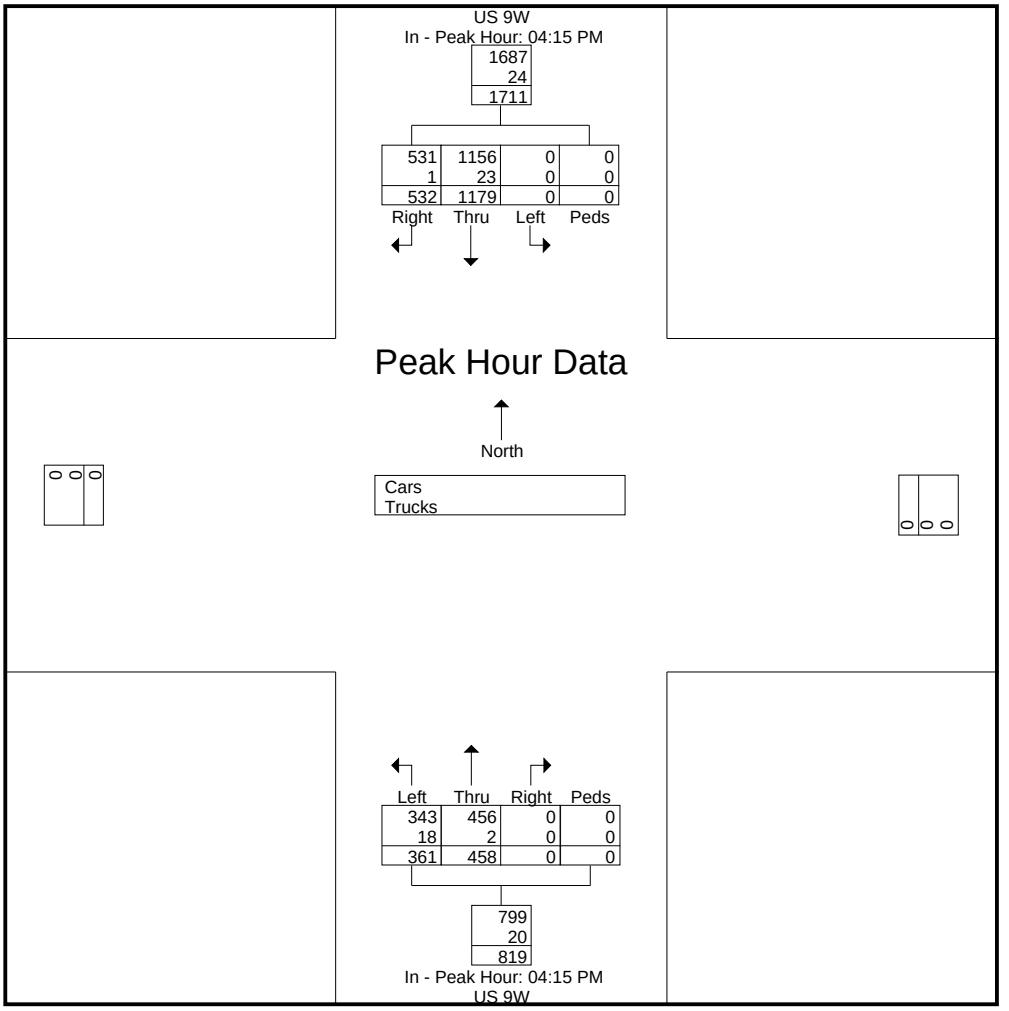


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : 9w on-ramp - pm
Site Code : 08152019
Start Date : 8/15/2019
Page No : 3

	US 9W From North					US 9W From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:30 PM - Peak 1 of 1											
Peak Hour for Each Approach Begins at:											
	04:15 PM					04:15 PM					
+0 mins.	**146**	278	0	0	424	0	110	**111**	0	**221**	
+15 mins.	136	285	0	0	421	0	**121**	94	0	215	
+30 mins.	121	304	0	0	425	0	118	89	0	207	
+45 mins.	129	**312**	0	0	**441**	0	109	67	0	176	
Total Volume	532	1179	0	0	1711	0	458	361	0	819	
% App. Total	31.1	68.9	0	0		0	55.9	44.1	0		
PHF	.911	.945	.000	.000	.970	.000	.946	.813	.000	.926	
Cars	531	1156	0	0	1687	0	456	343	0	799	
% Cars	99.8	98	0	0	98.6	0	99.6	95	0	97.6	
Trucks	1	23	0	0	24	0	2	18	0	20	
% Trucks	0.2	2	0	0	1.4	0	0.4	5	0	2.4	



McFarland Johnson Inc.

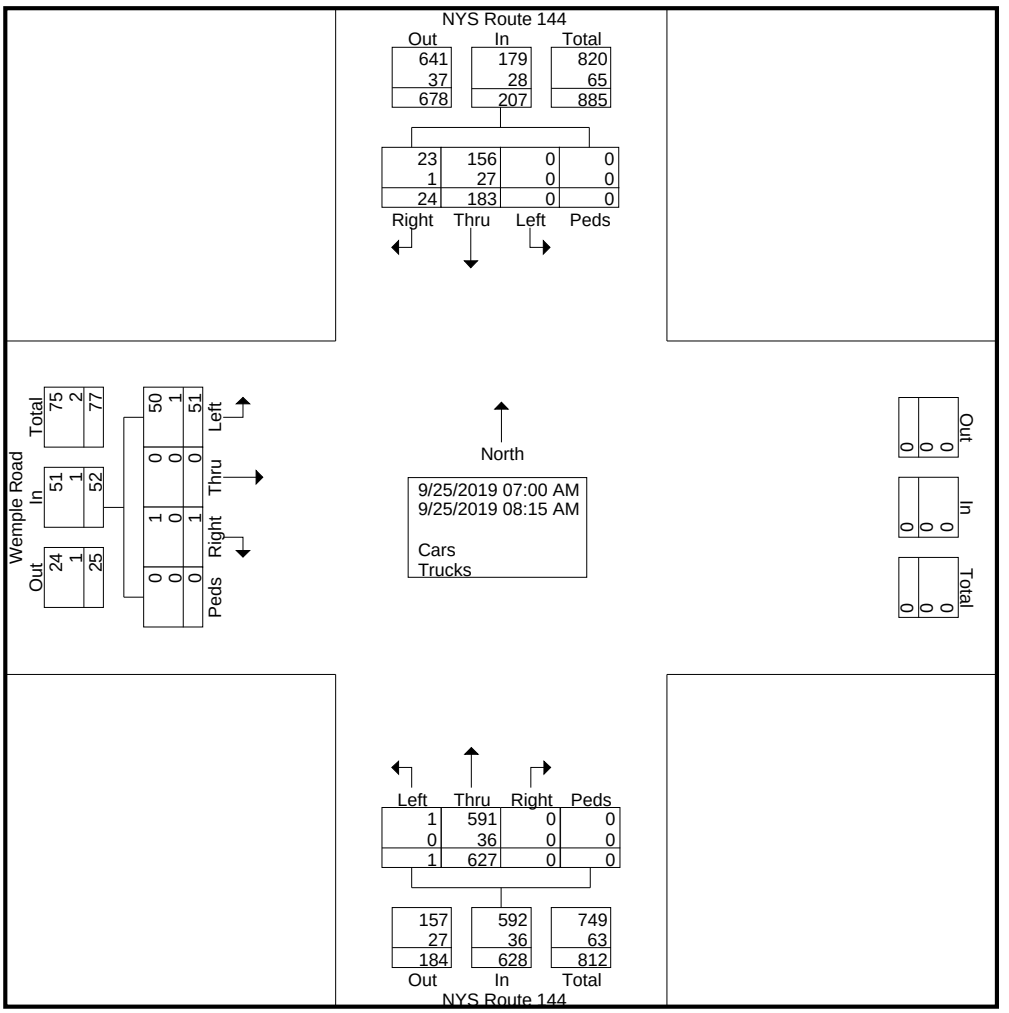
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NSO
Performed via Count Board

File Name : North Wemple Road - AM
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 1

Groups Printed- Cars - Trucks

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	3	30	0	0	33	0	95	1	0	96	1	0	6	0	7	136
07:15 AM	2	25	0	0	27	0	116	0	0	116	0	0	7	0	7	150
07:30 AM	4	36	0	0	40	0	138	0	0	138	0	0	15	0	15	193
07:45 AM	9	39	0	0	48	0	107	0	0	107	0	0	10	0	10	165
Total	18	130	0	0	148	0	456	1	0	457	1	0	38	0	39	644
08:00 AM	1	21	0	0	22	0	89	0	0	89	0	0	7	0	7	118
08:15 AM	5	32	0	0	37	0	82	0	0	82	0	0	6	0	6	125
Grand Total	24	183	0	0	207	0	627	1	0	628	1	0	51	0	52	887
Apprch %	11.6	88.4	0	0		0	99.8	0.2	0		1.9	0	98.1	0		
Total %	2.7	20.6	0	0	23.3	0	70.7	0.1	0	70.8	0.1	0	5.7	0	5.9	
Cars	23	156	0	0	179	0	591	1	0	592	1	0	50	0	51	822
% Cars	95.8	85.2	0	0	86.5	0	94.3	100	0	94.3	100	0	98	0	98.1	92.7
Trucks	1	27	0	0	28	0	36	0	0	36	0	0	1	0	1	65
% Trucks	4.2	14.8	0	0	13.5	0	5.7	0	0	5.7	0	0	2	0	1.9	7.3

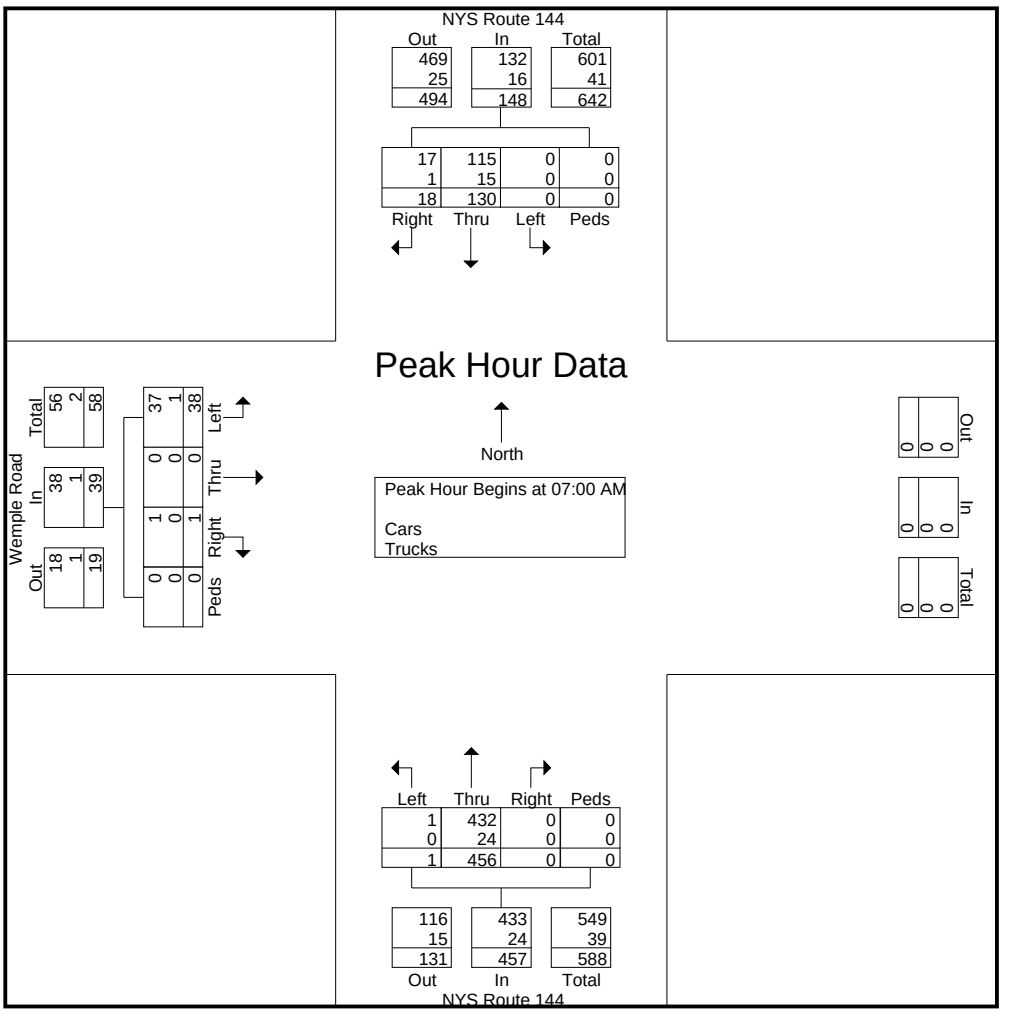


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : North Wemple Road - AM
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 2

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:00 AM																
07:00 AM	3	30	0	0	33	0	95	**1**	0	96	**1**	0	6	0	7	136
07:15 AM	2	25	0	0	27	0	116	0	0	116	0	0	7	0	7	150
07:30 AM	4	36	0	0	40	0	**138**	0	0	**138**	0	0	**15**	0	**15**	**193**
07:45 AM	**9**	**39**	0	0	**48**	0	107	0	0	107	0	0	10	0	10	165
Total Volume	18	130	0	0	148	0	456	1	0	457	1	0	38	0	39	644
% App. Total	12.2	87.8	0	0		0	99.8	0.2	0		2.6	0	97.4	0		
PHF	.500	.833	.000	.000	.771	.000	.826	.250	.000	.828	.250	.000	.633	.000	.650	.834
Cars	17	115	0	0	132	0	432	1	0	433	1	0	37	0	38	603
% Cars	94.4	88.5	0	0	89.2	0	94.7	100	0	94.7	100	0	97.4	0	97.4	93.6
Trucks	1	15	0	0	16	0	24	0	0	24	0	0	1	0	1	41
% Trucks	5.6	11.5	0	0	10.8	0	5.3	0	0	5.3	0	0	2.6	0	2.6	6.4



McFarland Johnson Inc.

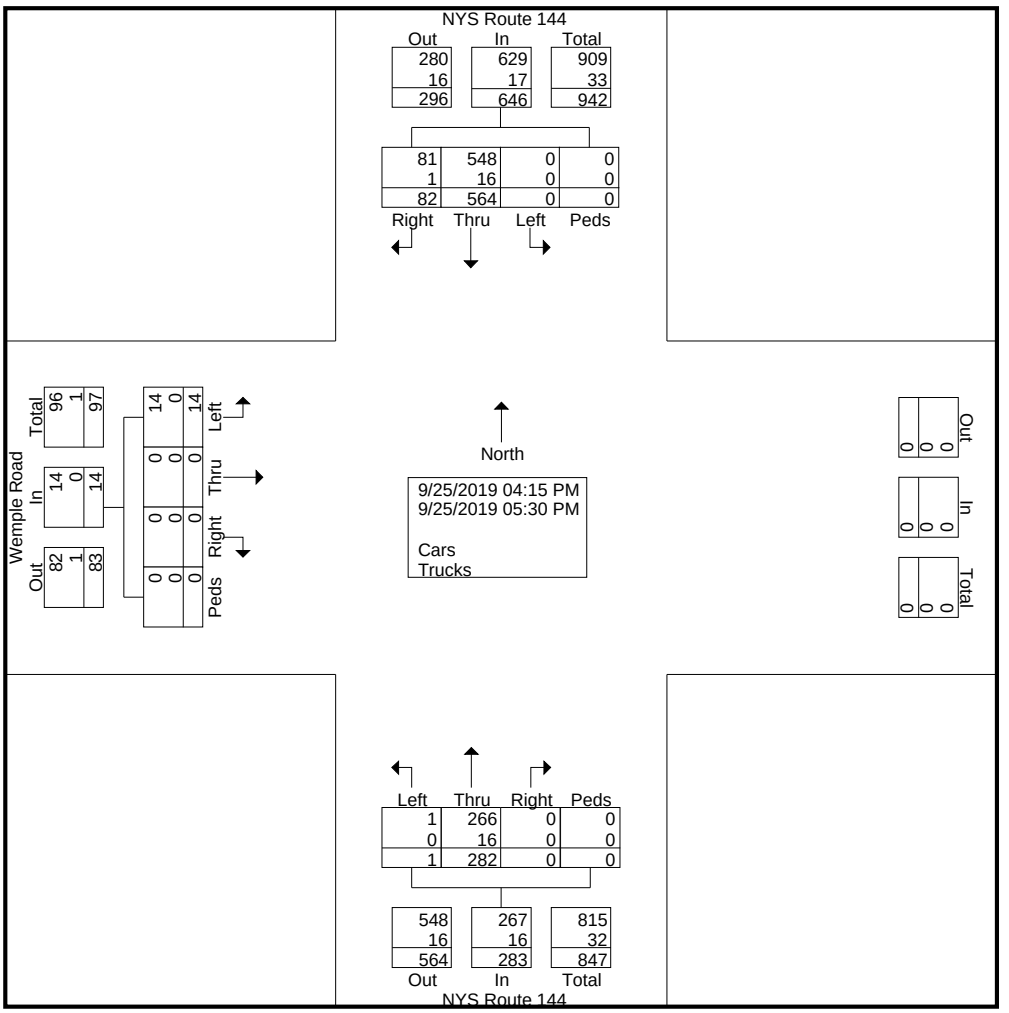
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NSO
Performed via Count Board

File Name : north wemple road - pm
Site Code : 1843700_
Start Date : 9/25/2019

Groups Printed- Cars - Trucks

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:15 PM	15	100	0	0	115	0	42	0	0	42	0	0	1	0	1	158
04:30 PM	10	83	0	0	93	0	41	0	0	41	0	0	2	0	2	136
04:45 PM	13	108	0	0	121	0	48	0	0	48	0	0	1	0	1	170
Total	38	291	0	0	329	0	131	0	0	131	0	0	4	0	4	464
05:00 PM	17	79	0	0	96	0	53	0	0	53	0	0	6	0	6	155
05:15 PM	11	99	0	0	110	0	42	1	0	43	0	0	1	0	1	154
05:30 PM	16	95	0	0	111	0	56	0	0	56	0	0	3	0	3	170
Grand Total	82	564	0	0	646	0	282	1	0	283	0	0	14	0	14	943
Apprch %	12.7	87.3	0	0		0	99.6	0.4	0		0	0	100	0		
Total %	8.7	59.8	0	0	68.5	0	29.9	0.1	0	30	0	0	1.5	0	1.5	
Cars	81	548	0	0	629	0	266	1	0	267	0	0	14	0	14	910
% Cars	98.8	97.2	0	0	97.4	0	94.3	100	0	94.3	0	0	100	0	100	96.5
Trucks	1	16	0	0	17	0	16	0	0	16	0	0	0	0	0	33
% Trucks	1.2	2.8	0	0	2.6	0	5.7	0	0	5.7	0	0	0	0	0	3.5

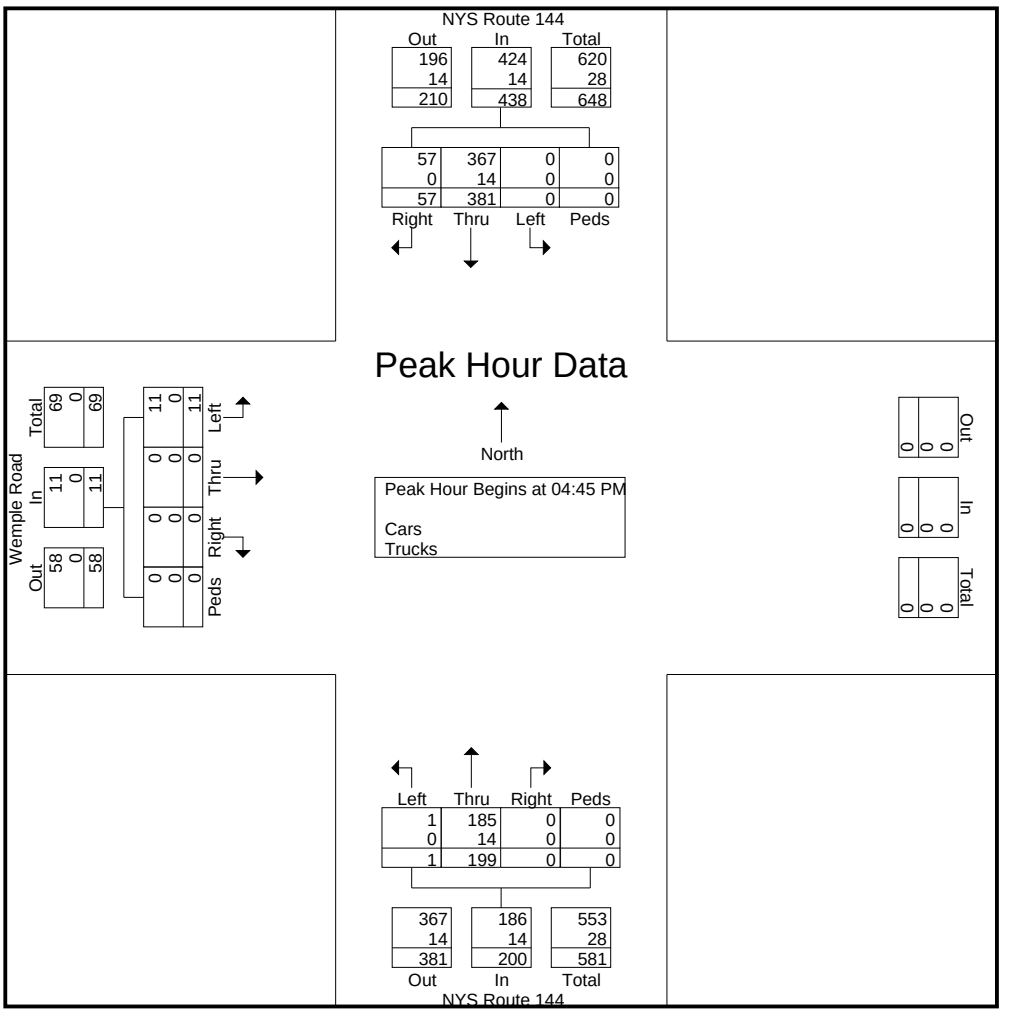


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : north wemple road - pm
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 2

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:30 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:45 PM																
04:45 PM	13	**108**	0	0	**121**	0	48	0	0	48	0	0	1	0	1	**170**
05:00 PM	**17**	79	0	0	96	0	53	0	0	53	0	0	**6**	0	**6**	155
05:15 PM	11	99	0	0	110	0	42	**1**	0	43	0	0	1	0	1	154
05:30 PM	16	95	0	0	111	0	**56**	0	0	**56**	0	0	3	0	3	170
Total Volume	57	381	0	0	438	0	199	1	0	200	0	0	11	0	11	649
% App. Total	13	87	0	0		0	99.5	0.5	0		0	0	100	0		
PHF	.838	.882	.000	.000	.905	.000	.888	.250	.000	.893	.000	.000	.458	.000	.458	.954
Cars	57	367	0	0	424	0	185	1	0	186	0	0	11	0	11	621
% Cars	100	96.3	0	0	96.8	0	93.0	100	0	93.0	0	0	100	0	100	95.7
Trucks	0	14	0	0	14	0	14	0	0	14	0	0	0	0	0	28
% Trucks	0	3.7	0	0	3.2	0	7.0	0	0	7.0	0	0	0	0	0	4.3



McFarland Johnson Inc.

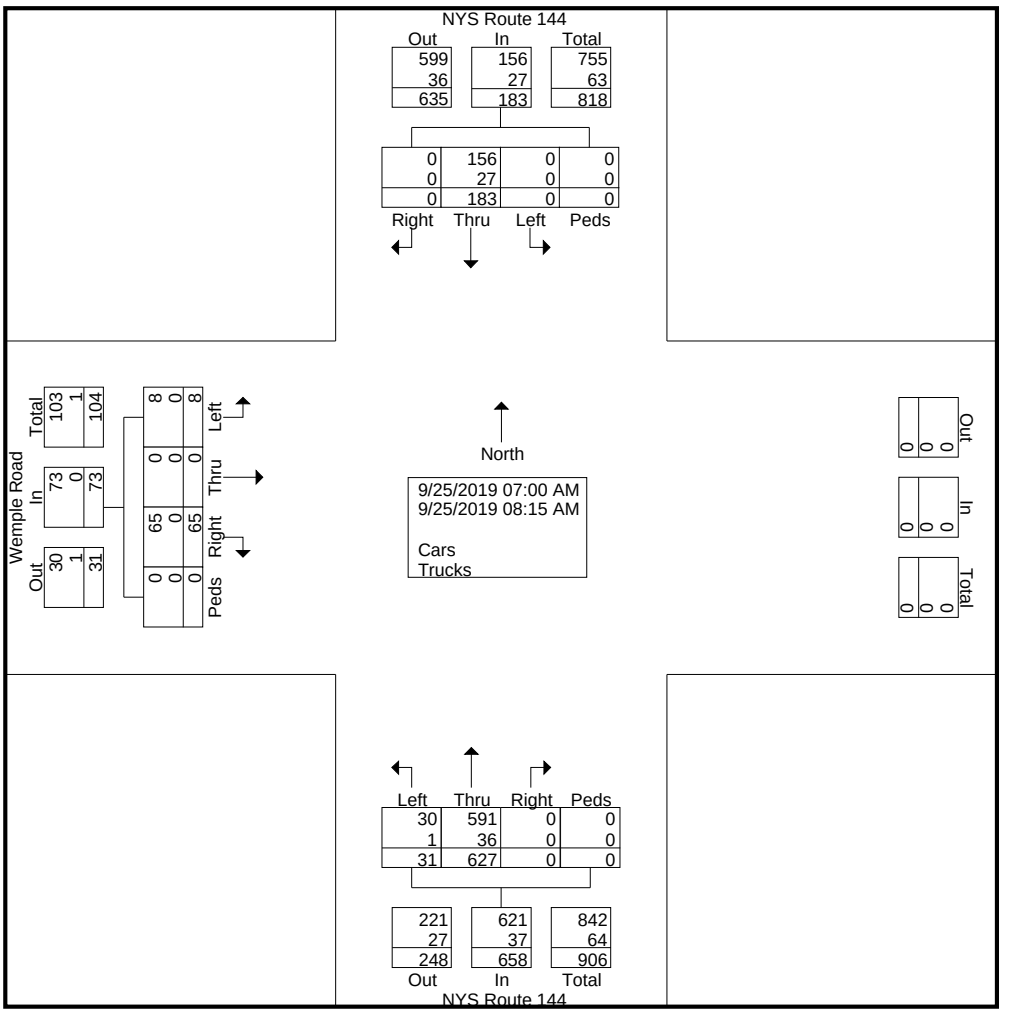
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NSO
Performed via Count Board

File Name : South Wemple Road - AM
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 1

Groups Printed- Cars - Trucks

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	30	0	0	30	0	95	0	0	95	9	0	1	0	10	135
07:15 AM	0	25	0	0	25	0	116	4	0	120	11	0	4	0	15	160
07:30 AM	0	36	0	0	36	0	138	12	0	150	9	0	1	0	10	196
07:45 AM	0	39	0	0	39	0	107	7	0	114	15	0	0	0	15	168
Total	0	130	0	0	130	0	456	23	0	479	44	0	6	0	50	659
08:00 AM	0	21	0	0	21	0	89	5	0	94	11	0	1	0	12	127
08:15 AM	0	32	0	0	32	0	82	3	0	85	10	0	1	0	11	128
Grand Total	0	183	0	0	183	0	627	31	0	658	65	0	8	0	73	914
Apprch %	0	100	0	0		0	95.3	4.7	0		89	0	11	0		
Total %	0	20	0	0	20	0	68.6	3.4	0	72	7.1	0	0.9	0	8	
Cars	0	156	0	0	156	0	591	30	0	621	65	0	8	0	73	850
% Cars	0	85.2	0	0	85.2	0	94.3	96.8	0	94.4	100	0	100	0	100	93
Trucks	0	27	0	0	27	0	36	1	0	37	0	0	0	0	0	64
% Trucks	0	14.8	0	0	14.8	0	5.7	3.2	0	5.6	0	0	0	0	0	7

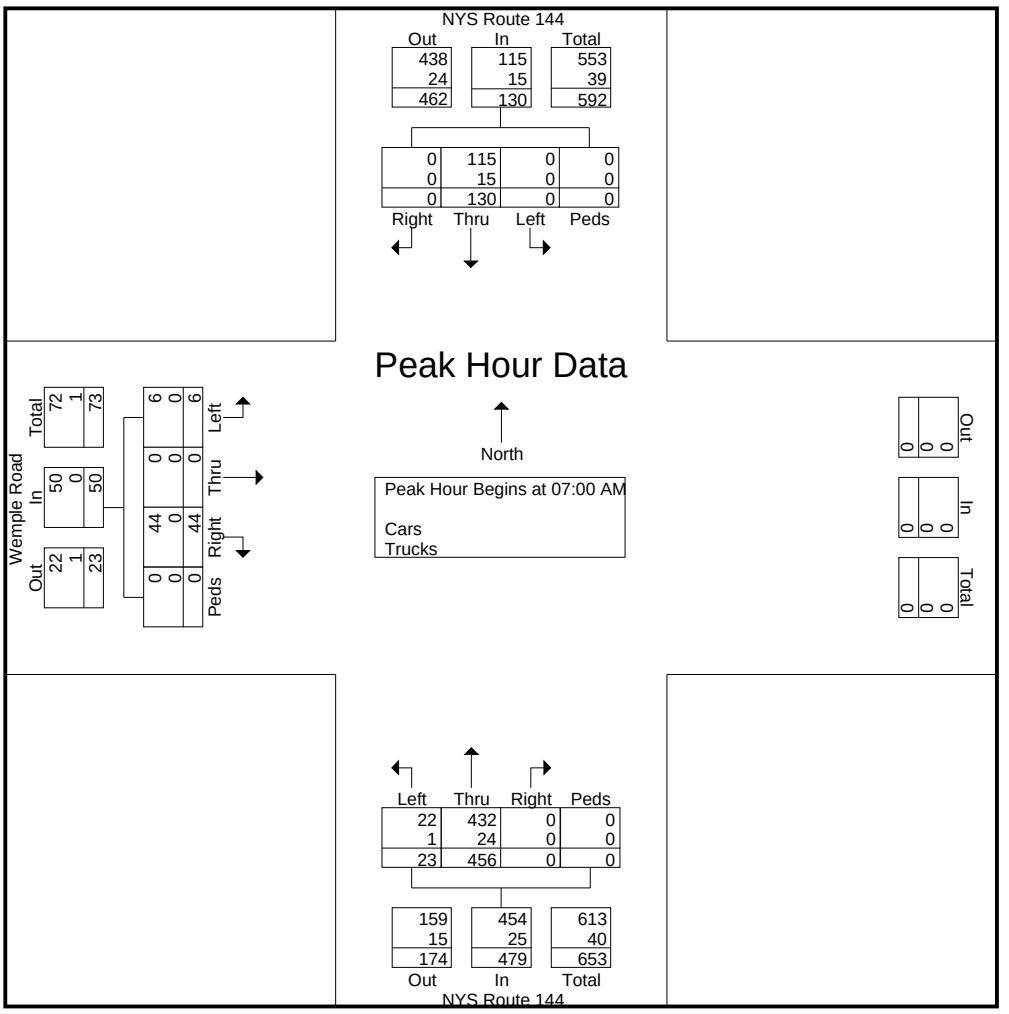


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : South Wemple Road - AM
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 2

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:00 AM																
07:00 AM	0	30	0	0	30	0	95	0	0	95	9	0	1	0	10	135
07:15 AM	0	25	0	0	25	0	116	4	0	120	11	0	**4**	0	**15**	160
07:30 AM	0	36	0	0	36	0	**138**	**12**	0	**150**	9	0	1	0	10	**196**
07:45 AM	0	**39**	0	0	**39**	0	107	7	0	114	**15**	0	0	0	15	168
Total Volume	0	130	0	0	130	0	456	23	0	479	44	0	6	0	50	659
% App. Total	0	100	0	0		0	95.2	4.8	0		88	0	12	0		
PHF	.000	.833	.000	.000	.833	.000	.826	.479	.000	.798	.733	.000	.375	.000	.833	.841
Cars	0	115	0	0	115	0	432	22	0	454	44	0	6	0	50	619
% Cars	0	88.5	0	0	88.5	0	94.7	95.7	0	94.8	100	0	100	0	100	93.9
Trucks	0	15	0	0	15	0	24	1	0	25	0	0	0	0	0	40
% Trucks	0	11.5	0	0	11.5	0	5.3	4.3	0	5.2	0	0	0	0	0	6.1



McFarland Johnson Inc.

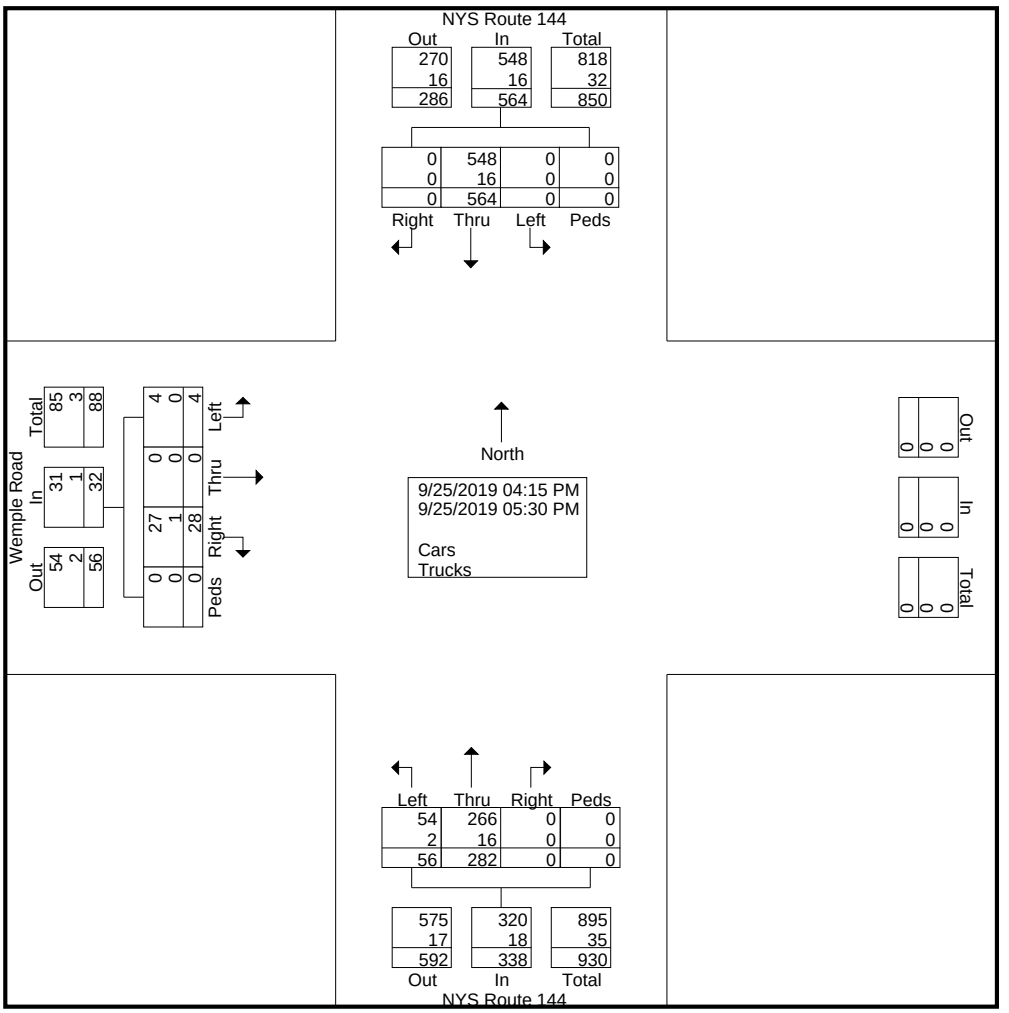
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NSO
Performed via Count Board

File Name : south wemple road - pm
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 1

Groups Printed- Cars - Trucks

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:15 PM	0	100	0	0	100	0	42	8	0	50	7	0	0	0	7	157
04:30 PM	0	83	0	0	83	0	41	14	0	55	6	0	1	0	7	145
04:45 PM	0	108	0	0	108	0	48	8	0	56	3	0	3	0	6	170
Total	0	291	0	0	291	0	131	30	0	161	16	0	4	0	20	472
05:00 PM	0	79	0	0	79	0	53	9	0	62	4	0	0	0	4	145
05:15 PM	0	99	0	0	99	0	42	6	0	48	4	0	0	0	4	151
05:30 PM	0	95	0	0	95	0	56	11	0	67	4	0	0	0	4	166
Grand Total	0	564	0	0	564	0	282	56	0	338	28	0	4	0	32	934
Apprch %	0	100	0	0		0	83.4	16.6	0		87.5	0	12.5	0		
Total %	0	60.4	0	0	60.4	0	30.2	6	0	36.2	3	0	0.4	0	3.4	
Cars	0	548	0	0	548	0	266	54	0	320	27	0	4	0	31	899
% Cars	0	97.2	0	0	97.2	0	94.3	96.4	0	94.7	96.4	0	100	0	96.9	96.3
Trucks	0	16	0	0	16	0	16	2	0	18	1	0	0	0	1	35
% Trucks	0	2.8	0	0	2.8	0	5.7	3.6	0	5.3	3.6	0	0	0	3.1	3.7

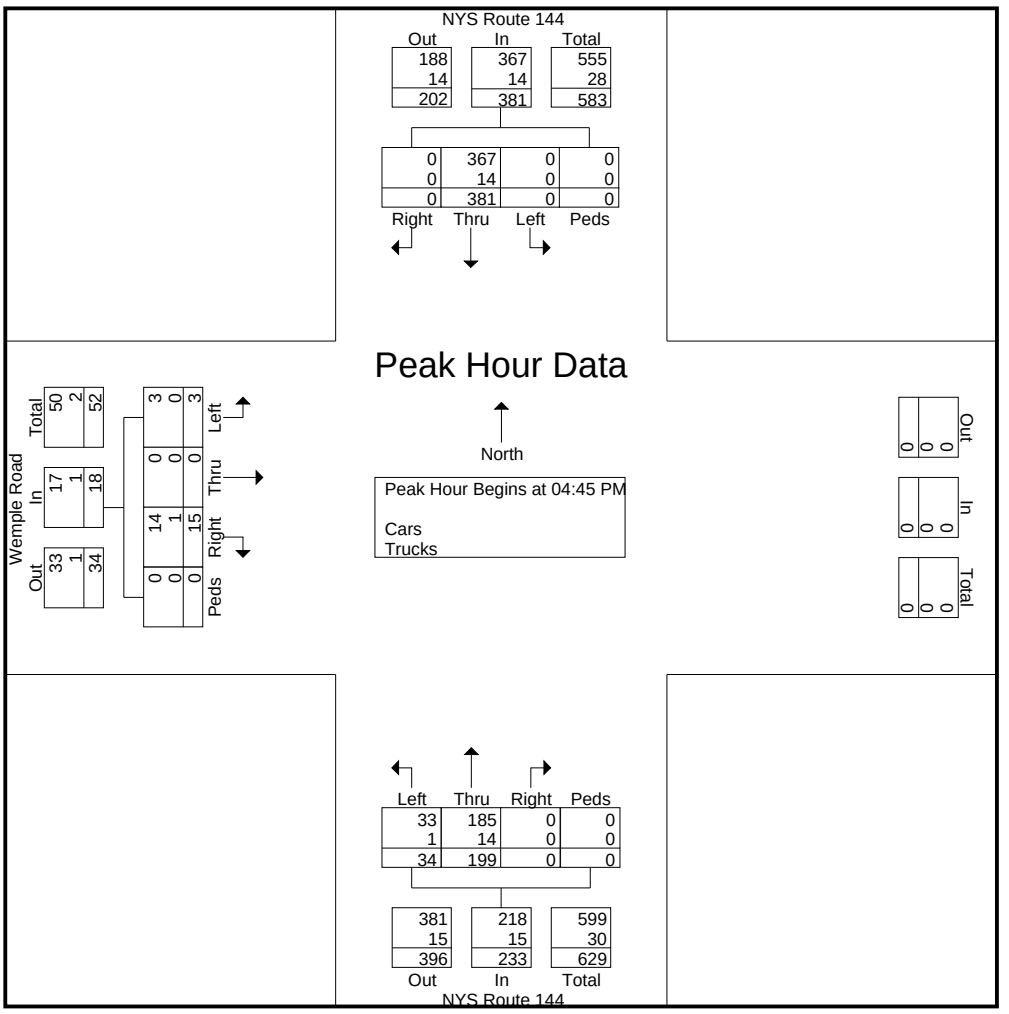


McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

File Name : south wemple road - pm
Site Code : 1843700_
Start Date : 9/25/2019
Page No : 2

	NYS Route 144 From North					NYS Route 144 From South					Wemple Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:30 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:45 PM																
04:45 PM	0	**108**	0	0	**108**	0	48	8	0	56	3	0	**3**	0	**6**	**170**
05:00 PM	0	79	0	0	79	0	53	9	0	62	**4**	0	0	0	4	145
05:15 PM	0	99	0	0	99	0	42	6	0	48	4	0	0	0	4	151
05:30 PM	0	95	0	0	95	0	**56**	**11**	0	**67**	4	0	0	0	4	166
Total Volume	0	381	0	0	381	0	199	34	0	233	15	0	3	0	18	632
% App. Total	0	100	0	0		0	85.4	14.6	0		83.3	0	16.7	0		
PHF	.000	.882	.000	.000	.882	.000	.888	.773	.000	.869	.938	.000	.250	.000	.750	.929
Cars	0	367	0	0	367	0	185	33	0	218	14	0	3	0	17	602
% Cars	0	96.3	0	0	96.3	0	93.0	97.1	0	93.6	93.3	0	100	0	94.4	95.3
Trucks	0	14	0	0	14	0	14	1	0	15	1	0	0	0	1	30
% Trucks	0	3.7	0	0	3.7	0	7.0	2.9	0	6.4	6.7	0	0	0	5.6	4.7



Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	**3**	**143**	**36**	2	**11**	0	0	**2**	**5**	0	0	0	0	**202**
18:00	2	97	18	1	5	**2**	0	0	2	0	0	0	0	127
19:00	3	91	23	1	2	0	0	0	0	0	0	0	0	120
20:00	2	59	14	2	4	0	0	0	1	0	0	0	0	82
21:00	0	36	9	4	6	0	0	1	1	0	0	0	0	57
22:00	0	32	8	**5**	6	0	0	0	2	0	0	0	0	53
23:00	0	18	4	0	2	0	0	0	1	0	0	0	0	25
Day Total	10	476	112	15	36	2	0	3	12	0	0	0	0	666
Percent	1.5%	71.5%	16.8%	2.3%	5.4%	0.3%	0.0%	0.5%	1.8%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak	17:00	17:00	17:00	22:00	17:00	18:00		17:00	17:00					17:00
Vol.	3	143	36	5	11	2		2	5					202

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/18/19	0	18	5	3	2	0	0	1	2	0	0	0	0	31
01:00	1	8	4	3	2	0	0	0	1	0	0	0	0	19
02:00	0	8	3	0	0	0	0	0	1	0	0	0	0	12
03:00	0	12	4	1	1	0	0	0	11	0	0	0	0	29
04:00	0	11	7	3	3	0	0	1	3	0	0	0	0	28
05:00	0	46	32	5	8	2	3	0	7	0	0	0	0	103
06:00	4	118	56	3	13	3	2	0	12	0	0	0	0	211
07:00	1	**344**	**64**	**13**	24	1	**5**	**4**	9	0	0	0	0	**465**
08:00	**5**	250	64	6	18	**6**	2	1	**13**	0	0	0	0	365
09:00	2	115	38	10	**28**	2	2	3	12	0	0	0	0	212
10:00	1	96	34	7	24	1	2	1	9	**2**	0	0	0	177
11:00	0	101	36	4	23	1	2	4	8	0	0	0	0	179
12 PM	0	91	42	5	15	2	2	**1**	**11**	0	0	0	0	169
13:00	**2**	76	34	**9**	**26**	2	**4**	1	3	0	0	0	0	157
14:00	1	109	**50**	4	12	**6**	1	0	8	0	0	0	0	191
15:00	1	116	34	6	11	0	1	0	8	0	0	0	0	177
16:00	1	**146**	29	1	12	0	0	1	3	**1**	0	0	0	**194**
17:00	2	116	32	0	8	0	0	1	4	0	0	0	0	163
18:00	1	74	28	3	6	0	0	1	2	0	0	0	0	115
19:00	1	65	15	1	8	0	0	0	0	0	0	0	0	90
20:00	1	50	10	1	10	0	0	1	1	0	0	0	0	74
21:00	0	44	10	3	7	0	0	1	3	0	0	0	0	68
22:00	0	30	8	2	3	0	0	0	2	0	0	0	0	45
23:00	0	17	2	0	1	0	0	0	1	0	0	0	0	21
Day Total	24	2061	641	93	265	26	26	22	134	3	0	0	0	3295
Percent	0.7%	62.5%	19.5%	2.8%	8.0%	0.8%	0.8%	0.7%	4.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	07:00	07:00	07:00	09:00	08:00	07:00	07:00	08:00	10:00				07:00
Vol.	5	344	64	13	28	6	5	4	13	2				465
PM Peak	13:00	16:00	14:00	13:00	13:00	14:00	13:00	12:00	12:00	16:00				16:00
Vol.	2	146	50	9	26	6	4	1	11	1				194

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/19/19	0	15	1	1	3	0	0	0	1	0	0	0	0	21
01:00	0	2	1	0	2	0	0	0	2	0	0	0	1	8
02:00	0	4	1	0	3	0	1	1	0	0	0	0	0	10
03:00	0	13	4	1	0	0	0	1	5	0	0	0	0	24
04:00	0	9	6	2	7	2	3	1	6	1	0	0	1	38
05:00	1	44	28	6	8	0	3	0	6	0	0	0	0	96
06:00	**5**	104	51	2	9	0	0	1	10	1	0	0	**2**	185
07:00	1	**368**	57	2	16	0	1	2	4	0	0	0	1	**452**
08:00	1	245	**61**	**12**	15	**4**	**8**	0	7	**2**	0	0	0	355
09:00	0	112	24	8	16	1	0	1	10	0	0	0	1	173
10:00	2	82	30	5	**24**	2	1	**3**	6	1	0	0	0	156
11:00	1	92	33	7	12	3	4	2	**11**	1	0	0	0	166
12 PM	0	104	28	**8**	7	2	**3**	2	**13**	0	0	0	0	167
13:00	0	102	**45**	7	**22**	3	2	**4**	4	**1**	0	0	0	190
14:00	**6**	117	35	6	8	1	1	0	9	0	0	0	0	183
15:00	2	126	33	1	9	**4**	2	3	7	0	0	0	0	187
16:00	0	145	25	2	16	0	1	0	5	0	0	0	0	194
17:00	3	**151**	32	2	6	1	0	0	4	0	0	0	0	**199**
18:00	2	108	31	1	8	0	0	1	2	0	0	0	0	153
19:00	1	64	17	0	7	0	0	1	2	1	0	0	0	93
20:00	0	59	11	1	7	0	0	0	4	0	0	0	0	82
21:00	1	34	7	2	3	0	0	0	1	1	0	0	0	49
22:00	0	24	7	1	3	0	0	1	2	0	0	0	0	38
23:00	0	13	4	1	2	0	0	0	0	0	0	0	0	20
Day Total	26	2137	572	78	213	23	30	24	121	9	0	0	6	3239
Percent	0.8%	66.0%	17.7%	2.4%	6.6%	0.7%	0.9%	0.7%	3.7%	0.3%	0.0%	0.0%	0.2%	
AM Peak	06:00	07:00	08:00	08:00	10:00	08:00	08:00	10:00	11:00	08:00			06:00	07:00
Vol.	5	368	61	12	24	4	8	3	11	2			2	452
PM Peak	14:00	17:00	13:00	12:00	13:00	15:00	12:00	13:00	12:00	13:00				17:00
Vol.	6	151	45	8	22	4	3	4	13	1				199

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/20/19	0	18	6	2	0	0	0	0	2	0	0	0	0	28
01:00	0	7	2	1	1	1	0	0	0	0	0	0	0	12
02:00	0	5	2	3	2	0	0	1	1	0	0	0	0	14
03:00	0	8	3	1	1	0	0	0	3	0	0	0	0	16
04:00	0	9	7	1	1	1	0	0	7	0	0	0	0	26
05:00	0	39	34	2	8	2	2	0	5	**1**	0	0	0	93
06:00	0	116	40	5	13	0	0	1	9	0	0	0	0	184
07:00	**2**	**366**	**59**	6	18	1	**6**	**4**	7	0	0	0	**1**	**470**
08:00	2	236	51	11	**23**	1	4	1	11	0	0	0	0	340
09:00	0	126	42	**14**	15	1	1	2	6	0	0	0	0	207
10:00	2	93	35	7	19	**4**	1	1	**20**	0	0	0	0	182
11:00	1	93	32	8	22	3	3	1	7	0	0	0	0	170
12 PM	2	111	26	**8**	17	1	1	**3**	5	0	0	0	0	174
13:00	2	85	38	5	**23**	0	0	2	**7**	0	0	0	0	162
14:00	0	106	31	3	13	**3**	**2**	1	5	0	0	0	0	164
15:00	2	129	32	4	8	3	0	0	5	0	0	0	**1**	184
16:00	**4**	**141**	40	2	12	1	2	1	5	0	0	0	0	**208**
17:00	2	126	**48**	5	13	1	0	0	1	0	0	0	0	196
18:00	0	95	29	0	6	0	0	3	4	0	0	0	0	137
19:00	1	61	14	3	4	0	0	1	3	0	0	0	0	87
20:00	1	53	6	0	3	0	0	0	0	0	0	0	0	63
21:00	0	35	14	2	3	0	0	0	4	0	0	0	0	58
22:00	0	32	8	1	0	0	0	1	3	0	0	0	0	45
23:00	0	10	4	2	1	0	0	1	1	0	0	0	0	19
Day Total	21	2100	603	96	226	23	22	24	121	1	0	0	2	3239
Percent	0.6%	64.8%	18.6%	3.0%	7.0%	0.7%	0.7%	0.7%	3.7%	0.0%	0.0%	0.0%	0.1%	
AM Peak	07:00	07:00	07:00	09:00	08:00	10:00	07:00	07:00	10:00	05:00			07:00	07:00
Vol.	2	366	59	14	23	4	6	4	20	1			1	470
PM Peak	16:00	16:00	17:00	12:00	13:00	14:00	14:00	12:00	13:00				15:00	16:00
Vol.	4	141	48	8	23	3	2	3	7				1	208

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/21/19	0	17	4	1	1	0	0	0	0	0	0	0	0	23
01:00	0	2	2	0	0	0	0	**1**	2	0	0	0	0	7
02:00	0	5	5	3	5	0	0	0	0	0	0	0	0	18
03:00	0	3	2	0	0	0	0	0	5	0	0	0	0	10
04:00	0	18	6	**4**	4	0	2	0	4	**1**	0	0	0	39
05:00	0	40	21	1	4	0	0	0	4	0	0	0	0	70
06:00	**1**	**104**	**43**	3	**10**	0	**3**	0	**10**	0	0	0	0	**174**
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Day Total	1	189	83	12	24	0	5	1	25	1	0	0	0	341
Percent	0.3%	55.4%	24.3%	3.5%	7.0%	0.0%	1.5%	0.3%	7.3%	0.3%	0.0%	0.0%	0.0%	
AM Peak	06:00	06:00	06:00	04:00	06:00		06:00	01:00	06:00	04:00				06:00
Vol.	1	104	43	4	10		3	1	10	1				174
PM Peak														
Vol.														
Grand Total	82	6963	2011	294	764	74	83	74	413	14	0	0	8	10780
Percent	0.8%	64.6%	18.7%	2.7%	7.1%	0.7%	0.8%	0.7%	3.8%	0.1%	0.0%	0.0%	0.1%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	**10**	**266**	**77**	0	**13**	**1**	**1**	0	**2**	0	0	0	0	**370**
18:00	3	148	34	1	7	1	0	0	1	0	0	0	0	195
19:00	1	104	22	1	8	0	0	0	1	0	0	0	0	137
20:00	2	90	18	3	8	0	1	0	1	0	0	0	0	123
21:00	1	57	18	**4**	7	0	0	0	2	**1**	0	0	0	90
22:00	0	42	11	0	0	0	0	0	1	0	0	0	0	54
23:00	1	36	4	3	5	1	0	0	2	0	0	0	0	52
Day Total	18	743	184	12	48	3	2	0	10	1	0	0	0	1021
Percent	1.8%	72.8%	18.0%	1.2%	4.7%	0.3%	0.2%	0.0%	1.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak	17:00	17:00	17:00	21:00	17:00	17:00	17:00		17:00	21:00				17:00
Vol.	10	266	77	4	13	1	1		2	1				370

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/18/19	0	14	9	4	3	0	0	0	0	0	0	0	0	30
01:00	0	11	2	1	0	0	0	0	2	0	0	0	0	16
02:00	0	10	1	1	1	0	0	0	4	0	0	0	0	17
03:00	0	10	10	4	4	0	0	0	4	0	0	0	0	32
04:00	0	11	12	4	7	0	1	0	6	0	0	0	0	41
05:00	3	35	18	6	9	4	2	**1**	3	0	0	0	0	81
06:00	2	77	45	7	14	2	1	1	5	1	0	0	0	155
07:00	3	85	**47**	7	14	5	1	0	8	1	0	0	0	171
08:00	3	**105**	33	**8**	19	4	0	1	9	**2**	0	0	0	**184**
09:00	2	79	38	7	**22**	6	2	0	**17**	0	0	0	0	173
10:00	2	85	34	7	19	**7**	**4**	1	10	0	0	0	0	169
11:00	**4**	89	35	2	18	2	1	1	12	0	0	0	0	164
12 PM	1	89	38	6	**21**	3	1	**1**	5	0	0	0	0	165
13:00	1	104	43	6	17	**7**	3	0	**11**	0	0	0	**1**	193
14:00	1	106	52	**12**	12	2	1	0	9	0	0	0	0	195
15:00	2	185	60	7	17	2	**4**	1	11	**1**	0	0	0	290
16:00	3	**297**	**66**	1	8	3	0	0	8	0	0	0	0	**386**
17:00	**5**	285	60	2	6	2	0	0	4	0	0	0	0	364
18:00	3	132	38	4	5	0	0	1	3	0	0	0	0	186
19:00	0	112	20	4	8	1	0	0	1	0	0	0	0	146
20:00	3	88	19	4	7	0	0	0	4	0	0	0	0	125
21:00	1	57	16	2	3	0	0	0	1	0	0	0	0	80
22:00	1	39	7	3	4	1	0	0	1	0	0	0	0	56
23:00	0	42	7	0	0	0	0	0	4	0	0	0	0	53
Day Total	40	2147	710	109	238	51	21	8	142	5	0	0	1	3472
Percent	1.2%	61.8%	20.4%	3.1%	6.9%	1.5%	0.6%	0.2%	4.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	07:00	08:00	09:00	10:00	10:00	05:00	09:00	08:00				08:00
Vol.	4	105	47	8	22	7	4	1	17	2				184
PM Peak	17:00	16:00	16:00	14:00	12:00	13:00	15:00	12:00	13:00	15:00			13:00	16:00
Vol.	5	297	66	12	21	7	4	1	11	1			1	386

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/19/19	0	20	2	0	0	0	0	0	2	0	0	0	0	24
01:00	1	11	2	0	1	0	0	0	2	0	0	0	0	17
02:00	0	8	3	1	0	0	0	0	4	0	0	0	0	16
03:00	2	10	4	1	3	2	0	0	2	0	0	0	0	24
04:00	1	13	20	4	4	0	0	0	9	0	0	0	0	51
05:00	0	29	19	7	9	1	0	0	6	0	0	0	0	71
06:00	3	87	**51**	8	9	5	0	0	7	0	0	0	**1**	171
07:00	**6**	93	24	1	10	1	**2**	**3**	14	0	0	0	0	154
08:00	5	84	37	8	15	4	1	1	8	0	0	0	1	164
09:00	4	95	34	6	12	**8**	2	1	8	0	0	0	0	170
10:00	4	75	34	**9**	**17**	4	1	2	12	0	0	0	1	159
11:00	3	**105**	36	4	12	2	2	1	**17**	0	0	0	0	**182**
12 PM	3	116	36	8	9	4	1	**1**	7	0	0	0	**1**	186
13:00	4	90	36	7	3	**5**	0	1	4	**2**	0	0	0	152
14:00	3	135	51	4	10	2	**2**	0	5	0	0	0	0	212
15:00	**5**	186	54	**10**	10	3	0	1	**14**	0	0	0	0	283
16:00	1	307	**66**	0	**13**	3	0	1	10	1	0	0	0	**402**
17:00	5	**309**	63	2	4	2	0	1	4	0	0	0	0	390
18:00	0	134	39	2	6	2	0	0	3	0	0	0	0	186
19:00	0	113	24	3	5	2	0	1	3	0	0	0	0	151
20:00	0	99	15	1	3	0	1	0	3	0	0	0	0	122
21:00	1	62	10	4	5	0	0	0	3	0	0	0	1	86
22:00	0	37	14	1	2	0	0	0	3	0	0	0	1	58
23:00	1	35	5	1	0	0	0	0	1	0	0	0	0	43
Day Total	52	2253	679	92	162	50	12	14	151	3	0	0	6	3474
Percent	1.5%	64.9%	19.5%	2.6%	4.7%	1.4%	0.3%	0.4%	4.3%	0.1%	0.0%	0.0%	0.2%	
AM Peak	07:00	11:00	06:00	10:00	10:00	09:00	07:00	07:00	11:00				06:00	11:00
Vol.	6	105	51	9	17	8	2	3	17				1	182
PM Peak	15:00	17:00	16:00	15:00	16:00	13:00	14:00	12:00	15:00	13:00			12:00	16:00
Vol.	5	309	66	10	13	5	2	1	14	2			1	402

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/20/19	0	24	2	0	0	0	0	0	1	0	0	0	0	27
01:00	3	6	3	1	1	1	1	0	1	0	0	0	0	17
02:00	0	9	1	1	1	0	0	0	0	0	0	0	0	12
03:00	0	7	7	3	3	0	0	0	3	0	0	0	0	23
04:00	1	11	14	2	2	1	0	0	9	0	0	0	0	40
05:00	0	30	16	3	5	1	0	0	6	0	0	0	0	61
06:00	2	79	37	3	18	3	**2**	1	6	0	0	0	0	151
07:00	**5**	**94**	30	**10**	14	3	1	**3**	4	0	0	0	**1**	165
08:00	1	82	**40**	10	**22**	3	1	0	10	0	0	0	0	**169**
09:00	3	87	28	6	19	3	0	0	**16**	0	0	0	0	162
10:00	1	70	34	9	22	**4**	2	1	9	0	0	0	0	152
11:00	4	86	36	3	13	3	1	2	11	0	0	0	0	159
12 PM	1	97	31	3	**20**	**2**	2	1	8	0	0	0	0	165
13:00	**5**	120	35	4	14	2	**4**	**3**	8	0	0	0	0	195
14:00	1	123	38	**7**	14	1	3	0	**11**	0	0	0	0	198
15:00	5	181	59	6	19	2	1	0	5	0	0	0	0	278
16:00	5	284	81	1	18	0	1	0	7	0	0	0	0	397
17:00	4	**292**	**82**	5	12	1	0	0	9	0	0	0	0	**405**
18:00	1	123	27	7	8	0	0	1	6	0	0	0	0	173
19:00	2	120	20	2	8	2	0	0	1	0	0	0	0	155
20:00	0	85	18	3	4	0	0	0	1	0	0	0	**1**	112
21:00	0	55	11	0	0	0	0	0	2	0	0	0	0	68
22:00	0	41	10	1	1	0	0	0	1	0	0	0	0	54
23:00	0	43	7	1	1	0	0	0	2	0	0	0	0	54
Day Total	44	2149	667	91	239	32	19	12	137	0	0	0	2	3392
Percent	1.3%	63.4%	19.7%	2.7%	7.0%	0.9%	0.6%	0.4%	4.0%	0.0%	0.0%	0.0%	0.1%	
AM Peak	07:00	07:00	08:00	07:00	08:00	10:00	06:00	07:00	09:00				07:00	08:00
Vol.	5	94	40	10	22	4	2	3	16				1	169
PM Peak	13:00	17:00	17:00	14:00	12:00	12:00	13:00	13:00	14:00				20:00	17:00
Vol.	5	292	82	7	20	2	4	3	11				1	405

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/21/19	0	9	2	0	0	0	0	0	2	0	0	0	0	13
01:00	**1**	10	11	**4**	4	**2**	0	0	3	0	0	0	0	35
02:00	0	6	3	0	0	0	0	0	2	0	0	0	0	11
03:00	0	7	6	1	2	0	0	0	4	0	0	0	0	20
04:00	1	6	13	2	4	2	0	0	5	0	0	0	0	33
05:00	0	22	11	0	6	0	**1**	0	5	0	0	0	0	45
06:00	1	**54**	**28**	3	**10**	2	0	0	**7**	0	0	0	0	**105**
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Day Total	3	114	74	10	26	6	1	0	28	0	0	0	0	262
Percent	1.1%	43.5%	28.2%	3.8%	9.9%	2.3%	0.4%	0.0%	10.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	01:00	06:00	06:00	01:00	06:00	01:00	05:00		06:00					06:00
Vol.	1	54	28	4	10	2	1		7					105
PM Peak Vol.														
Grand Total	157	7406	2314	314	713	142	55	34	468	9	0	0	9	11621
Percent	1.4%	63.7%	19.9%	2.7%	6.1%	1.2%	0.5%	0.3%	4.0%	0.1%	0.0%	0.0%	0.1%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 1

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
06/17/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	5	0	2	7	5	12	55	75	38	3	1	0	0	0	0	203
18:00	1	0	0	0	2	15	36	48	20	4	0	0	1	0	0	127
19:00	0	0	1	0	4	13	52	27	18	3	1	0	1	0	0	120
20:00	0	0	1	0	3	5	26	29	12	4	2	0	0	0	0	82
21:00	0	0	0	0	0	7	19	17	9	4	1	0	0	0	0	57
22:00	0	0	2	0	1	16	15	7	9	3	0	0	0	0	0	53
23:00	0	0	0	0	0	2	8	6	8	0	1	0	0	0	0	25
Total	6	0	6	7	15	70	211	209	114	21	6	0	2	0	0	667

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 1

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
06/18/19	0	0	0	0	0	1	12	10	4	3	1	0	0	0	0	31
01:00	0	0	0	0	2	7	6	0	4	0	0	0	0	0	0	19
02:00	0	0	0	1	0	0	3	0	5	3	0	0	0	0	0	12
03:00	0	0	0	0	0	1	14	4	6	4	0	0	0	0	0	29
04:00	0	0	0	0	0	0	5	15	4	4	0	0	0	0	0	28
05:00	0	0	0	0	3	4	25	48	13	5	5	0	0	0	0	103
06:00	5	1	1	1	11	13	48	75	52	5	0	0	0	0	0	212
07:00	4	0	0	4	12	55	161	155	64	11	0	0	0	0	0	466
08:00	7	0	1	4	22	57	113	104	50	7	0	1	0	0	0	366
09:00	4	1	1	1	7	53	68	56	22	0	0	0	0	0	0	213
10:00	2	1	0	0	7	43	55	54	15	0	0	0	0	0	0	177
11:00	3	0	1	2	17	47	70	30	9	2	0	0	0	0	0	181
12 PM	5	1	0	0	7	31	66	45	12	1	0	1	0	0	0	169
13:00	11	6	0	3	15	31	46	34	12	1	0	0	0	0	0	159
14:00	4	0	0	5	15	27	62	57	18	2	1	0	0	0	0	191
15:00	0	0	0	0	6	21	66	49	30	5	0	0	0	0	0	177
16:00	4	2	1	0	1	12	71	81	18	5	0	1	0	0	0	196
17:00	0	1	1	2	10	11	46	71	19	2	0	0	0	0	0	163
18:00	0	0	0	3	3	10	32	42	22	2	1	0	0	0	0	115
19:00	2	0	0	1	4	11	22	26	21	3	0	0	0	0	0	90
20:00	1	1	0	0	2	13	17	27	9	3	0	0	0	0	1	74
21:00	0	0	0	3	0	15	20	23	4	3	0	0	0	0	0	68
22:00	0	0	0	0	1	11	15	12	4	2	0	0	0	0	0	45
23:00	1	0	0	0	0	2	3	6	5	3	1	0	0	0	0	21
Total	53	14	6	30	145	476	1046	1024	422	76	9	3	0	0	1	3305

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 1

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
06/19/19	0	0	0	0	0	1	5	7	5	3	0	0	0	0	0	21
01:00	0	0	0	0	1	1	1	2	1	2	0	0	0	0	0	8
02:00	1	0	0	0	0	0	3	4	2	0	0	0	0	0	0	10
03:00	0	0	0	0	0	2	6	4	7	4	1	0	0	0	0	24
04:00	0	0	0	0	1	6	15	11	5	0	0	0	0	0	0	38
05:00	1	0	0	0	1	13	21	25	30	5	0	0	0	0	0	96
06:00	3	0	0	0	14	24	27	55	53	10	0	0	0	0	0	186
07:00	9	0	1	5	18	45	112	182	70	9	1	1	0	0	0	453
08:00	5	0	0	2	20	60	99	125	39	6	0	0	0	0	0	356
09:00	4	0	2	7	5	21	64	46	20	3	1	0	0	0	0	173
10:00	5	0	0	0	14	34	45	47	11	1	0	0	0	0	0	157
11:00	2	1	0	2	4	34	54	48	18	3	1	0	0	0	0	167
12 PM	0	0	0	0	3	28	59	56	16	5	0	0	0	0	0	167
13:00	5	0	0	3	7	14	61	66	33	3	0	0	0	0	0	192
14:00	0	0	0	1	8	31	69	54	17	2	1	0	0	0	0	183
15:00	2	1	0	3	0	22	66	71	19	3	1	0	0	0	0	188
16:00	4	1	1	3	2	24	61	78	20	1	0	0	0	0	0	195
17:00	4	3	2	3	2	21	56	74	27	7	1	0	0	0	0	200
18:00	3	0	0	1	4	16	52	49	19	7	3	0	0	0	0	154
19:00	0	0	0	0	0	13	31	40	9	0	0	0	0	0	0	93
20:00	1	0	0	0	2	16	29	20	10	4	0	0	0	0	0	82
21:00	1	0	0	0	0	7	8	23	6	4	0	0	0	0	0	49
22:00	0	0	0	0	2	3	13	8	9	2	1	0	0	0	0	38
23:00	0	0	0	0	0	1	11	6	1	1	0	0	0	0	0	20
Total	50	6	6	30	108	437	968	1101	447	85	11	1	0	0	0	3250

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 1

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
06/20/19	0	0	0	0	0	3	9	6	6	3	1	0	0	0	0	28
01:00	0	0	0	0	0	3	4	1	4	0	0	0	0	0	0	12
02:00	0	0	0	0	0	2	1	5	6	0	0	0	0	0	0	14
03:00	0	0	0	0	0	0	2	8	3	2	1	0	0	0	0	16
04:00	1	0	0	0	1	2	6	10	5	1	0	0	0	0	0	26
05:00	2	0	0	1	8	12	22	29	17	2	1	0	0	0	0	94
06:00	3	0	0	2	12	17	28	73	42	6	1	0	0	0	0	184
07:00	6	0	1	5	6	54	154	169	73	3	0	0	1	0	0	472
08:00	15	8	22	19	21	47	93	68	39	9	0	0	0	0	0	341
09:00	0	0	0	3	4	25	73	77	22	2	0	0	1	0	0	207
10:00	2	0	1	2	8	33	67	43	20	6	0	0	0	0	0	182
11:00	2	1	2	0	3	35	56	49	21	2	0	0	0	0	0	171
12 PM	4	1	1	5	0	20	50	60	30	3	0	0	0	0	0	174
13:00	1	1	1	1	9	14	50	55	27	4	0	0	0	0	0	163
14:00	2	3	0	2	3	32	45	50	24	2	0	0	0	1	0	164
15:00	4	0	3	5	11	14	68	52	23	6	0	0	0	0	0	186
16:00	6	0	1	5	7	13	68	71	30	6	1	0	0	0	1	209
17:00	5	2	1	1	19	25	70	51	21	2	0	0	0	0	0	197
18:00	0	0	1	0	2	15	34	47	33	4	1	0	0	0	0	137
19:00	0	0	1	0	2	14	22	25	17	5	1	0	0	0	0	87
20:00	0	2	0	1	5	7	13	16	16	3	0	0	0	0	0	63
21:00	1	0	0	0	0	16	14	17	9	0	1	0	0	0	0	58
22:00	0	0	0	0	1	4	14	17	7	2	0	0	0	0	0	45
23:00	0	0	0	0	0	4	6	7	1	1	0	0	0	0	0	19
Total	54	18	35	52	122	411	969	1006	496	74	8	0	2	1	1	3249

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 1

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
06/21/19	0	0	0	1	3	3	6	5	4	1	0	0	0	0	0	23
01:00	0	0	0	0	2	2	0	1	2	0	0	0	0	0	0	7
02:00	0	0	0	0	0	6	6	2	4	0	0	0	0	0	0	18
03:00	1	0	0	0	1	5	2	1	0	0	0	0	0	0	0	10
04:00	0	0	0	0	3	5	11	9	10	1	0	0	0	0	0	39
05:00	1	0	0	0	1	5	15	27	14	6	1	0	0	0	0	70
06:00	3	0	1	1	7	28	51	45	38	1	0	0	0	0	0	175
07:00	2	1	4	4	13	33	130	156	68	7	0	1	0	0	0	419
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	7	1	5	6	30	87	221	246	140	16	1	1	0	0	0	761
Grand Total	170	39	58	125	420	1481	3415	3586	1619	272	35	5	4	1	2	11232

Stats

15th Percentile :	42 MPH
50th Percentile :	49 MPH
85th Percentile :	55 MPH
95th Percentile :	59 MPH
Mean Speed(Average) :	50 MPH
10 MPH Pace Speed :	46-55 MPH
Number in Pace :	7001
Percent in Pace :	62.3%
Number of Vehicles > 55 MPH :	1938
Percent of Vehicles > 55 MPH :	17.3%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 2

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
06/17/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	1	0	2	1	8	48	153	111	38	8	0	0	0	0	0	370
18:00	1	0	0	1	2	26	69	56	34	4	0	1	1	0	0	195
19:00	1	0	0	3	5	16	35	53	18	5	0	0	0	0	1	137
20:00	0	0	1	1	3	19	33	38	24	4	0	0	0	0	0	123
21:00	0	0	0	1	2	16	28	29	10	4	0	0	0	0	0	90
22:00	0	0	2	0	1	6	9	15	15	6	0	0	0	0	0	54
23:00	0	1	2	2	0	3	16	10	14	4	0	0	0	0	0	52
Total	3	1	7	9	21	134	343	312	153	35	0	1	1	0	1	1021

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 2

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
06/18/19	0	0	0	0	0	0	4	10	10	5	1	0	0	0	0	30
01:00	0	0	0	0	1	1	7	3	2	2	0	0	0	0	0	16
02:00	0	0	0	0	1	1	5	4	5	0	1	0	0	0	0	17
03:00	0	0	0	0	1	0	7	7	14	3	0	0	0	0	0	32
04:00	0	0	0	0	0	7	9	10	13	2	0	0	0	0	0	41
05:00	0	0	0	0	6	11	18	24	21	1	0	0	0	0	0	81
06:00	1	1	0	1	6	28	33	54	24	7	0	0	0	0	0	155
07:00	6	0	1	4	2	30	53	55	18	3	0	0	0	0	0	172
08:00	1	0	0	1	27	34	70	30	18	2	1	0	0	0	0	184
09:00	5	6	1	3	26	36	60	31	6	0	0	0	0	0	0	174
10:00	4	0	2	2	14	47	53	34	12	1	0	0	0	0	0	169
11:00	10	1	1	6	14	34	55	35	8	1	1	0	0	0	0	166
12 PM	3	1	2	3	8	28	71	36	8	5	0	0	0	1	0	166
13:00	5	0	0	1	21	52	70	36	10	0	0	0	0	0	0	195
14:00	3	0	0	0	11	44	57	58	21	1	0	0	0	0	0	195
15:00	5	2	2	5	10	42	104	82	35	3	0	0	0	0	0	290
16:00	5	0	3	8	9	58	137	126	39	2	0	0	0	0	0	387
17:00	3	0	1	0	11	47	161	114	24	4	0	0	0	0	0	365
18:00	5	0	2	5	2	27	66	48	30	1	0	0	0	0	0	186
19:00	0	0	0	0	1	18	53	47	22	4	1	0	0	0	0	146
20:00	3	0	0	1	6	18	47	28	17	3	1	1	0	0	0	125
21:00	5	0	0	4	5	13	26	14	13	0	0	0	0	0	0	80
22:00	0	0	0	0	3	13	13	18	8	1	0	0	0	0	0	56
23:00	0	0	0	0	1	4	9	15	22	2	0	0	0	0	0	53
Total	64	11	15	44	186	593	1188	919	400	53	6	1	0	1	0	3481

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 2

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
06/19/19	2	0	0	0	0	3	9	6	4	0	0	0	0	0	0	24
01:00	0	0	0	0	1	1	6	2	5	2	0	0	0	0	0	17
02:00	2	0	0	0	0	3	5	6	1	0	0	0	0	0	0	17
03:00	2	0	0	0	0	7	7	3	5	0	0	0	0	0	0	24
04:00	3	0	1	0	3	4	16	20	3	1	1	0	0	0	0	52
05:00	3	0	0	2	1	11	16	32	7	0	0	0	0	0	0	72
06:00	3	0	2	2	5	30	61	55	9	3	1	0	0	0	1	172
07:00	7	4	2	4	9	30	57	38	5	1	0	0	0	0	0	157
08:00	13	1	2	2	6	41	58	35	6	0	0	0	0	0	0	164
09:00	3	0	6	1	17	32	68	35	8	0	0	0	0	0	0	170
10:00	6	1	1	2	11	47	57	28	5	0	0	0	0	1	0	159
11:00	4	1	0	6	21	39	55	41	15	0	0	0	0	0	1	183
12 PM	3	1	0	2	19	53	57	42	8	1	0	0	0	0	0	186
13:00	5	0	0	6	12	30	61	32	8	0	0	0	0	0	0	154
14:00	0	0	2	0	10	49	84	56	10	0	1	0	0	0	0	212
15:00	7	0	0	4	9	46	113	83	19	2	0	0	0	0	0	283
16:00	1	2	3	6	15	73	156	119	27	0	0	0	0	0	0	402
17:00	2	0	1	9	16	72	161	106	16	7	0	0	0	0	0	390
18:00	3	0	0	0	10	44	48	66	14	1	0	0	0	0	0	186
19:00	1	0	0	1	6	25	64	36	15	3	0	0	0	0	0	151
20:00	0	0	1	1	7	25	41	30	14	3	0	0	0	0	0	122
21:00	1	0	0	0	5	16	24	25	11	2	1	0	1	0	0	86
22:00	1	0	0	1	2	8	19	21	5	1	0	0	0	0	0	58
23:00	0	0	0	0	0	3	9	18	13	0	0	0	0	0	0	43
Total	72	10	21	49	185	692	1252	935	233	27	4	0	1	1	2	3484

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 2

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
06/20/19	1	0	0	1	1	6	9	7	2	0	0	0	0	0	0	27
01:00	1	0	0	2	2	4	2	1	4	1	0	0	0	0	0	17
02:00	2	0	0	0	0	0	1	6	4	0	0	0	0	0	0	13
03:00	0	0	0	0	3	0	6	11	2	1	0	0	0	0	0	23
04:00	1	0	0	0	3	9	15	8	4	0	0	0	0	0	0	40
05:00	2	0	0	0	1	11	11	29	8	0	0	0	0	0	0	62
06:00	7	0	1	0	13	33	45	45	8	0	0	0	0	0	0	152
07:00	2	2	0	0	11	45	50	45	9	1	0	0	0	0	0	165
08:00	7	0	3	13	17	38	54	29	8	1	0	0	0	0	0	170
09:00	1	1	0	1	15	35	71	32	6	0	0	0	0	0	0	162
10:00	2	0	0	8	9	32	61	30	11	0	0	0	0	0	0	153
11:00	3	2	2	4	12	32	51	40	11	2	0	0	0	0	0	159
12 PM	0	3	2	7	14	32	59	31	15	2	0	0	0	0	0	165
13:00	1	0	1	1	13	39	64	52	22	2	0	0	0	0	0	195
14:00	3	1	0	2	7	34	59	67	21	4	0	0	0	0	0	198
15:00	2	5	3	7	18	43	94	74	28	3	0	1	0	0	0	278
16:00	4	1	1	1	17	56	148	124	42	4	0	0	0	0	0	398
17:00	4	0	2	3	18	91	171	91	22	3	0	0	0	0	0	405
18:00	1	1	1	0	8	20	59	60	18	4	1	0	0	0	0	173
19:00	0	1	1	2	9	29	47	37	26	2	0	1	0	0	0	155
20:00	0	1	0	0	7	20	36	34	13	1	0	0	0	0	0	112
21:00	0	0	0	2	2	12	25	18	8	1	0	0	0	0	0	68
22:00	0	0	0	0	5	12	18	9	7	3	0	0	0	0	0	54
23:00	0	0	0	0	1	1	9	25	16	2	0	0	0	0	0	54
Total	44	18	17	54	206	634	1165	905	315	37	1	2	0	0	0	3398

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Direction 2

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
06/21/19	0	0	0	0	2	0	2	4	5	0	0	0	0	0	0	13
01:00	0	0	0	4	3	2	6	9	11	0	0	0	0	0	0	35
02:00	1	0	0	0	0	1	3	4	2	0	0	0	0	0	0	11
03:00	0	0	0	0	1	1	9	7	1	1	0	0	0	0	0	20
04:00	0	0	0	2	2	6	11	11	0	1	0	0	0	0	0	33
05:00	0	0	1	0	1	5	12	19	6	1	0	0	0	0	0	45
06:00	0	0	2	0	9	10	37	30	14	3	0	0	0	0	0	105
07:00	3	1	0	0	9	33	47	39	10	3	0	0	0	0	0	145
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4	1	3	6	27	58	127	123	49	9	0	0	0	0	0	407
Grand Total	187	41	63	162	625	2111	4075	3194	1150	161	11	4	2	2	3	11791

Stats

15th Percentile :	41 MPH
50th Percentile :	48 MPH
85th Percentile :	54 MPH
95th Percentile :	58 MPH
Mean Speed(Average) :	48 MPH
10 MPH Pace Speed :	46-55 MPH
Number in Pace :	7269
Percent in Pace :	61.6%
Number of Vehicles > 55 MPH :	1333
Percent of Vehicles > 55 MPH :	11.3%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: NY 144 - River Rd
Segment: 110' N of Anders Lane
Ctr#: 36067

GPS: 42.602516, -73.769694

Start	17-Jun-19		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Northboun	Southbou	Northbou	Southbou	Northbou	Southbou	Northbou	Southbou	Northbou	Southbou	Northbou	Southbou	Northbou	Southbou	Northbou	Southbou
12:00 AM	*	*	31	30	21	24	28	27	23	13	*	*	*	*	26	24
01:00	*	*	19	16	8	17	12	17	7	35	*	*	*	*	12	21
02:00	*	*	12	17	10	16	14	12	18	11	*	*	*	*	14	14
03:00	*	*	29	32	24	24	16	23	10	20	*	*	*	*	20	25
04:00	*	*	28	41	38	51	26	40	39	33	*	*	*	*	33	41
05:00	*	*	103	81	96	71	93	61	70	45	*	*	*	*	90	64
06:00	*	*	211	155	185	171	184	151	**174**	**105**	*	*	*	*	188	146
07:00	*	*	**465**	171	**452**	154	**470**	165	*	*	*	*	*	*	**462**	163
08:00	*	*	365	**184**	355	164	340	**169**	*	*	*	*	*	*	353	**172**
09:00	*	*	212	173	173	170	207	162	*	*	*	*	*	*	197	168
10:00	*	*	177	169	156	159	182	152	*	*	*	*	*	*	172	160
11:00	*	*	179	164	166	**182**	170	159	*	*	*	*	*	*	172	168
12:00 PM	*	*	169	165	167	186	174	165	*	*	*	*	*	*	170	172
01:00	*	*	157	193	190	152	162	195	*	*	*	*	*	*	170	180
02:00	*	*	191	195	183	212	164	198	*	*	*	*	*	*	179	202
03:00	*	*	177	290	187	283	184	278	*	*	*	*	*	*	183	284
04:00	*	*	**194**	**386**	194	**402**	**208**	397	*	*	*	*	*	*	**199**	**395**
05:00	**202**	**370**	163	364	**199**	390	196	**405**	*	*	*	*	*	*	190	382
06:00	127	195	115	186	153	186	137	173	*	*	*	*	*	*	133	185
07:00	120	137	90	146	93	151	87	155	*	*	*	*	*	*	98	147
08:00	82	123	74	125	82	122	63	112	*	*	*	*	*	*	75	120
09:00	57	90	68	80	49	86	58	68	*	*	*	*	*	*	58	81
10:00	53	54	45	56	38	58	45	54	*	*	*	*	*	*	45	56
11:00	25	52	21	53	20	43	19	54	*	*	*	*	*	*	21	50
Lane	666	1021	3295	3472	3239	3474	3239	3392	341	262	0	0	0	0	3260	3420
Day	1687		6767		6713		6631		603		0		0		6680	
AM Peak	-	-	07:00	08:00	07:00	11:00	07:00	08:00	06:00	06:00	-	-	-	-	07:00	08:00
Vol.	-	-	465	184	452	182	470	169	174	105	-	-	-	-	462	172
PM Peak	17:00	17:00	16:00	16:00	17:00	16:00	16:00	17:00	-	-	-	-	-	-	16:00	16:00
Vol.	202	370	194	386	199	402	208	405	-	-	-	-	-	-	199	395

Comb. Total	1687		6767		6713		6631		603		0		0		6680	
ADT	ADT 6,676		AADT 6,676													

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	1	**612**	**69**	**10**	**6**	0	0	0	**1**	0	0	0	0	**699**
18:00	1	373	48	6	4	0	0	0	1	0	0	0	0	433
19:00	1	283	39	1	2	0	0	0	0	0	0	0	0	326
20:00	**2**	236	23	0	2	0	0	0	0	0	0	0	0	263
21:00	0	185	16	0	2	0	0	0	0	0	0	0	0	203
22:00	0	115	12	0	3	0	0	0	0	0	0	0	0	130
23:00	0	83	9	0	2	0	0	0	0	0	0	0	0	94
Total	5	1887	216	17	21	0	0	0	2	0	0	0	0	2148
Percent	0.2%	87.8%	10.1%	0.8%	1.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak	20:00	17:00	17:00	17:00	17:00				17:00					17:00
Vol.	2	612	69	10	6				1					699

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/02/19	0	37	5	0	0	0	0	0	0	0	0	0	0	42
01:00	0	18	1	0	0	0	0	0	**1**	0	0	0	0	20
02:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
03:00	0	21	3	0	0	0	0	0	0	0	0	0	0	24
04:00	0	22	5	1	1	0	0	0	0	0	0	0	0	29
05:00	0	100	17	0	4	0	0	0	0	0	0	0	0	121
06:00	0	319	43	3	4	1	0	0	1	0	0	0	0	371
07:00	**3**	838	**91**	**12**	9	1	0	**1**	1	0	0	0	0	**956**
08:00	0	**841**	89	10	12	0	0	0	1	0	0	0	0	953
09:00	0	438	51	5	**14**	**2**	0	0	0	0	0	0	0	510
10:00	0	321	69	2	11	1	0	1	0	0	0	0	0	405
11:00	0	327	61	3	11	2	0	0	0	0	0	0	0	404
12 PM	0	352	51	3	6	1	0	0	**2**	0	0	0	0	415
13:00	**1**	350	64	2	6	**3**	0	**1**	1	0	0	0	0	428
14:00	0	416	76	1	14	0	0	0	1	0	0	0	0	508
15:00	1	623	**90**	**12**	**21**	2	0	1	0	**1**	0	0	0	751
16:00	0	**754**	64	9	7	1	0	1	0	0	0	0	0	**836**
17:00	0	667	58	8	7	0	0	1	1	0	0	0	0	742
18:00	0	452	36	3	7	0	0	0	0	0	0	0	0	498
19:00	0	296	27	1	2	0	0	0	0	0	0	0	0	326
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	5	7199	902	75	136	14	0	6	9	1	0	0	0	8347
Percent	0.1%	86.2%	10.8%	0.9%	1.6%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	07:00	07:00	09:00	09:00		07:00	01:00					07:00
Vol.	3	841	91	12	14	2		1	1					956
PM Peak	13:00	16:00	15:00	15:00	15:00	13:00		13:00	12:00	15:00				16:00
Vol.	1	754	90	12	21	3		1	2	1				836
Grand Total	10	9086	1118	92	157	14	0	6	11	1	0	0	0	10495
Percent	0.1%	86.6%	10.7%	0.9%	1.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1	173	17	3	0	0	0	0	0	0	0	0	0	194
17:15	0	160	19	4	2	0	0	0	0	0	0	0	0	185
17:30	0	150	21	1	2	0	0	0	0	0	0	0	0	174
17:45	0	129	12	2	2	0	0	0	1	0	0	0	0	146
	1	612	69	10	6	0	0	0	1	0	0	0	0	699
18:00	0	109	21	2	3	0	0	0	0	0	0	0	0	135
18:15	0	124	11	2	1	0	0	0	1	0	0	0	0	139
18:30	0	75	8	0	0	0	0	0	0	0	0	0	0	83
18:45	1	65	8	2	0	0	0	0	0	0	0	0	0	76
	1	373	48	6	4	0	0	0	1	0	0	0	0	433
19:00	0	96	13	1	1	0	0	0	0	0	0	0	0	111
19:15	0	64	14	0	0	0	0	0	0	0	0	0	0	78
19:30	1	61	9	0	0	0	0	0	0	0	0	0	0	71
19:45	0	62	3	0	1	0	0	0	0	0	0	0	0	66
	1	283	39	1	2	0	0	0	0	0	0	0	0	326
20:00	0	73	5	0	0	0	0	0	0	0	0	0	0	78
20:15	0	69	7	0	0	0	0	0	0	0	0	0	0	76
20:30	1	51	5	0	2	0	0	0	0	0	0	0	0	59
20:45	1	43	6	0	0	0	0	0	0	0	0	0	0	50
	2	236	23	0	2	0	0	0	0	0	0	0	0	263
21:00	0	62	8	0	1	0	0	0	0	0	0	0	0	71
21:15	0	51	1	0	0	0	0	0	0	0	0	0	0	52
21:30	0	41	2	0	1	0	0	0	0	0	0	0	0	44
21:45	0	31	5	0	0	0	0	0	0	0	0	0	0	36
	0	185	16	0	2	0	0	0	0	0	0	0	0	203
22:00	0	40	3	0	0	0	0	0	0	0	0	0	0	43
22:15	0	28	0	0	1	0	0	0	0	0	0	0	0	29
22:30	0	24	4	0	1	0	0	0	0	0	0	0	0	29
22:45	0	23	5	0	1	0	0	0	0	0	0	0	0	29
	0	115	12	0	3	0	0	0	0	0	0	0	0	130
23:00	0	28	2	0	0	0	0	0	0	0	0	0	0	30
23:15	0	28	2	0	1	0	0	0	0	0	0	0	0	31
23:30	0	13	2	0	1	0	0	0	0	0	0	0	0	16
23:45	0	14	3	0	0	0	0	0	0	0	0	0	0	17
	0	83	9	0	2	0	0	0	0	0	0	0	0	94
Total	5	1887	216	17	21	0	0	0	2	0	0	0	0	2148
Percent	0.2%	87.8%	10.1%	0.8%	1.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/02/19	0	19	1	0	0	0	0	0	0	0	0	0	0	20
00:15	0	8	2	0	0	0	0	0	0	0	0	0	0	10
00:30	0	6	2	0	0	0	0	0	0	0	0	0	0	8
00:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
	0	37	5	0	0	0	0	0	0	0	0	0	0	42
01:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
01:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	4	0	0	0	0	0	0	1	0	0	0	0	5
	0	18	1	0	0	0	0	0	1	0	0	0	0	20
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	4
	0	7	1	0	0	0	0	0	0	0	0	0	0	8
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:30	0	9	2	0	0	0	0	0	0	0	0	0	0	11
03:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
	0	21	3	0	0	0	0	0	0	0	0	0	0	24
04:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04:15	0	1	2	0	0	0	0	0	0	0	0	0	0	3
04:30	0	10	2	1	0	0	0	0	0	0	0	0	0	13
04:45	0	9	0	0	1	0	0	0	0	0	0	0	0	10
	0	22	5	1	1	0	0	0	0	0	0	0	0	29
05:00	0	17	3	0	0	0	0	0	0	0	0	0	0	20
05:15	0	25	2	0	0	0	0	0	0	0	0	0	0	27
05:30	0	26	3	0	2	0	0	0	0	0	0	0	0	31
05:45	0	32	9	0	2	0	0	0	0	0	0	0	0	43
	0	100	17	0	4	0	0	0	0	0	0	0	0	121
06:00	0	32	5	0	0	0	0	0	1	0	0	0	0	38
06:15	0	56	9	0	1	0	0	0	0	0	0	0	0	66
06:30	0	111	15	1	2	1	0	0	0	0	0	0	0	130
06:45	0	120	14	2	1	0	0	0	0	0	0	0	0	137
	0	319	43	3	4	1	0	0	1	0	0	0	0	371
07:00	0	136	7	2	4	0	0	1	0	0	0	0	0	150
07:15	1	169	19	2	1	0	0	0	1	0	0	0	0	193
07:30	1	282	35	3	3	0	0	0	0	0	0	0	0	324
07:45	1	251	30	5	1	1	0	0	0	0	0	0	0	289
	3	838	91	12	9	1	0	1	1	0	0	0	0	956
08:00	0	240	27	4	3	0	0	0	0	0	0	0	0	274
08:15	0	224	17	2	4	0	0	0	1	0	0	0	0	248
08:30	0	206	23	2	4	0	0	0	0	0	0	0	0	235
08:45	0	171	22	2	1	0	0	0	0	0	0	0	0	196
	0	841	89	10	12	0	0	0	1	0	0	0	0	953
09:00	0	149	14	1	4	0	0	0	0	0	0	0	0	168
09:15	0	95	20	2	4	1	0	0	0	0	0	0	0	122
09:30	0	113	11	1	4	1	0	0	0	0	0	0	0	130
09:45	0	81	6	1	2	0	0	0	0	0	0	0	0	90
	0	438	51	5	14	2	0	0	0	0	0	0	0	510
10:00	0	87	12	0	1	0	0	0	0	0	0	0	0	100
10:15	0	67	18	0	3	0	0	1	0	0	0	0	0	89
10:30	0	85	20	2	6	1	0	0	0	0	0	0	0	114
10:45	0	82	19	0	1	0	0	0	0	0	0	0	0	102
	0	321	69	2	11	1	0	1	0	0	0	0	0	405
11:00	0	72	16	0	3	0	0	0	0	0	0	0	0	91
11:15	0	88	16	1	4	2	0	0	0	0	0	0	0	111
11:30	0	84	14	1	2	0	0	0	0	0	0	0	0	101
11:45	0	83	15	1	2	0	0	0	0	0	0	0	0	101
	0	327	61	3	11	2	0	0	0	0	0	0	0	404
Total	3	3289	436	36	66	7	0	2	4	0	0	0	0	3843
Percent	0.1%	85.6%	11.3%	0.9%	1.7%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12 PM	0	86	12	0	1	0	0	0	2	0	0	0	0	101
12:15	0	100	13	2	2	0	0	0	0	0	0	0	0	117
12:30	0	81	10	0	0	0	0	0	0	0	0	0	0	91
12:45	0	85	16	1	3	1	0	0	0	0	0	0	0	106
	0	352	51	3	6	1	0	0	2	0	0	0	0	415
13:00	1	79	16	0	1	1	0	0	0	0	0	0	0	98
13:15	0	86	16	1	0	0	0	0	0	0	0	0	0	103
13:30	0	105	15	0	4	1	0	0	0	0	0	0	0	125
13:45	0	80	17	1	1	1	0	1	1	0	0	0	0	102
	1	350	64	2	6	3	0	1	1	0	0	0	0	428
14:00	0	101	17	1	5	0	0	0	0	0	0	0	0	124
14:15	0	105	16	0	4	0	0	0	1	0	0	0	0	126
14:30	0	81	19	0	2	0	0	0	0	0	0	0	0	102
14:45	0	129	24	0	3	0	0	0	0	0	0	0	0	156
	0	416	76	1	14	0	0	0	1	0	0	0	0	508
15:00	0	119	17	1	5	0	0	0	0	1	0	0	0	143
15:15	0	128	22	1	8	1	0	0	0	0	0	0	0	160
15:30	1	188	22	1	7	0	0	1	0	0	0	0	0	220
15:45	0	188	29	9	1	1	0	0	0	0	0	0	0	228
	1	623	90	12	21	2	0	1	0	1	0	0	0	751
16:00	0	182	23	1	3	0	0	0	0	0	0	0	0	209
16:15	0	180	18	4	1	0	0	0	0	0	0	0	0	203
16:30	0	186	11	2	1	0	0	0	0	0	0	0	0	200
16:45	0	206	12	2	2	1	0	1	0	0	0	0	0	224
	0	754	64	9	7	1	0	1	0	0	0	0	0	836
17:00	0	186	21	3	4	0	0	1	0	0	0	0	0	215
17:15	0	172	15	3	1	0	0	0	0	0	0	0	0	191
17:30	0	178	16	0	2	0	0	0	0	0	0	0	0	196
17:45	0	131	6	2	0	0	0	0	1	0	0	0	0	140
	0	667	58	8	7	0	0	1	1	0	0	0	0	742
18:00	0	156	11	1	1	0	0	0	0	0	0	0	0	169
18:15	0	110	6	0	1	0	0	0	0	0	0	0	0	117
18:30	0	106	10	2	5	0	0	0	0	0	0	0	0	123
18:45	0	80	9	0	0	0	0	0	0	0	0	0	0	89
	0	452	36	3	7	0	0	0	0	0	0	0	0	498
19:00	0	73	9	1	0	0	0	0	0	0	0	0	0	83
19:15	0	79	5	0	0	0	0	0	0	0	0	0	0	84
19:30	0	77	5	0	2	0	0	0	0	0	0	0	0	84
19:45	0	67	8	0	0	0	0	0	0	0	0	0	0	75
	0	296	27	1	2	0	0	0	0	0	0	0	0	326
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	3910	466	39	70	7	0	4	5	1	0	0	0	4504
Percent	0.0%	86.8%	10.3%	0.9%	1.6%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
Grand Total	10	9086	1118	92	157	14	0	6	11	1	0	0	0	10495
Percent	0.1%	86.6%	10.7%	0.9%	1.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	13	15	229	343	87	10	1	1	0	0	0	0	0	0	0	699
18:00	4	12	144	227	42	4	0	0	0	0	0	0	0	0	0	433
19:00	2	7	130	162	22	3	0	0	0	0	0	0	0	0	0	326
20:00	2	11	98	128	21	2	0	1	0	0	0	0	0	0	0	263
21:00	2	6	90	90	13	2	0	0	0	0	0	0	0	0	0	203
22:00	1	6	63	48	12	0	0	0	0	0	0	0	0	0	0	130
23:00	0	7	39	45	3	0	0	0	0	0	0	0	0	0	0	94
Total	24	64	793	1043	200	21	1	2	0	0	0	0	0	0	0	2148

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
10/02/19	0	3	20	14	5	0	0	0	0	0	0	0	0	0	0	42
01:00	1	2	9	7	1	0	0	0	0	0	0	0	0	0	0	20
02:00	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	2	7	11	3	1	0	0	0	0	0	0	0	0	0	24
04:00	0	1	11	14	2	0	1	0	0	0	0	0	0	0	0	29
05:00	1	7	59	46	7	1	0	0	0	0	0	0	0	0	0	121
06:00	6	10	135	185	32	3	0	0	0	0	0	0	0	0	0	371
07:00	23	20	298	475	124	15	1	0	0	0	0	0	0	0	0	956
08:00	5	12	328	492	112	4	0	0	0	0	0	0	0	0	0	953
09:00	6	21	158	277	40	8	0	0	0	0	0	0	0	0	0	510
10:00	5	7	150	197	43	3	0	0	0	0	0	0	0	0	0	405
11:00	1	11	151	191	43	7	0	0	0	0	0	0	0	0	0	404
12 PM	6	14	145	216	29	5	0	0	0	0	0	0	0	0	0	415
13:00	19	10	164	200	32	3	0	0	0	0	0	0	0	0	0	428
14:00	4	28	203	224	47	2	0	0	0	0	0	0	0	0	0	508
15:00	7	20	239	390	86	8	1	0	0	0	0	0	0	0	0	751
16:00	10	9	224	453	129	10	1	0	0	0	0	0	0	0	0	836
17:00	11	5	212	406	97	10	1	0	0	0	0	0	0	0	0	742
18:00	3	12	156	255	63	8	1	0	0	0	0	0	0	0	0	498
19:00	6	19	115	140	40	5	1	0	0	0	0	0	0	0	0	326
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	114	214	2787	4197	935	93	7	0	0	0	0	0	0	0	0	8347
Grand Total	138	278	3580	5240	1135	114	8	2	0	0	0	0	0	0	0	10495

Stats

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	8820
Percent in Pace :	84.0%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:30	4	8	52	125	44	2	0	0	0	0	0	0	0	0	0	235
16:45	3	2	63	114	34	3	0	0	0	0	0	0	0	0	0	219
	7	10	115	239	78	5	0	0	0	0	0	0	0	0	0	454
17:00	4	4	61	94	27	2	1	1	0	0	0	0	0	0	0	194
17:15	5	7	59	86	24	4	0	0	0	0	0	0	0	0	0	185
17:30	2	2	64	90	16	0	0	0	0	0	0	0	0	0	0	174
17:45	2	2	45	73	20	4	0	0	0	0	0	0	0	0	0	146
	13	15	229	343	87	10	1	1	0	0	0	0	0	0	0	699
18:00	1	4	45	71	11	3	0	0	0	0	0	0	0	0	0	135
18:15	2	3	38	84	12	0	0	0	0	0	0	0	0	0	0	139
18:30	0	2	31	40	10	0	0	0	0	0	0	0	0	0	0	83
18:45	1	3	30	32	9	1	0	0	0	0	0	0	0	0	0	76
	4	12	144	227	42	4	0	0	0	0	0	0	0	0	0	433
19:00	1	3	45	49	11	2	0	0	0	0	0	0	0	0	0	111
19:15	1	0	24	48	5	0	0	0	0	0	0	0	0	0	0	78
19:30	0	0	29	38	3	1	0	0	0	0	0	0	0	0	0	71
19:45	0	4	32	27	3	0	0	0	0	0	0	0	0	0	0	66
	2	7	130	162	22	3	0	0	0	0	0	0	0	0	0	326
20:00	0	1	28	44	5	0	0	0	0	0	0	0	0	0	0	78
20:15	2	4	31	35	4	0	0	0	0	0	0	0	0	0	0	76
20:30	0	3	20	25	10	1	0	0	0	0	0	0	0	0	0	59
20:45	0	3	19	24	2	1	0	1	0	0	0	0	0	0	0	50
	2	11	98	128	21	2	0	1	0	0	0	0	0	0	0	263
21:00	0	1	33	28	9	0	0	0	0	0	0	0	0	0	0	71
21:15	2	4	21	23	0	2	0	0	0	0	0	0	0	0	0	52
21:30	0	1	22	19	2	0	0	0	0	0	0	0	0	0	0	44
21:45	0	0	14	20	2	0	0	0	0	0	0	0	0	0	0	36
	2	6	90	90	13	2	0	0	0	0	0	0	0	0	0	203
22:00	0	1	20	19	3	0	0	0	0	0	0	0	0	0	0	43
22:15	0	3	12	11	3	0	0	0	0	0	0	0	0	0	0	29
22:30	1	1	13	11	3	0	0	0	0	0	0	0	0	0	0	29
22:45	0	1	18	7	3	0	0	0	0	0	0	0	0	0	0	29
	1	6	63	48	12	0	0	0	0	0	0	0	0	0	0	130
23:00	0	1	11	18	0	0	0	0	0	0	0	0	0	0	0	30
23:15	0	2	14	13	2	0	0	0	0	0	0	0	0	0	0	31
23:30	0	3	6	6	1	0	0	0	0	0	0	0	0	0	0	16
23:45	0	1	8	8	0	0	0	0	0	0	0	0	0	0	0	17
	0	7	39	45	3	0	0	0	0	0	0	0	0	0	0	94
Total	31	74	908	1282	278	26	1	2	0	0	0	0	0	0	0	2602

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
10/02/1																
9	0	3	7	7	3	0	0	0	0	0	0	0	0	0	0	20
00:15	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	10
00:30	0	0	6	1	1	0	0	0	0	0	0	0	0	0	0	8
00:45	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	4
	0	3	20	14	5	0	0	0	0	0	0	0	0	0	0	42
01:00	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	6
01:15	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	7
01:30	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	5
	1	2	9	7	1	0	0	0	0	0	0	0	0	0	0	20
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	5
03:30	0	1	2	5	2	1	0	0	0	0	0	0	0	0	0	11
03:45	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	6
	0	2	7	11	3	1	0	0	0	0	0	0	0	0	0	24
04:00	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
04:15	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	3
04:30	0	0	4	8	1	0	0	0	0	0	0	0	0	0	0	13
04:45	0	0	6	3	1	0	0	0	0	0	0	0	0	0	0	10
	0	1	11	14	2	0	1	0	0	0	0	0	0	0	0	29
05:00	0	3	7	8	2	0	0	0	0	0	0	0	0	0	0	20
05:15	0	2	16	7	1	1	0	0	0	0	0	0	0	0	0	27
05:30	1	1	19	10	0	0	0	0	0	0	0	0	0	0	0	31
05:45	0	1	17	21	4	0	0	0	0	0	0	0	0	0	0	43
	1	7	59	46	7	1	0	0	0	0	0	0	0	0	0	121
06:00	2	1	19	14	2	0	0	0	0	0	0	0	0	0	0	38
06:15	1	4	28	31	2	0	0	0	0	0	0	0	0	0	0	66
06:30	0	4	38	76	9	3	0	0	0	0	0	0	0	0	0	130
06:45	3	1	50	64	19	0	0	0	0	0	0	0	0	0	0	137
	6	10	135	185	32	3	0	0	0	0	0	0	0	0	0	371
07:00	4	4	42	92	8	0	0	0	0	0	0	0	0	0	0	150
07:15	4	1	56	88	39	4	1	0	0	0	0	0	0	0	0	193
07:30	7	8	99	156	46	8	0	0	0	0	0	0	0	0	0	324
07:45	8	7	101	139	31	3	0	0	0	0	0	0	0	0	0	289
	23	20	298	475	124	15	1	0	0	0	0	0	0	0	0	956
08:00	3	5	74	148	42	2	0	0	0	0	0	0	0	0	0	274
08:15	2	3	86	134	23	0	0	0	0	0	0	0	0	0	0	248
08:30	0	0	95	112	27	1	0	0	0	0	0	0	0	0	0	235
08:45	0	4	73	98	20	1	0	0	0	0	0	0	0	0	0	196
	5	12	328	492	112	4	0	0	0	0	0	0	0	0	0	953
09:00	1	3	51	99	13	1	0	0	0	0	0	0	0	0	0	168
09:15	0	4	41	64	11	2	0	0	0	0	0	0	0	0	0	122
09:30	3	13	36	67	9	2	0	0	0	0	0	0	0	0	0	130
09:45	2	1	30	47	7	3	0	0	0	0	0	0	0	0	0	90
	6	21	158	277	40	8	0	0	0	0	0	0	0	0	0	510
10:00	0	2	34	50	14	0	0	0	0	0	0	0	0	0	0	100
10:15	1	2	37	41	7	1	0	0	0	0	0	0	0	0	0	89
10:30	2	2	43	56	10	1	0	0	0	0	0	0	0	0	0	114
10:45	2	1	36	50	12	1	0	0	0	0	0	0	0	0	0	102
	5	7	150	197	43	3	0	0	0	0	0	0	0	0	0	405
11:00	0	2	39	39	8	3	0	0	0	0	0	0	0	0	0	91
11:15	0	5	46	51	9	0	0	0	0	0	0	0	0	0	0	111
11:30	1	4	30	53	11	2	0	0	0	0	0	0	0	0	0	101
11:45	0	0	36	48	15	2	0	0	0	0	0	0	0	0	0	101
	1	11	151	191	43	7	0	0	0	0	0	0	0	0	0	404
Total	48	97	1329	1913	412	42	2	0	0	0	0	0	0	0	0	3843

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
12 PM	3	0	31	57	9	1	0	0	0	0	0	0	0	0	0	101
12:15	1	3	46	61	5	1	0	0	0	0	0	0	0	0	0	117
12:30	2	4	35	39	8	3	0	0	0	0	0	0	0	0	0	91
12:45	0	7	33	59	7	0	0	0	0	0	0	0	0	0	0	106
	6	14	145	216	29	5	0	0	0	0	0	0	0	0	0	415
13:00	0	0	34	54	9	1	0	0	0	0	0	0	0	0	0	98
13:15	3	3	38	48	11	0	0	0	0	0	0	0	0	0	0	103
13:30	13	2	58	46	4	2	0	0	0	0	0	0	0	0	0	125
13:45	3	5	34	52	8	0	0	0	0	0	0	0	0	0	0	102
	19	10	164	200	32	3	0	0	0	0	0	0	0	0	0	428
14:00	0	6	47	58	11	2	0	0	0	0	0	0	0	0	0	124
14:15	2	4	51	56	13	0	0	0	0	0	0	0	0	0	0	126
14:30	2	8	42	38	12	0	0	0	0	0	0	0	0	0	0	102
14:45	0	10	63	72	11	0	0	0	0	0	0	0	0	0	0	156
	4	28	203	224	47	2	0	0	0	0	0	0	0	0	0	508
15:00	2	4	53	64	16	4	0	0	0	0	0	0	0	0	0	143
15:15	2	4	54	86	13	1	0	0	0	0	0	0	0	0	0	160
15:30	1	3	65	119	28	3	1	0	0	0	0	0	0	0	0	220
15:45	2	9	67	121	29	0	0	0	0	0	0	0	0	0	0	228
	7	20	239	390	86	8	1	0	0	0	0	0	0	0	0	751
16:00	3	1	66	114	21	4	0	0	0	0	0	0	0	0	0	209
16:15	2	2	57	110	30	2	0	0	0	0	0	0	0	0	0	203
16:30	1	1	37	124	33	3	1	0	0	0	0	0	0	0	0	200
16:45	4	5	64	105	45	1	0	0	0	0	0	0	0	0	0	224
	10	9	224	453	129	10	1	0	0	0	0	0	0	0	0	836
17:00	5	0	61	115	29	5	0	0	0	0	0	0	0	0	0	215
17:15	6	2	66	99	18	0	0	0	0	0	0	0	0	0	0	191
17:30	0	0	56	109	27	3	1	0	0	0	0	0	0	0	0	196
17:45	0	3	29	83	23	2	0	0	0	0	0	0	0	0	0	140
	11	5	212	406	97	10	1	0	0	0	0	0	0	0	0	742
18:00	1	0	50	85	30	3	0	0	0	0	0	0	0	0	0	169
18:15	1	4	35	63	10	4	0	0	0	0	0	0	0	0	0	117
18:30	1	6	43	60	11	1	1	0	0	0	0	0	0	0	0	123
18:45	0	2	28	47	12	0	0	0	0	0	0	0	0	0	0	89
	3	12	156	255	63	8	1	0	0	0	0	0	0	0	0	498
19:00	1	6	24	37	14	1	0	0	0	0	0	0	0	0	0	83
19:15	0	6	32	35	7	4	0	0	0	0	0	0	0	0	0	84
19:30	0	1	30	43	10	0	0	0	0	0	0	0	0	0	0	84
19:45	5	6	29	25	9	0	1	0	0	0	0	0	0	0	0	75
	6	19	115	140	40	5	1	0	0	0	0	0	0	0	0	326
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	66	117	1458	2284	523	51	5	0	0	0	0	0	0	0	0	4504
Total	145	288	3695	5479	1213	119	8	2	0	0	0	0	0	0	0	10949

Stats	
15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	9174
Percent in Pace :	83.8%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Start Time	Mon 30-Sep-19	Tue 01-Oct-19	Wed 02-Oct-19	Thu 03-Oct-19	Fri 04-Oct-19	Average Day	Sat 05-Oct-19	Sun 06-Oct-19	Week Average
12:00 AM	*	*	42	*	*	42	*	*	42
01:00	*	*	20	*	*	20	*	*	20
02:00	*	*	8	*	*	8	*	*	8
03:00	*	*	24	*	*	24	*	*	24
04:00	*	*	29	*	*	29	*	*	29
05:00	*	*	121	*	*	121	*	*	121
06:00	*	*	371	*	*	371	*	*	371
07:00	*	*	**956**	*	*	**956**	*	*	**956**
08:00	*	*	953	*	*	953	*	*	953
09:00	*	*	510	*	*	510	*	*	510
10:00	*	*	405	*	*	405	*	*	405
11:00	*	*	404	*	*	404	*	*	404
12:00 PM	*	*	415	*	*	415	*	*	415
01:00	*	*	428	*	*	428	*	*	428
02:00	*	*	508	*	*	508	*	*	508
03:00	*	*	751	*	*	751	*	*	751
04:00	*	*	**836**	*	*	**836**	*	*	**836**
05:00	*	**699**	742	*	*	720	*	*	720
06:00	*	433	498	*	*	466	*	*	466
07:00	*	326	326	*	*	326	*	*	326
08:00	*	263	*	*	*	263	*	*	263
09:00	*	203	*	*	*	203	*	*	203
10:00	*	130	*	*	*	130	*	*	130
11:00	*	94	*	*	*	94	*	*	94
Day Total	0	2148	8347	0	0	8983	0	0	8983
% Avg. WkDay	0.0%	23.9%	92.9%	0.0%	0.0%				
% Avg. Week	0.0%	23.9%	92.9%	0.0%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	07:00	-	-	07:00	-	-	07:00
Vol.	-	-	956	-	-	956	-	-	956
PM Peak	-	17:00	16:00	-	-	16:00	-	-	16:00
Vol.	-	699	836	-	-	836	-	-	836
Grand Total	0	2148	8347	0	0	8983	0	0	8983

ADT ADT 8,944 AADT 8,944

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Start Time	01-Oct-19 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		*	*		
12:15		*	*		
12:30		*	*		
12:45		*	*	0	0
01:00		*	*		
01:15		*	*		
01:30		*	*		
01:45		*	*	0	0
02:00		*	*		
02:15		*	*		
02:30		*	*		
02:45		*	*	0	0
03:00		*	*		
03:15		*	*		
03:30		*	*		
03:45		*	*	0	0
04:00		*	*		
04:15		*	*		
04:30		*	*		
04:45		*	*	0	0
05:00		*	194		
05:15		*	185		
05:30		*	174		
05:45		*	146	0	699
06:00		*	135		
06:15		*	139		
06:30		*	83		
06:45		*	76	0	433
07:00		*	111		
07:15		*	78		
07:30		*	71		
07:45		*	66	0	326
08:00		*	78		
08:15		*	76		
08:30		*	59		
08:45		*	50	0	263
09:00		*	71		
09:15		*	52		
09:30		*	44		
09:45		*	36	0	203
10:00		*	43		
10:15		*	29		
10:30		*	29		
10:45		*	29	0	130
11:00		*	30		
11:15		*	31		
11:30		*	16		
11:45		*	17	0	94
Total		0	2148		
Percent		0.0%	100.0%		

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Mainline On Ramp
Segment: 175' S of US9W
Ctr#: 35247

GPS: 42.635374, -73.777971

Start Time	02-Oct-19 Wed	Northbound Morning	Afternoon	Hour Totals Morning	Afternoon
12:00		20	101		
12:15		10	117		
12:30		8	91		
12:45		4	106	42	415
01:00		6	98		
01:15		7	103		
01:30		2	125		
01:45		5	102	20	428
02:00		2	124		
02:15		0	126		
02:30		2	102		
02:45		4	156	8	508
03:00		2	143		
03:15		5	160		
03:30		11	220		
03:45		6	228	24	751
04:00		3	209		
04:15		3	203		
04:30		13	200		
04:45		10	224	29	836
05:00		20	215		
05:15		27	191		
05:30		31	196		
05:45		43	140	121	742
06:00		38	169		
06:15		66	117		
06:30		130	123		
06:45		137	89	371	498
07:00		150	83		
07:15		193	84		
07:30		324	84		
07:45		289	75	956	326
08:00		274	0		
08:15		248	*		
08:30		235	*		
08:45		196	*	953	0
09:00		168	*		
09:15		122	*		
09:30		130	*		
09:45		90	*	510	0
10:00		100	*		
10:15		89	*		
10:30		114	*		
10:45		102	*	405	0
11:00		91	*		
11:15		111	*		
11:30		101	*		
11:45		101	*	404	0
Total		3843	4504		
Percent		46.0%	54.0%		
Grand Total		3843	6652		
Percent		36.6%	63.4%		
ADT		ADT 8,944		AADT 8,944	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	1	**446**	**82**	**3**	15	**2**	0	1	**5**	**1**	0	0	0	**556**
18:00	1	375	43	3	**16**	2	0	**3**	3	1	0	0	0	447
19:00	**2**	233	54	2	5	2	0	0	2	0	0	0	0	300
20:00	1	168	29	1	2	1	0	0	2	1	0	0	0	205
21:00	0	116	18	0	1	0	0	0	0	0	0	0	0	135
22:00	0	57	16	0	2	0	0	0	3	0	0	0	0	78
23:00	0	66	16	0	0	0	0	0	1	0	0	0	0	83
Day Total	5	1461	258	9	41	7	0	4	16	3	0	0	0	1804
Percent	0.3%	81.0%	14.3%	0.5%	2.3%	0.4%	0.0%	0.2%	0.9%	0.2%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak	19:00	17:00	17:00	17:00	18:00	17:00		18:00	17:00	17:00				17:00
Vol.	2	446	82	3	16	2		3	5	1				556

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/02/19	0	18	3	0	0	0	0	0	1	1	0	0	0	23
01:00	0	9	6	0	0	0	0	0	1	1	0	0	0	17
02:00	0	14	2	0	1	0	0	0	1	2	0	0	**1**	21
03:00	0	23	11	0	3	0	0	0	6	3	0	0	0	46
04:00	0	24	16	2	4	1	**1**	0	1	0	0	0	0	49
05:00	0	135	42	1	8	2	0	0	6	2	0	0	0	196
06:00	1	401	137	4	**34**	3	0	0	5	3	0	0	0	588
07:00	1	999	**155**	8	23	5	1	4	5	0	0	0	0	1201
08:00	0	**1018**	147	9	24	2	1	1	8	**4**	0	0	0	**1214**
09:00	**2**	586	109	4	25	**7**	0	**9**	9	1	0	0	0	752
10:00	0	383	90	**13**	27	7	1	8	**14**	0	0	0	0	543
11:00	0	337	86	10	30	4	0	2	9	3	0	0	0	481
12 PM	**1**	385	90	5	15	**9**	0	**2**	**13**	2	0	0	**2**	524
13:00	1	344	88	7	33	7	2	1	6	2	0	0	0	491
14:00	1	363	106	**10**	**35**	4	**4**	2	10	4	0	0	0	539
15:00	1	500	**150**	8	23	5	0	1	4	0	0	0	0	692
16:00	0	**549**	122	7	19	2	1	0	5	2	0	0	0	**707**
17:00	0	483	83	6	14	5	0	0	3	**5**	0	0	0	599
18:00	0	372	42	1	12	1	0	0	3	0	0	0	0	431
19:00	0	265	47	1	7	1	0	1	2	1	0	0	0	325
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Day Total	8	7208	1532	96	337	65	11	31	112	36	0	0	3	9439
Percent	0.1%	76.4%	16.2%	1.0%	3.6%	0.7%	0.1%	0.3%	1.2%	0.4%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	07:00	10:00	06:00	09:00	04:00	09:00	10:00	08:00			02:00	08:00
Vol.	2	1018	155	13	34	7	1	9	14	4			1	1214
PM Peak	12:00	16:00	15:00	14:00	14:00	12:00	14:00	12:00	12:00	17:00			12:00	16:00
Vol.	1	549	150	10	35	9	4	2	13	5			2	707
Grand Total	13	8669	1790	105	378	72	11	35	128	39	0	0	3	11243
Percent	0.1%	77.1%	15.9%	0.9%	3.4%	0.6%	0.1%	0.3%	1.1%	0.3%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	134	28	2	5	2	0	1	0	1	0	0	0	173
17:15	0	119	21	0	7	0	0	0	2	0	0	0	0	149
17:30	1	105	18	1	2	0	0	0	1	0	0	0	0	128
17:45	0	88	15	0	1	0	0	0	2	0	0	0	0	106
	1	446	82	3	15	2	0	1	5	1	0	0	0	556
18:00	0	86	10	2	8	1	0	0	0	0	0	0	0	107
18:15	0	100	18	0	1	1	0	0	2	0	0	0	0	122
18:30	0	105	8	1	5	0	0	1	1	1	0	0	0	122
18:45	1	84	7	0	2	0	0	2	0	0	0	0	0	96
	1	375	43	3	16	2	0	3	3	1	0	0	0	447
19:00	2	63	14	1	3	1	0	0	0	0	0	0	0	84
19:15	0	71	16	0	0	1	0	0	1	0	0	0	0	89
19:30	0	45	12	1	2	0	0	0	1	0	0	0	0	61
19:45	0	54	12	0	0	0	0	0	0	0	0	0	0	66
	2	233	54	2	5	2	0	0	2	0	0	0	0	300
20:00	0	53	8	0	0	1	0	0	2	1	0	0	0	65
20:15	1	48	3	1	2	0	0	0	0	0	0	0	0	55
20:30	0	26	14	0	0	0	0	0	0	0	0	0	0	40
20:45	0	41	4	0	0	0	0	0	0	0	0	0	0	45
	1	168	29	1	2	1	0	0	2	1	0	0	0	205
21:00	0	34	4	0	0	0	0	0	0	0	0	0	0	38
21:15	0	20	6	0	0	0	0	0	0	0	0	0	0	26
21:30	0	31	3	0	1	0	0	0	0	0	0	0	0	35
21:45	0	31	5	0	0	0	0	0	0	0	0	0	0	36
	0	116	18	0	1	0	0	0	0	0	0	0	0	135
22:00	0	20	5	0	0	0	0	0	1	0	0	0	0	26
22:15	0	17	1	0	1	0	0	0	1	0	0	0	0	20
22:30	0	12	7	0	0	0	0	0	1	0	0	0	0	20
22:45	0	8	3	0	1	0	0	0	0	0	0	0	0	12
	0	57	16	0	2	0	0	0	3	0	0	0	0	78
23:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23
23:15	0	24	5	0	0	0	0	0	0	0	0	0	0	29
23:30	0	13	3	0	0	0	0	0	0	0	0	0	0	16
23:45	0	10	4	0	0	0	0	0	1	0	0	0	0	15
	0	66	16	0	0	0	0	0	1	0	0	0	0	83
Total	5	1461	258	9	41	7	0	4	16	3	0	0	0	1804
Percent	0.3%	81.0%	14.3%	0.5%	2.3%	0.4%	0.0%	0.2%	0.9%	0.2%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/02/19	0	6	0	0	0	0	0	0	0	1	0	0	0	7
00:15	0	4	1	0	0	0	0	0	1	0	0	0	0	6
00:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
00:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
	0	18	3	0	0	0	0	0	1	1	0	0	0	23
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
01:15	0	2	2	0	0	0	0	0	0	1	0	0	0	5
01:30	0	2	2	0	0	0	0	0	0	0	0	0	0	4
01:45	0	1	2	0	0	0	0	0	1	0	0	0	0	4
	0	9	6	0	0	0	0	0	1	1	0	0	0	17
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	3	1	0	0	0	0	0	0	1	0	0	0	5
02:45	0	5	1	0	1	0	0	0	1	1	0	0	1	10
	0	14	2	0	1	0	0	0	1	2	0	0	1	21
03:00	0	7	4	0	1	0	0	0	0	0	0	0	0	12
03:15	0	4	2	0	1	0	0	0	4	1	0	0	0	12
03:30	0	7	3	0	0	0	0	0	1	2	0	0	0	13
03:45	0	5	2	0	1	0	0	0	1	0	0	0	0	9
	0	23	11	0	3	0	0	0	6	3	0	0	0	46
04:00	0	3	6	1	0	0	0	0	0	0	0	0	0	10
04:15	0	7	5	0	2	0	1	0	0	0	0	0	0	15
04:30	0	4	4	0	0	1	0	0	0	0	0	0	0	9
04:45	0	10	1	1	2	0	0	0	1	0	0	0	0	15
	0	24	16	2	4	1	1	0	1	0	0	0	0	49
05:00	0	19	4	1	1	1	0	0	2	2	0	0	0	30
05:15	0	23	4	0	1	0	0	0	2	0	0	0	0	30
05:30	0	44	17	0	3	0	0	0	1	0	0	0	0	65
05:45	0	49	17	0	3	1	0	0	1	0	0	0	0	71
	0	135	42	1	8	2	0	0	6	2	0	0	0	196
06:00	0	50	28	0	3	0	0	0	2	0	0	0	0	83
06:15	1	78	29	0	10	0	0	0	0	0	0	0	0	118
06:30	0	113	30	3	10	2	0	0	2	3	0	0	0	163
06:45	0	160	50	1	11	1	0	0	1	0	0	0	0	224
	1	401	137	4	34	3	0	0	5	3	0	0	0	588
07:00	0	149	31	2	10	1	0	1	2	0	0	0	0	196
07:15	1	266	49	3	6	3	0	1	1	0	0	0	0	330
07:30	0	286	29	2	2	1	0	2	1	0	0	0	0	323
07:45	0	298	46	1	5	0	1	0	1	0	0	0	0	352
	1	999	155	8	23	5	1	4	5	0	0	0	0	1201
08:00	0	263	49	1	7	0	0	0	4	1	0	0	0	325
08:15	0	277	29	1	7	0	0	0	1	1	0	0	0	316
08:30	0	254	29	5	4	2	0	0	2	1	0	0	0	297
08:45	0	224	40	2	6	0	1	1	1	1	0	0	0	276
	0	1018	147	9	24	2	1	1	8	4	0	0	0	1214
09:00	2	175	36	2	10	2	0	4	2	0	0	0	0	233
09:15	0	171	19	1	8	0	0	3	0	0	0	0	0	202
09:30	0	119	27	0	4	3	0	0	3	1	0	0	0	157
09:45	0	121	27	1	3	2	0	2	4	0	0	0	0	160
	2	586	109	4	25	7	0	9	9	1	0	0	0	752
10:00	0	78	19	3	5	3	0	4	3	0	0	0	0	115
10:15	0	88	19	2	5	0	0	3	4	0	0	0	0	121
10:30	0	106	31	5	9	1	1	1	3	0	0	0	0	157
10:45	0	111	21	3	8	3	0	0	4	0	0	0	0	150
	0	383	90	13	27	7	1	8	14	0	0	0	0	543
11:00	0	77	21	1	9	1	0	0	1	0	0	0	0	110
11:15	0	89	25	2	9	1	0	0	3	1	0	0	0	130
11:30	0	86	21	4	10	0	0	0	2	1	0	0	0	124
11:45	0	85	19	3	2	2	0	2	3	1	0	0	0	117
	0	337	86	10	30	4	0	2	9	3	0	0	0	481
Total	4	3947	804	51	179	31	4	24	66	20	0	0	1	5131
Percent	0.1%	76.9%	15.7%	1.0%	3.5%	0.6%	0.1%	0.5%	1.3%	0.4%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12 PM	0	83	24	3	2	1	0	0	3	1	0	0	1	118
12:15	0	99	16	1	5	5	0	0	4	0	0	0	0	130
12:30	1	107	18	0	7	0	0	1	1	0	0	0	0	135
12:45	0	96	32	1	1	3	0	1	5	1	0	0	1	141
	1	385	90	5	15	9	0	2	13	2	0	0	2	524
13:00	1	86	31	2	8	2	0	1	1	0	0	0	0	132
13:15	0	78	18	2	7	2	0	0	2	1	0	0	0	110
13:30	0	75	23	2	8	1	1	0	2	1	0	0	0	113
13:45	0	105	16	1	10	2	1	0	1	0	0	0	0	136
	1	344	88	7	33	7	2	1	6	2	0	0	0	491
14:00	0	86	26	2	11	0	2	1	1	0	0	0	0	129
14:15	1	96	21	3	11	2	1	0	2	2	0	0	0	139
14:30	0	86	34	3	7	0	0	1	4	2	0	0	0	137
14:45	0	95	25	2	6	2	1	0	3	0	0	0	0	134
	1	363	106	10	35	4	4	2	10	4	0	0	0	539
15:00	0	104	32	1	4	2	0	1	1	0	0	0	0	145
15:15	0	105	38	2	10	0	0	0	2	0	0	0	0	157
15:30	0	167	37	2	8	0	0	0	0	0	0	0	0	214
15:45	1	124	43	3	1	3	0	0	1	0	0	0	0	176
	1	500	150	8	23	5	0	1	4	0	0	0	0	692
16:00	0	139	30	3	4	0	1	0	1	1	0	0	0	179
16:15	0	144	36	2	7	2	0	0	1	0	0	0	0	192
16:30	0	148	32	1	4	0	0	0	2	1	0	0	0	188
16:45	0	118	24	1	4	0	0	0	1	0	0	0	0	148
	0	549	122	7	19	2	1	0	5	2	0	0	0	707
17:00	0	129	24	1	9	2	0	0	1	0	0	0	0	166
17:15	0	132	15	1	0	0	0	0	0	0	0	0	0	148
17:30	0	109	27	0	2	1	0	0	1	1	0	0	0	141
17:45	0	113	17	4	3	2	0	0	1	4	0	0	0	144
	0	483	83	6	14	5	0	0	3	5	0	0	0	599
18:00	0	113	14	0	4	0	0	0	2	0	0	0	0	133
18:15	0	98	10	1	1	0	0	0	0	0	0	0	0	110
18:30	0	91	6	0	4	1	0	0	1	0	0	0	0	103
18:45	0	70	12	0	3	0	0	0	0	0	0	0	0	85
	0	372	42	1	12	1	0	0	3	0	0	0	0	431
19:00	0	74	15	1	1	0	0	0	1	0	0	0	0	92
19:15	0	80	21	0	2	1	0	1	0	0	0	0	0	105
19:30	0	53	6	0	2	0	0	0	1	1	0	0	0	63
19:45	0	58	5	0	2	0	0	0	0	0	0	0	0	65
	0	265	47	1	7	1	0	1	2	1	0	0	0	325
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	3261	728	45	158	34	7	7	46	16	0	0	2	4308
Percent	0.1%	75.7%	16.9%	1.0%	3.7%	0.8%	0.2%	0.2%	1.1%	0.4%	0.0%	0.0%	0.0%	
Grand Total	13	8669	1790	105	378	72	11	35	128	39	0	0	3	11243
Percent	0.1%	77.1%	15.9%	0.9%	3.4%	0.6%	0.1%	0.3%	1.1%	0.3%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start	1	21	26	31	36	41	46	51	56	61	66	71	76	81	86	
Time	20	25	30	35	40	45	50	55	60	65	70	75	80	85	9999	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	0	0	0	6	54	235	205	47	8	1	0	0	0	0	0	556
18:00	1	0	1	2	57	207	142	30	5	2	0	0	0	0	0	447
19:00	2	0	0	9	43	121	99	23	2	0	0	1	0	0	0	300
20:00	2	0	1	5	36	83	61	15	1	1	0	0	0	0	0	205
21:00	1	0	0	2	25	59	44	3	1	0	0	0	0	0	0	135
22:00	0	0	0	5	18	27	24	4	0	0	0	0	0	0	0	78
23:00	0	0	0	1	10	31	28	11	2	0	0	0	0	0	0	83
Total	6	0	2	30	243	763	603	133	19	4	0	1	0	0	0	1804

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
10/02/19	1	0	0	0	3	5	10	4	0	0	0	0	0	0	0	23
01:00	0	0	0	1	5	5	5	1	0	0	0	0	0	0	0	17
02:00	0	0	0	0	5	8	6	2	0	0	0	0	0	0	0	21
03:00	0	0	0	2	11	9	17	7	0	0	0	0	0	0	0	46
04:00	0	0	0	4	7	21	14	3	0	0	0	0	0	0	0	49
05:00	2	0	0	3	11	77	80	17	5	1	0	0	0	0	0	196
06:00	1	0	0	7	71	277	185	39	7	1	0	0	0	0	0	588
07:00	1	0	3	42	281	634	215	21	3	1	0	0	0	0	0	1201
08:00	3	0	4	53	408	606	133	7	0	0	0	0	0	0	0	1214
09:00	0	0	1	32	146	345	182	41	5	0	0	0	0	0	0	752
10:00	4	4	1	26	110	249	125	22	0	1	1	0	0	0	0	543
11:00	0	0	0	7	100	244	110	17	2	1	0	0	0	0	0	481
12 PM	0	0	1	24	116	248	113	22	0	0	0	0	0	0	0	524
13:00	2	0	2	6	115	223	131	12	0	0	0	0	0	0	0	491
14:00	4	1	0	14	114	255	129	19	1	2	0	0	0	0	0	539
15:00	0	0	3	12	110	342	204	19	1	1	0	0	0	0	0	692
16:00	5	0	0	9	119	355	183	33	3	0	0	0	0	0	0	707
17:00	1	0	1	6	69	272	207	37	5	0	1	0	0	0	0	599
18:00	0	0	0	6	46	202	152	21	3	0	1	0	0	0	0	431
19:00	1	0	0	1	41	158	99	22	1	2	0	0	0	0	0	325
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	25	5	16	255	1888	4535	2300	366	36	10	3	0	0	0	0	9439
Grand Total	31	5	18	285	2131	5298	2903	499	55	14	3	1	0	0	0	11243

Stats

15th Percentile :	38 MPH
50th Percentile :	42 MPH
85th Percentile :	48 MPH
95th Percentile :	50 MPH
Mean Speed(Average) :	44 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	8201
Percent in Pace :	72.9%
Number of Vehicles > 55 MPH :	73
Percent of Vehicles > 55 MPH :	0.6%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	26	70	69	6	2	0	0	0	0	0	0	173
17:15	0	0	0	1	9	64	59	15	1	0	0	0	0	0	0	149
17:30	0	0	0	2	6	51	52	16	1	0	0	0	0	0	0	128
17:45	0	0	0	3	13	50	25	10	4	1	0	0	0	0	0	106
	0	0	0	6	54	235	205	47	8	1	0	0	0	0	0	556
18:00	0	0	0	0	7	55	39	4	2	0	0	0	0	0	0	107
18:15	0	0	0	2	22	54	33	9	2	0	0	0	0	0	0	122
18:30	0	0	1	0	19	52	38	10	0	2	0	0	0	0	0	122
18:45	1	0	0	0	9	46	32	7	1	0	0	0	0	0	0	96
	1	0	1	2	57	207	142	30	5	2	0	0	0	0	0	447
19:00	0	0	0	3	16	33	25	6	1	0	0	0	0	0	0	84
19:15	1	0	0	3	14	34	32	5	0	0	0	0	0	0	0	89
19:30	1	0	0	2	6	32	15	4	0	0	0	1	0	0	0	61
19:45	0	0	0	1	7	22	27	8	1	0	0	0	0	0	0	66
	2	0	0	9	43	121	99	23	2	0	0	1	0	0	0	300
20:00	0	0	0	1	10	23	26	5	0	0	0	0	0	0	0	65
20:15	0	0	0	1	4	29	15	4	1	1	0	0	0	0	0	55
20:30	2	0	1	2	12	15	7	1	0	0	0	0	0	0	0	40
20:45	0	0	0	1	10	16	13	5	0	0	0	0	0	0	0	45
	2	0	1	5	36	83	61	15	1	1	0	0	0	0	0	205
21:00	0	0	0	0	11	14	13	0	0	0	0	0	0	0	0	38
21:15	1	0	0	1	3	12	8	1	0	0	0	0	0	0	0	26
21:30	0	0	0	0	4	16	13	2	0	0	0	0	0	0	0	35
21:45	0	0	0	1	7	17	10	0	1	0	0	0	0	0	0	36
	1	0	0	2	25	59	44	3	1	0	0	0	0	0	0	135
22:00	0	0	0	2	9	12	3	0	0	0	0	0	0	0	0	26
22:15	0	0	0	1	0	5	10	4	0	0	0	0	0	0	0	20
22:30	0	0	0	1	7	6	6	0	0	0	0	0	0	0	0	20
22:45	0	0	0	1	2	4	5	0	0	0	0	0	0	0	0	12
	0	0	0	5	18	27	24	4	0	0	0	0	0	0	0	78
23:00	0	0	0	0	5	10	6	2	0	0	0	0	0	0	0	23
23:15	0	0	0	0	2	6	14	6	1	0	0	0	0	0	0	29
23:30	0	0	0	0	1	8	5	2	0	0	0	0	0	0	0	16
23:45	0	0	0	1	2	7	3	1	1	0	0	0	0	0	0	15
	0	0	0	1	10	31	28	11	2	0	0	0	0	0	0	83
Total	6	0	2	30	243	763	603	133	19	4	0	1	0	0	0	1804

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
10/02/1																
9	0	0	0	0	1	2	3	1	0	0	0	0	0	0	0	7
00:15	0	0	0	0	1	1	3	1	0	0	0	0	0	0	0	6
00:30	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4
00:45	1	0	0	0	1	1	2	1	0	0	0	0	0	0	0	6
	1	0	0	0	3	5	10	4	0	0	0	0	0	0	0	23
01:00	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4
01:15	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	5
01:30	0	0	0	1	2	0	1	0	0	0	0	0	0	0	0	4
01:45	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
	0	0	0	1	5	5	5	1	0	0	0	0	0	0	0	17
02:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
02:15	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	3
02:30	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	5
02:45	0	0	0	0	3	3	3	1	0	0	0	0	0	0	0	10
	0	0	0	0	5	8	6	2	0	0	0	0	0	0	0	21
03:00	0	0	0	0	3	3	3	3	0	0	0	0	0	0	0	12
03:15	0	0	0	0	5	2	3	2	0	0	0	0	0	0	0	12
03:30	0	0	0	2	0	2	7	2	0	0	0	0	0	0	0	13
03:45	0	0	0	0	3	2	4	0	0	0	0	0	0	0	0	9
	0	0	0	2	11	9	17	7	0	0	0	0	0	0	0	46
04:00	0	0	0	0	2	5	3	0	0	0	0	0	0	0	0	10
04:15	0	0	0	2	0	6	6	1	0	0	0	0	0	0	0	15
04:30	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	9
04:45	0	0	0	1	3	7	3	1	0	0	0	0	0	0	0	15
	0	0	0	4	7	21	14	3	0	0	0	0	0	0	0	49
05:00	0	0	0	1	3	10	10	5	1	0	0	0	0	0	0	30
05:15	0	0	0	0	2	14	12	2	0	0	0	0	0	0	0	30
05:30	2	0	0	1	3	24	28	6	1	0	0	0	0	0	0	65
05:45	0	0	0	1	3	29	30	4	3	1	0	0	0	0	0	71
	2	0	0	3	11	77	80	17	5	1	0	0	0	0	0	196
06:00	0	0	0	0	8	35	32	6	1	1	0	0	0	0	0	83
06:15	1	0	0	1	11	58	38	8	1	0	0	0	0	0	0	118
06:30	0	0	0	4	28	71	46	12	2	0	0	0	0	0	0	163
06:45	0	0	0	2	24	113	69	13	3	0	0	0	0	0	0	224
	1	0	0	7	71	277	185	39	7	1	0	0	0	0	0	588
07:00	0	0	0	3	20	104	58	9	2	0	0	0	0	0	0	196
07:15	0	0	0	4	55	203	63	5	0	0	0	0	0	0	0	330
07:30	0	0	0	0	55	196	67	3	1	1	0	0	0	0	0	323
07:45	1	0	3	35	151	131	27	4	0	0	0	0	0	0	0	352
	1	0	3	42	281	634	215	21	3	1	0	0	0	0	0	1201
08:00	1	0	0	22	116	154	30	2	0	0	0	0	0	0	0	325
08:15	2	0	0	14	96	162	40	2	0	0	0	0	0	0	0	316
08:30	0	0	0	4	90	167	35	1	0	0	0	0	0	0	0	297
08:45	0	0	4	13	106	123	28	2	0	0	0	0	0	0	0	276
	3	0	4	53	408	606	133	7	0	0	0	0	0	0	0	1214
09:00	0	0	1	19	65	101	41	6	0	0	0	0	0	0	0	233
09:15	0	0	0	2	33	92	62	13	0	0	0	0	0	0	0	202
09:30	0	0	0	8	25	69	36	18	1	0	0	0	0	0	0	157
09:45	0	0	0	3	23	83	43	4	4	0	0	0	0	0	0	160
	0	0	1	32	146	345	182	41	5	0	0	0	0	0	0	752
10:00	0	0	0	3	20	57	27	8	0	0	0	0	0	0	0	115
10:15	1	0	0	8	30	49	23	8	0	1	1	0	0	0	0	121
10:30	2	4	0	10	34	77	27	3	0	0	0	0	0	0	0	157
10:45	1	0	1	5	26	66	48	3	0	0	0	0	0	0	0	150
	4	4	1	26	110	249	125	22	0	1	1	0	0	0	0	543
11:00	0	0	0	3	28	44	27	6	1	1	0	0	0	0	0	110
11:15	0	0	0	3	26	65	29	7	0	0	0	0	0	0	0	130
11:30	0	0	0	1	29	61	29	4	0	0	0	0	0	0	0	124
11:45	0	0	0	0	17	74	25	0	1	0	0	0	0	0	0	117
	0	0	0	7	100	244	110	17	2	1	0	0	0	0	0	481
Total	12	4	9	177	1158	2480	1082	181	22	5	1	0	0	0	0	5131

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Northbound

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
12 PM	0	0	1	6	26	51	29	5	0	0	0	0	0	0	0	118
12:15	0	0	0	4	32	63	27	4	0	0	0	0	0	0	0	130
12:30	0	0	0	5	27	70	29	4	0	0	0	0	0	0	0	135
12:45	0	0	0	9	31	64	28	9	0	0	0	0	0	0	0	141
	0	0	1	24	116	248	113	22	0	0	0	0	0	0	0	524
13:00	2	0	1	1	31	58	37	2	0	0	0	0	0	0	0	132
13:15	0	0	0	3	24	60	22	1	0	0	0	0	0	0	0	110
13:30	0	0	0	0	38	41	32	2	0	0	0	0	0	0	0	113
13:45	0	0	1	2	22	64	40	7	0	0	0	0	0	0	0	136
	2	0	2	6	115	223	131	12	0	0	0	0	0	0	0	491
14:00	1	0	0	0	19	67	33	8	1	0	0	0	0	0	0	129
14:15	2	1	0	6	30	64	35	1	0	0	0	0	0	0	0	139
14:30	0	0	0	2	29	69	33	2	0	2	0	0	0	0	0	137
14:45	1	0	0	6	36	55	28	8	0	0	0	0	0	0	0	134
	4	1	0	14	114	255	129	19	1	2	0	0	0	0	0	539
15:00	0	0	3	1	23	68	46	3	0	1	0	0	0	0	0	145
15:15	0	0	0	3	41	74	33	6	0	0	0	0	0	0	0	157
15:30	0	0	0	2	27	108	68	8	1	0	0	0	0	0	0	214
15:45	0	0	0	6	19	92	57	2	0	0	0	0	0	0	0	176
	0	0	3	12	110	342	204	19	1	1	0	0	0	0	0	692
16:00	5	0	0	7	35	91	36	5	0	0	0	0	0	0	0	179
16:15	0	0	0	1	37	97	51	5	1	0	0	0	0	0	0	192
16:30	0	0	0	1	24	100	53	9	1	0	0	0	0	0	0	188
16:45	0	0	0	0	23	67	43	14	1	0	0	0	0	0	0	148
	5	0	0	9	119	355	183	33	3	0	0	0	0	0	0	707
17:00	0	0	1	1	14	93	45	11	0	0	1	0	0	0	0	166
17:15	0	0	0	0	17	70	53	6	2	0	0	0	0	0	0	148
17:30	1	0	0	1	14	57	61	5	2	0	0	0	0	0	0	141
17:45	0	0	0	4	24	52	48	15	1	0	0	0	0	0	0	144
	1	0	1	6	69	272	207	37	5	0	1	0	0	0	0	599
18:00	0	0	0	4	21	52	44	10	1	0	1	0	0	0	0	133
18:15	0	0	0	0	11	55	39	4	1	0	0	0	0	0	0	110
18:30	0	0	0	0	13	50	35	5	0	0	0	0	0	0	0	103
18:45	0	0	0	2	1	45	34	2	1	0	0	0	0	0	0	85
	0	0	0	6	46	202	152	21	3	0	1	0	0	0	0	431
19:00	0	0	0	1	6	43	34	8	0	0	0	0	0	0	0	92
19:15	0	0	0	0	21	52	28	3	0	1	0	0	0	0	0	105
19:30	1	0	0	0	8	37	12	5	0	0	0	0	0	0	0	63
19:45	0	0	0	0	6	26	25	6	1	1	0	0	0	0	0	65
	1	0	0	1	41	158	99	22	1	2	0	0	0	0	0	325
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	13	1	7	78	730	2055	1218	185	14	5	2	0	0	0	0	4308
Total	31	5	18	285	2131	5298	2903	499	55	14	3	1	0	0	0	11243

Stats		
15th Percentile :	38	MPH
50th Percentile :	42	MPH
85th Percentile :	48	MPH
95th Percentile :	50	MPH
Mean Speed(Average) :	44	MPH
10 MPH Pace Speed :	41-50	MPH
Number in Pace :	8201	
Percent in Pace :	72.9%	
Number of Vehicles > 55 MPH :	73	
Percent of Vehicles > 55 MPH :	0.6%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Start Time	Mon 30-Sep-19	Tue 01-Oct-19	Wed 02-Oct-19	Thu 03-Oct-19	Fri 04-Oct-19	Average Day	Sat 05-Oct-19	Sun 06-Oct-19	Week Average
12:00 AM	*	*	23	*	*	23	*	*	23
01:00	*	*	17	*	*	17	*	*	17
02:00	*	*	21	*	*	21	*	*	21
03:00	*	*	46	*	*	46	*	*	46
04:00	*	*	49	*	*	49	*	*	49
05:00	*	*	196	*	*	196	*	*	196
06:00	*	*	588	*	*	588	*	*	588
07:00	*	*	1201	*	*	1201	*	*	1201
08:00	*	*	**1214**	*	*	**1214**	*	*	**1214**
09:00	*	*	752	*	*	752	*	*	752
10:00	*	*	543	*	*	543	*	*	543
11:00	*	*	481	*	*	481	*	*	481
12:00 PM	*	*	524	*	*	524	*	*	524
01:00	*	*	491	*	*	491	*	*	491
02:00	*	*	539	*	*	539	*	*	539
03:00	*	*	692	*	*	692	*	*	692
04:00	*	*	**707**	*	*	**707**	*	*	**707**
05:00	*	**556**	599	*	*	578	*	*	578
06:00	*	447	431	*	*	439	*	*	439
07:00	*	300	325	*	*	312	*	*	312
08:00	*	205	*	*	*	205	*	*	205
09:00	*	135	*	*	*	135	*	*	135
10:00	*	78	*	*	*	78	*	*	78
11:00	*	83	*	*	*	83	*	*	83
Day Total	0	1804	9439	0	0	9914	0	0	9914
% Avg. WkDay	0.0%	18.2%	95.2%	0.0%	0.0%				
% Avg. Week	0.0%	18.2%	95.2%	0.0%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	08:00	-	-	08:00	-	-	08:00
Vol.	-	-	1214	-	-	1214	-	-	1214
PM Peak	-	17:00	16:00	-	-	16:00	-	-	16:00
Vol.	-	556	707	-	-	707	-	-	707
Grand Total	0	1804	9439	0	0	9914	0	0	9914

ADT ADT 9,882 AADT 9,882

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Start Time	01-Oct-19 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		*	*		
12:15		*	*		
12:30		*	*		
12:45		*	*	0	0
01:00		*	*		
01:15		*	*		
01:30		*	*		
01:45		*	*	0	0
02:00		*	*		
02:15		*	*		
02:30		*	*		
02:45		*	*	0	0
03:00		*	*		
03:15		*	*		
03:30		*	*		
03:45		*	*	0	0
04:00		*	*		
04:15		*	*		
04:30		*	*		
04:45		*	*	0	0
05:00		*	173		
05:15		*	149		
05:30		*	128		
05:45		*	106	0	556
06:00		*	107		
06:15		*	122		
06:30		*	122		
06:45		*	96	0	447
07:00		*	84		
07:15		*	89		
07:30		*	61		
07:45		*	66	0	300
08:00		*	65		
08:15		*	55		
08:30		*	40		
08:45		*	45	0	205
09:00		*	38		
09:15		*	26		
09:30		*	35		
09:45		*	36	0	135
10:00		*	26		
10:15		*	20		
10:30		*	20		
10:45		*	12	0	78
11:00		*	23		
11:15		*	29		
11:30		*	16		
11:45		*	15	0	83
Total		0	1804		
Percent		0.0%	100.0%		

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramo from US 9W
Segment: 490' E of US 9W
Ctr#: 35246

GPS: 42.632459, -73.774014

Start Time	02-Oct-19 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		7	118		
12:15		6	130		
12:30		4	135		
12:45		6	141	23	524
01:00		4	132		
01:15		5	110		
01:30		4	113		
01:45		4	136	17	491
02:00		3	129		
02:15		3	139		
02:30		5	137		
02:45		10	134	21	539
03:00		12	145		
03:15		12	157		
03:30		13	214		
03:45		9	176	46	692
04:00		10	179		
04:15		15	192		
04:30		9	188		
04:45		15	148	49	707
05:00		30	166		
05:15		30	148		
05:30		65	141		
05:45		71	144	196	599
06:00		83	133		
06:15		118	110		
06:30		163	103		
06:45		224	85	588	431
07:00		196	92		
07:15		330	105		
07:30		323	63		
07:45		352	65	1201	325
08:00		325	0		
08:15		316	*		
08:30		297	*		
08:45		276	*	1214	0
09:00		233	*		
09:15		202	*		
09:30		157	*		
09:45		160	*	752	0
10:00		115	*		
10:15		121	*		
10:30		157	*		
10:45		150	*	543	0
11:00		110	*		
11:15		130	*		
11:30		124	*		
11:45		117	*	481	0
Total		5131	4308		
Percent		54.4%	45.6%		
Grand Total		5131	6112		
Percent		45.6%	54.4%		
ADT		ADT 9,882		AADT 9,882	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	0	**427**	**35**	**2**	**7**	1	0	1	3	0	0	0	0	**476**
18:00	**2**	315	15	2	4	**2**	0	1	**5**	1	0	0	0	347
19:00	0	230	14	1	5	1	0	**2**	3	0	0	0	0	256
20:00	0	154	10	1	2	0	0	0	3	**3**	0	0	0	173
21:00	0	141	8	0	0	0	0	0	4	1	0	0	0	154
22:00	0	139	9	0	2	0	0	0	0	0	0	0	0	150
23:00	0	122	10	0	0	0	0	1	2	0	0	0	0	135
Day Total	2	1528	101	6	20	4	0	5	20	5	0	0	0	1691
Percent	0.1%	90.4%	6.0%	0.4%	1.2%	0.2%	0.0%	0.3%	1.2%	0.3%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak	18:00	17:00	17:00	17:00	17:00	18:00		19:00	18:00	20:00				17:00
Vol.	2	427	35	2	7	2		2	5	3				476

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
10/02/19	0	92	2	1	1	0	0	0	0	0	0	0	0	96
01:00	0	61	5	1	0	1	0	0	1	0	0	0	0	69
02:00	0	34	2	0	0	0	0	1	2	0	0	0	0	39
03:00	0	42	4	0	0	0	0	1	2	1	0	0	0	50
04:00	0	75	9	0	4	3	0	0	1	0	0	0	0	92
05:00	0	201	25	1	4	0	0	2	5	3	0	0	0	241
06:00	0	527	**89**	1	**14**	1	0	**5**	**14**	3	0	0	0	654
07:00	1	1204	81	4	13	4	0	0	4	**6**	0	0	0	1317
08:00	**3**	**1340**	76	1	10	4	0	3	9	6	0	0	0	**1452**
09:00	0	643	51	3	13	**6**	**1**	2	7	2	0	0	0	728
10:00	1	477	52	**5**	5	2	0	1	7	1	0	0	0	551
11:00	0	415	52	2	12	0	0	3	4	2	0	0	0	490
12 PM	2	395	37	1	9	1	0	1	**8**	**3**	0	0	0	457
13:00	0	425	28	1	5	1	0	1	4	0	0	0	0	465
14:00	1	464	42	**4**	6	0	0	0	4	2	0	0	0	523
15:00	**4**	**471**	**46**	0	**10**	**2**	0	0	1	0	0	0	0	**534**
16:00	0	467	37	2	10	1	**1**	**2**	2	0	0	0	0	522
17:00	0	460	25	2	10	2	0	1	1	0	0	0	0	501
18:00	0	304	16	2	5	0	0	0	0	0	0	0	0	327
19:00	0	231	9	1	2	1	0	0	2	0	0	0	0	246
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Day Total	12	8328	688	32	133	29	2	23	78	29	0	0	0	9354
Percent	0.1%	89.0%	7.4%	0.3%	1.4%	0.3%	0.0%	0.2%	0.8%	0.3%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	10:00	06:00	09:00	09:00	06:00	06:00	07:00				08:00
Vol.	3	1340	89	5	14	6	1	5	14	6				1452
PM Peak	15:00	15:00	15:00	14:00	15:00	15:00	16:00	16:00	12:00	12:00				15:00
Vol.	4	471	46	4	10	2	1	2	8	3				534
Grand Total	14	9856	789	38	153	33	2	28	98	34	0	0	0	11045
Percent	0.1%	89.2%	7.1%	0.3%	1.4%	0.3%	0.0%	0.3%	0.9%	0.3%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment" 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment" 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	124	7	1	3	0	0	1	1	0	0	0	0	137
17:15	0	96	11	0	1	0	0	0	1	0	0	0	0	109
17:30	0	113	10	0	1	1	0	0	1	0	0	0	0	126
17:45	0	94	7	1	2	0	0	0	0	0	0	0	0	104
	0	427	35	2	7	1	0	1	3	0	0	0	0	476
18:00	0	97	4	0	2	2	0	0	1	0	0	0	0	106
18:15	0	78	5	0	2	0	0	0	2	1	0	0	0	88
18:30	0	85	5	2	0	0	0	0	1	0	0	0	0	93
18:45	2	55	1	0	0	0	0	1	1	0	0	0	0	60
	2	315	15	2	4	2	0	1	5	1	0	0	0	347
19:00	0	70	4	0	3	1	0	0	0	0	0	0	0	78
19:15	0	51	5	0	1	0	0	1	0	0	0	0	0	58
19:30	0	60	2	1	0	0	0	1	1	0	0	0	0	65
19:45	0	49	3	0	1	0	0	0	2	0	0	0	0	55
	0	230	14	1	5	1	0	2	3	0	0	0	0	256
20:00	0	42	5	0	0	0	0	0	1	1	0	0	0	49
20:15	0	38	1	0	1	0	0	0	0	1	0	0	0	41
20:30	0	41	2	1	1	0	0	0	2	0	0	0	0	47
20:45	0	33	2	0	0	0	0	0	0	1	0	0	0	36
	0	154	10	1	2	0	0	0	3	3	0	0	0	173
21:00	0	39	1	0	0	0	0	0	0	0	0	0	0	40
21:15	0	30	1	0	0	0	0	0	1	0	0	0	0	32
21:30	0	35	2	0	0	0	0	0	3	0	0	0	0	40
21:45	0	37	4	0	0	0	0	0	0	1	0	0	0	42
	0	141	8	0	0	0	0	0	4	1	0	0	0	154
22:00	0	35	3	0	1	0	0	0	0	0	0	0	0	39
22:15	0	30	1	0	0	0	0	0	0	0	0	0	0	31
22:30	0	40	3	0	0	0	0	0	0	0	0	0	0	43
22:45	0	34	2	0	1	0	0	0	0	0	0	0	0	37
	0	139	9	0	2	0	0	0	0	0	0	0	0	150
23:00	0	31	2	0	0	0	0	0	1	0	0	0	0	34
23:15	0	34	4	0	0	0	0	0	0	0	0	0	0	38
23:30	0	30	2	0	0	0	0	1	1	0	0	0	0	34
23:45	0	27	2	0	0	0	0	0	0	0	0	0	0	29
	0	122	10	0	0	0	0	1	2	0	0	0	0	135
Total	2	1528	101	6	20	4	0	5	20	5	0	0	0	1691
Percent	0.1%	90.4%	6.0%	0.4%	1.2%	0.2%	0.0%	0.3%	1.2%	0.3%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment" 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
10/02/19	0	37	1	0	0	0	0	0	0	0	0	0	0	38
00:15	0	29	0	0	0	0	0	0	0	0	0	0	0	29
00:30	0	15	1	0	0	0	0	0	0	0	0	0	0	16
00:45	0	11	0	1	1	0	0	0	0	0	0	0	0	13
	0	92	2	1	1	0	0	0	0	0	0	0	0	96
01:00	0	21	0	0	0	0	0	0	0	0	0	0	0	21
01:15	0	6	2	1	0	0	0	0	0	0	0	0	0	9
01:30	0	14	1	0	0	1	0	0	0	0	0	0	0	16
01:45	0	20	2	0	0	0	0	0	1	0	0	0	0	23
	0	61	5	1	0	1	0	0	1	0	0	0	0	69
02:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
02:15	0	11	1	0	0	0	0	0	1	0	0	0	0	13
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	13	1	0	0	0	0	1	1	0	0	0	0	16
	0	34	2	0	0	0	0	1	2	0	0	0	0	39
03:00	0	21	2	0	0	0	0	1	0	0	0	0	0	24
03:15	0	5	0	0	0	0	0	0	0	1	0	0	0	6
03:30	0	11	0	0	0	0	0	0	1	0	0	0	0	12
03:45	0	5	2	0	0	0	0	0	1	0	0	0	0	8
	0	42	4	0	0	0	0	1	2	1	0	0	0	50
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
04:15	0	24	1	0	1	0	0	0	0	0	0	0	0	26
04:30	0	21	0	0	0	2	0	0	1	0	0	0	0	24
04:45	0	24	7	0	3	1	0	0	0	0	0	0	0	35
	0	75	9	0	4	3	0	0	1	0	0	0	0	92
05:00	0	53	4	0	1	0	0	2	2	1	0	0	0	63
05:15	0	38	3	0	0	0	0	0	0	0	0	0	0	41
05:30	0	46	6	0	1	0	0	0	1	2	0	0	0	56
05:45	0	64	12	1	2	0	0	0	2	0	0	0	0	81
	0	201	25	1	4	0	0	2	5	3	0	0	0	241
06:00	0	63	16	0	2	0	0	1	4	1	0	0	0	87
06:15	0	97	19	0	2	1	0	3	4	0	0	0	0	126
06:30	0	167	25	1	5	0	0	1	4	1	0	0	0	204
06:45	0	200	29	0	5	0	0	0	2	1	0	0	0	237
	0	527	89	1	14	1	0	5	14	3	0	0	0	654
07:00	0	241	14	1	4	0	0	0	0	3	0	0	0	263
07:15	0	284	25	1	3	1	0	0	1	1	0	0	0	316
07:30	1	280	14	2	3	0	0	0	2	0	0	0	0	302
07:45	0	399	28	0	3	3	0	0	1	2	0	0	0	436
	1	1204	81	4	13	4	0	0	4	6	0	0	0	1317
08:00	2	343	18	0	3	1	0	0	2	3	0	0	0	372
08:15	0	351	20	0	2	3	0	0	2	2	0	0	0	380
08:30	1	320	16	0	2	0	0	2	1	0	0	0	0	342
08:45	0	326	22	1	3	0	0	1	4	1	0	0	0	358
	3	1340	76	1	10	4	0	3	9	6	0	0	0	1452
09:00	0	199	11	3	6	1	1	1	0	0	0	0	0	222
09:15	0	159	15	0	1	0	0	0	2	0	0	0	0	177
09:30	0	145	15	0	4	1	0	0	1	1	0	0	0	167
09:45	0	140	10	0	2	4	0	1	4	1	0	0	0	162
	0	643	51	3	13	6	1	2	7	2	0	0	0	728
10:00	0	110	11	3	2	1	0	1	0	0	0	0	0	128
10:15	0	127	14	1	2	1	0	0	2	0	0	0	0	147
10:30	1	119	14	0	0	0	0	0	4	1	0	0	0	139
10:45	0	121	13	1	1	0	0	0	1	0	0	0	0	137
	1	477	52	5	5	2	0	1	7	1	0	0	0	551
11:00	0	110	16	0	5	0	0	1	0	0	0	0	0	132
11:15	0	121	10	1	2	0	0	0	0	0	0	0	0	134
11:30	0	86	18	0	4	0	0	0	2	1	0	0	0	111
11:45	0	98	8	1	1	0	0	2	2	1	0	0	0	113
	0	415	52	2	12	0	0	3	4	2	0	0	0	490
Total	5	5111	448	19	76	21	1	18	56	24	0	0	0	5779
Percent	0.1%	88.4%	7.8%	0.3%	1.3%	0.4%	0.0%	0.3%	1.0%	0.4%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment" 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
12 PM	0	93	7	1	4	0	0	0	2	0	0	0	0	107
12:15	0	106	9	0	2	0	0	1	2	0	0	0	0	120
12:30	1	106	9	0	3	1	0	0	2	1	0	0	0	123
12:45	1	90	12	0	0	0	0	0	2	2	0	0	0	107
	2	395	37	1	9	1	0	1	8	3	0	0	0	457
13:00	0	110	7	0	1	0	0	0	2	0	0	0	0	120
13:15	0	116	10	0	1	1	0	1	0	0	0	0	0	129
13:30	0	99	4	1	1	0	0	0	1	0	0	0	0	106
13:45	0	100	7	0	2	0	0	0	1	0	0	0	0	110
	0	425	28	1	5	1	0	1	4	0	0	0	0	465
14:00	1	101	6	1	2	0	0	0	1	0	0	0	0	112
14:15	0	110	12	0	0	0	0	0	0	0	0	0	0	122
14:30	0	120	11	1	4	0	0	0	2	1	0	0	0	139
14:45	0	133	13	2	0	0	0	0	1	1	0	0	0	150
	1	464	42	4	6	0	0	0	4	2	0	0	0	523
15:00	0	104	7	0	1	0	0	0	0	0	0	0	0	112
15:15	1	114	14	0	2	1	0	0	1	0	0	0	0	133
15:30	3	144	10	0	5	0	0	0	0	0	0	0	0	162
15:45	0	109	15	0	2	1	0	0	0	0	0	0	0	127
	4	471	46	0	10	2	0	0	1	0	0	0	0	534
16:00	0	129	12	2	2	0	1	1	0	0	0	0	0	147
16:15	0	107	7	0	2	1	0	1	0	0	0	0	0	118
16:30	0	113	10	0	1	0	0	0	1	0	0	0	0	125
16:45	0	118	8	0	5	0	0	0	1	0	0	0	0	132
	0	467	37	2	10	1	1	2	2	0	0	0	0	522
17:00	0	155	9	1	2	0	0	0	1	0	0	0	0	168
17:15	0	128	9	0	3	0	0	0	0	0	0	0	0	140
17:30	0	93	4	0	2	1	0	1	0	0	0	0	0	101
17:45	0	84	3	1	3	1	0	0	0	0	0	0	0	92
	0	460	25	2	10	2	0	1	1	0	0	0	0	501
18:00	0	79	6	0	0	0	0	0	0	0	0	0	0	85
18:15	0	69	4	0	1	0	0	0	0	0	0	0	0	74
18:30	0	91	2	1	1	0	0	0	0	0	0	0	0	95
18:45	0	65	4	1	3	0	0	0	0	0	0	0	0	73
	0	304	16	2	5	0	0	0	0	0	0	0	0	327
19:00	0	50	3	0	0	0	0	0	0	0	0	0	0	53
19:15	0	67	3	0	2	1	0	0	1	0	0	0	0	74
19:30	0	55	2	1	0	0	0	0	1	0	0	0	0	59
19:45	0	59	1	0	0	0	0	0	0	0	0	0	0	60
	0	231	9	1	2	1	0	0	2	0	0	0	0	246
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	3217	240	13	57	8	1	5	22	5	0	0	0	3575
Percent	0.2%	90.0%	6.7%	0.4%	1.6%	0.2%	0.0%	0.1%	0.6%	0.1%	0.0%	0.0%	0.0%	
Grand Total	14	9856	789	38	153	33	2	28	98	34	0	0	0	11045
Percent	0.1%	89.2%	7.1%	0.3%	1.4%	0.3%	0.0%	0.3%	0.9%	0.3%	0.0%	0.0%	0.0%	

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	0	0	0	0	0	0	1	13	75	178	174	30	5	0	0	476
18:00	0	0	0	0	0	0	3	13	56	142	112	17	4	0	0	347
19:00	0	0	0	0	0	0	1	18	90	99	43	5	0	0	0	256
20:00	0	0	0	0	1	0	4	16	49	79	20	3	1	0	0	173
21:00	0	0	0	0	0	0	3	14	45	60	28	4	0	0	0	154
22:00	0	0	0	0	0	2	2	10	57	55	20	4	0	0	0	150
23:00	0	0	0	0	0	0	1	9	24	51	31	16	3	0	0	135
Total	0	0	0	0	1	2	15	93	396	664	428	79	13	0	0	1691

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
10/02/19	0	0	0	0	0	0	0	4	32	52	7	0	1	0	0	96
01:00	0	0	0	0	0	0	0	3	28	33	4	1	0	0	0	69
02:00	0	0	0	0	0	0	1	7	6	19	5	0	1	0	0	39
03:00	0	0	0	0	0	0	2	0	11	21	13	2	0	1	0	50
04:00	0	0	0	0	0	0	1	3	32	37	14	4	0	1	0	92
05:00	0	0	0	0	0	0	6	6	69	109	40	11	0	0	0	241
06:00	0	0	0	1	0	1	12	48	169	304	99	19	1	0	0	654
07:00	0	0	0	0	0	0	22	205	486	446	134	22	2	0	0	1317
08:00	0	0	0	0	0	2	40	238	524	502	123	21	2	0	0	1452
09:00	0	0	0	0	0	0	5	40	151	356	151	25	0	0	0	728
10:00	0	0	0	0	0	0	11	45	121	213	126	29	6	0	0	551
11:00	0	0	0	0	0	3	10	22	134	218	88	12	2	1	0	490
12 PM	0	0	0	0	0	0	3	23	110	233	75	9	4	0	0	457
13:00	0	0	1	0	0	6	6	27	161	189	58	13	4	0	0	465
14:00	0	0	0	0	0	1	3	33	158	250	68	9	1	0	0	523
15:00	0	0	0	0	0	1	2	12	109	283	108	16	2	1	0	534
16:00	0	2	0	0	0	0	1	23	128	225	128	13	2	0	0	522
17:00	0	0	0	0	0	0	0	9	65	243	153	28	3	0	0	501
18:00	0	0	0	0	0	0	1	6	70	154	85	9	2	0	0	327
19:00	0	0	0	0	0	0	2	9	66	110	48	9	1	1	0	246
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	2	1	1	0	14	128	763	2630	3997	1527	252	34	5	0	9354
Grand Total	0	2	1	1	1	16	143	856	3026	4661	1955	331	47	5	0	11045

Stats

15th Percentile :	41 MPH
50th Percentile :	46 MPH
85th Percentile :	51 MPH
95th Percentile :	54 MPH
Mean Speed(Average) :	47 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	7687
Percent in Pace :	69.6%
Number of Vehicles > 55 MPH :	383
Percent of Vehicles > 55 MPH :	3.5%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
10/01/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
00:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	1	3	17	59	47	9	1	0	0	137
17:15	0	0	0	0	0	0	0	3	12	30	53	11	0	0	0	109
17:30	0	0	0	0	0	0	0	7	30	45	38	4	2	0	0	126
17:45	0	0	0	0	0	0	0	0	16	44	36	6	2	0	0	104
	0	0	0	0	0	0	1	13	75	178	174	30	5	0	0	476
18:00	0	0	0	0	0	0	0	2	11	41	45	7	0	0	0	106
18:15	0	0	0	0	0	0	2	4	14	28	32	5	3	0	0	88
18:30	0	0	0	0	0	0	0	3	13	48	27	2	0	0	0	93
18:45	0	0	0	0	0	0	1	4	18	25	8	3	1	0	0	60
	0	0	0	0	0	0	3	13	56	142	112	17	4	0	0	347
19:00	0	0	0	0	0	0	0	8	35	18	15	2	0	0	0	78
19:15	0	0	0	0	0	0	1	1	19	23	11	3	0	0	0	58
19:30	0	0	0	0	0	0	0	4	17	35	9	0	0	0	0	65
19:45	0	0	0	0	0	0	0	5	19	23	8	0	0	0	0	55
	0	0	0	0	0	0	1	18	90	99	43	5	0	0	0	256
20:00	0	0	0	0	0	0	2	4	9	28	4	1	1	0	0	49
20:15	0	0	0	0	0	0	1	0	9	20	9	2	0	0	0	41
20:30	0	0	0	0	1	0	0	8	17	17	4	0	0	0	0	47
20:45	0	0	0	0	0	0	1	4	14	14	3	0	0	0	0	36
	0	0	0	0	1	0	4	16	49	79	20	3	1	0	0	173
21:00	0	0	0	0	0	0	1	2	2	25	8	2	0	0	0	40
21:15	0	0	0	0	0	0	0	3	11	12	6	0	0	0	0	32
21:30	0	0	0	0	0	0	1	5	17	11	6	0	0	0	0	40
21:45	0	0	0	0	0	0	1	4	15	12	8	2	0	0	0	42
	0	0	0	0	0	0	3	14	45	60	28	4	0	0	0	154
22:00	0	0	0	0	0	2	0	2	14	16	4	1	0	0	0	39
22:15	0	0	0	0	0	0	1	2	8	16	3	1	0	0	0	31
22:30	0	0	0	0	0	0	1	2	14	18	7	1	0	0	0	43
22:45	0	0	0	0	0	0	0	4	21	5	6	1	0	0	0	37
	0	0	0	0	0	2	2	10	57	55	20	4	0	0	0	150
23:00	0	0	0	0	0	0	0	2	9	20	3	0	0	0	0	34
23:15	0	0	0	0	0	0	0	2	5	9	12	9	1	0	0	38
23:30	0	0	0	0	0	0	1	4	7	8	8	5	1	0	0	34
23:45	0	0	0	0	0	0	0	1	3	14	8	2	1	0	0	29
	0	0	0	0	0	0	1	9	24	51	31	16	3	0	0	135
Total	0	0	0	0	1	2	15	93	396	664	428	79	13	0	0	1691

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
10/02/1																
9	0	0	0	0	0	0	0	3	23	10	2	0	0	0	0	38
00:15	0	0	0	0	0	0	0	1	6	20	1	0	1	0	0	29
00:30	0	0	0	0	0	0	0	0	2	10	4	0	0	0	0	16
00:45	0	0	0	0	0	0	0	0	1	12	0	0	0	0	0	13
	0	0	0	0	0	0	0	4	32	52	7	0	1	0	0	96
01:00	0	0	0	0	0	0	0	0	13	8	0	0	0	0	0	21
01:15	0	0	0	0	0	0	0	1	4	2	1	1	0	0	0	9
01:30	0	0	0	0	0	0	0	1	7	7	1	0	0	0	0	16
01:45	0	0	0	0	0	0	0	1	4	16	2	0	0	0	0	23
	0	0	0	0	0	0	0	3	28	33	4	1	0	0	0	69
02:00	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	7
02:15	0	0	0	0	0	0	1	6	2	0	3	0	1	0	0	13
02:30	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3
02:45	0	0	0	0	0	0	0	1	2	12	1	0	0	0	0	16
	0	0	0	0	0	0	1	7	6	19	5	0	1	0	0	39
03:00	0	0	0	0	0	0	0	0	7	16	0	1	0	0	0	24
03:15	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	6
03:30	0	0	0	0	0	0	0	0	2	2	8	0	0	0	0	12
03:45	0	0	0	0	0	0	1	0	2	3	0	1	0	1	0	8
	0	0	0	0	0	0	2	0	11	21	13	2	0	1	0	50
04:00	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	7
04:15	0	0	0	0	0	0	1	1	13	10	1	0	0	0	0	26
04:30	0	0	0	0	0	0	0	0	13	11	0	0	0	0	0	24
04:45	0	0	0	0	0	0	0	2	6	10	12	4	0	1	0	35
	0	0	0	0	0	0	1	3	32	37	14	4	0	1	0	92
05:00	0	0	0	0	0	0	0	2	37	21	3	0	0	0	0	63
05:15	0	0	0	0	0	0	0	2	3	22	12	2	0	0	0	41
05:30	0	0	0	0	0	0	1	1	15	30	7	2	0	0	0	56
05:45	0	0	0	0	0	0	5	1	14	36	18	7	0	0	0	81
	0	0	0	0	0	0	6	6	69	109	40	11	0	0	0	241
06:00	0	0	0	0	0	0	2	5	27	37	14	2	0	0	0	87
06:15	0	0	0	0	0	0	3	12	35	56	19	0	1	0	0	126
06:30	0	0	0	1	0	1	7	18	45	90	32	10	0	0	0	204
06:45	0	0	0	0	0	0	0	13	62	121	34	7	0	0	0	237
	0	0	0	1	0	1	12	48	169	304	99	19	1	0	0	654
07:00	0	0	0	0	0	0	2	21	49	118	61	10	2	0	0	263
07:15	0	0	0	0	0	0	1	38	129	106	37	5	0	0	0	316
07:30	0	0	0	0	0	0	0	35	130	111	19	7	0	0	0	302
07:45	0	0	0	0	0	0	19	111	178	111	17	0	0	0	0	436
	0	0	0	0	0	0	22	205	486	446	134	22	2	0	0	1317
08:00	0	0	0	0	0	2	29	65	122	130	22	2	0	0	0	372
08:15	0	0	0	0	0	0	6	88	150	107	25	3	1	0	0	380
08:30	0	0	0	0	0	0	3	25	127	147	31	9	0	0	0	342
08:45	0	0	0	0	0	0	2	60	125	118	45	7	1	0	0	358
	0	0	0	0	0	2	40	238	524	502	123	21	2	0	0	1452
09:00	0	0	0	0	0	0	1	10	41	119	42	9	0	0	0	222
09:15	0	0	0	0	0	0	1	10	41	86	33	6	0	0	0	177
09:30	0	0	0	0	0	0	3	9	47	74	30	4	0	0	0	167
09:45	0	0	0	0	0	0	0	11	22	77	46	6	0	0	0	162
	0	0	0	0	0	0	5	40	151	356	151	25	0	0	0	728
10:00	0	0	0	0	0	0	4	12	32	45	30	4	1	0	0	128
10:15	0	0	0	0	0	0	5	16	38	57	20	11	0	0	0	147
10:30	0	0	0	0	0	0	1	15	28	54	28	9	4	0	0	139
10:45	0	0	0	0	0	0	1	2	23	57	48	5	1	0	0	137
	0	0	0	0	0	0	11	45	121	213	126	29	6	0	0	551
11:00	0	0	0	0	0	3	6	6	31	53	31	1	1	0	0	132
11:15	0	0	0	0	0	0	1	5	42	55	24	6	0	1	0	134
11:30	0	0	0	0	0	0	2	5	35	41	23	4	1	0	0	111
11:45	0	0	0	0	0	0	1	6	26	69	10	1	0	0	0	113
	0	0	0	0	0	3	10	22	134	218	88	12	2	1	0	490
Total	0	0	0	1	0	6	110	621	1763	2310	804	146	15	3	0	5779

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
12 PM	0	0	0	0	0	0	1	7	26	52	18	1	2	0	0	107
12:15	0	0	0	0	0	0	0	5	33	60	18	3	1	0	0	120
12:30	0	0	0	0	0	0	1	8	35	59	17	3	0	0	0	123
12:45	0	0	0	0	0	0	1	3	16	62	22	2	1	0	0	107
	0	0	0	0	0	0	3	23	110	233	75	9	4	0	0	457
13:00	0	0	1	0	0	6	3	6	49	35	11	8	1	0	0	120
13:15	0	0	0	0	0	0	2	16	31	61	18	1	0	0	0	129
13:30	0	0	0	0	0	0	1	1	37	54	13	0	0	0	0	106
13:45	0	0	0	0	0	0	0	4	44	39	16	4	3	0	0	110
	0	0	1	0	0	6	6	27	161	189	58	13	4	0	0	465
14:00	0	0	0	0	0	0	0	12	22	51	20	6	1	0	0	112
14:15	0	0	0	0	0	0	0	0	32	74	15	1	0	0	0	122
14:30	0	0	0	0	0	0	3	14	61	51	10	0	0	0	0	139
14:45	0	0	0	0	0	1	0	7	43	74	23	2	0	0	0	150
	0	0	0	0	0	1	3	33	158	250	68	9	1	0	0	523
15:00	0	0	0	0	0	0	1	0	17	83	10	1	0	0	0	112
15:15	0	0	0	0	0	1	0	4	46	58	18	5	1	0	0	133
15:30	0	0	0	0	0	0	1	1	20	72	58	8	1	1	0	162
15:45	0	0	0	0	0	0	0	7	26	70	22	2	0	0	0	127
	0	0	0	0	0	1	2	12	109	283	108	16	2	1	0	534
16:00	0	0	0	0	0	0	0	11	50	59	27	0	0	0	0	147
16:15	0	2	0	0	0	0	1	9	38	52	13	3	0	0	0	118
16:30	0	0	0	0	0	0	0	2	16	55	45	6	1	0	0	125
16:45	0	0	0	0	0	0	0	1	24	59	43	4	1	0	0	132
	0	2	0	0	0	0	1	23	128	225	128	13	2	0	0	522
17:00	0	0	0	0	0	0	0	4	27	78	48	11	0	0	0	168
17:15	0	0	0	0	0	0	0	1	12	77	44	4	2	0	0	140
17:30	0	0	0	0	0	0	0	2	13	51	30	5	0	0	0	101
17:45	0	0	0	0	0	0	0	2	13	37	31	8	1	0	0	92
	0	0	0	0	0	0	0	9	65	243	153	28	3	0	0	501
18:00	0	0	0	0	0	0	0	2	15	39	26	3	0	0	0	85
18:15	0	0	0	0	0	0	0	0	12	34	25	2	1	0	0	74
18:30	0	0	0	0	0	0	0	2	11	52	27	3	0	0	0	95
18:45	0	0	0	0	0	0	1	2	32	29	7	1	1	0	0	73
	0	0	0	0	0	0	1	6	70	154	85	9	2	0	0	327
19:00	0	0	0	0	0	0	2	0	9	38	4	0	0	0	0	53
19:15	0	0	0	0	0	0	0	4	36	27	6	1	0	0	0	74
19:30	0	0	0	0	0	0	0	3	12	17	21	4	1	1	0	59
19:45	0	0	0	0	0	0	0	2	9	28	17	4	0	0	0	60
	0	0	0	0	0	0	2	9	66	110	48	9	1	1	0	246
20:00	0	0	0	0	0	0	1	3	16	4	12	2	0	0	0	38
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	3	16	4	12	2	0	0	0	38
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	0	0	8	19	145	883	1691	735	108	19	2	0	3613

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Northbound

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
10/03/1																
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	1	1	16	144	859	3042	4665	1967	333	47	5	0	11083

Stats

15th Percentile :	41 MPH
50th Percentile :	46 MPH
85th Percentile :	51 MPH
95th Percentile :	54 MPH
Mean Speed(Average) :	47 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	7707
Percent in Pace :	69.5%
Number of Vehicles > 55 MPH :	385
Percent of Vehicles > 55 MPH :	3.5%

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment: 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Start Time	Mon 30-Sep-19	Tue 01-Oct-19	Wed 02-Oct-19	Thu 03-Oct-19	Fri 04-Oct-19	Average Day	Sat 05-Oct-19	Sun 06-Oct-19	Week Average
12:00 AM	*	*	96	*	*	96	*	*	96
01:00	*	*	69	*	*	69	*	*	69
02:00	*	*	39	*	*	39	*	*	39
03:00	*	*	50	*	*	50	*	*	50
04:00	*	*	92	*	*	92	*	*	92
05:00	*	*	241	*	*	241	*	*	241
06:00	*	*	654	*	*	654	*	*	654
07:00	*	*	1317	*	*	1317	*	*	1317
08:00	*	*	**1452**	*	*	**1452**	*	*	**1452**
09:00	*	*	728	*	*	728	*	*	728
10:00	*	*	551	*	*	551	*	*	551
11:00	*	*	490	*	*	490	*	*	490
12:00 PM	*	*	457	*	*	457	*	*	457
01:00	*	*	465	*	*	465	*	*	465
02:00	*	*	523	*	*	523	*	*	523
03:00	*	*	**534**	*	*	**534**	*	*	**534**
04:00	*	*	522	*	*	522	*	*	522
05:00	*	**476**	501	*	*	488	*	*	488
06:00	*	347	327	*	*	337	*	*	337
07:00	*	256	246	*	*	251	*	*	251
08:00	*	173	*	*	*	173	*	*	173
09:00	*	154	*	*	*	154	*	*	154
10:00	*	150	*	*	*	150	*	*	150
11:00	*	135	*	*	*	135	*	*	135
Day Total	0	1691	9354	0	0	9968	0	0	9968
% Avg. WkDay	0.0%	17.0%	93.8%	0.0%	0.0%				
% Avg. Week	0.0%	17.0%	93.8%	0.0%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	08:00	-	-	08:00	-	-	08:00
Vol.	-	-	1452	-	-	1452	-	-	1452
PM Peak	-	17:00	15:00	-	-	15:00	-	-	15:00
Vol.	-	476	534	-	-	534	-	-	534
Grand Total	0	1691	9354	0	0	9968	0	0	9968

ADT ADT 9,944 AADT 9,944

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment" 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Start Time	01-Oct-19 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		*	*		
12:15		*	*		
12:30		*	*		
12:45		*	*	0	0
01:00		*	*		
01:15		*	*		
01:30		*	*		
01:45		*	*	0	0
02:00		*	*		
02:15		*	*		
02:30		*	*		
02:45		*	*	0	0
03:00		*	*		
03:15		*	*		
03:30		*	*		
03:45		*	*	0	0
04:00		*	*		
04:15		*	*		
04:30		*	*		
04:45		*	*	0	0
05:00		*	137		
05:15		*	109		
05:30		*	126		
05:45		*	104	0	476
06:00		*	106		
06:15		*	88		
06:30		*	93		
06:45		*	60	0	347
07:00		*	78		
07:15		*	58		
07:30		*	65		
07:45		*	55	0	256
08:00		*	49		
08:15		*	41		
08:30		*	47		
08:45		*	36	0	173
09:00		*	40		
09:15		*	32		
09:30		*	40		
09:45		*	42	0	154
10:00		*	39		
10:15		*	31		
10:30		*	43		
10:45		*	37	0	150
11:00		*	34		
11:15		*	38		
11:30		*	34		
11:45		*	29	0	135
Total		0	1691		
Percent		0.0%	100.0%		

Tri-State Traffic Data Inc

184 Baker Rd
Coatesville, PA 19320

Road Name: I787 NB Ramp from I90
Segment" 365' E of US 9W Overpass
Ctr#: GJ15

GPS: 42.632465, -73.774011

Start Time	02-Oct-19 Wed	Northbound Morning	Afternoon	Hour Totals Morning	Afternoon
12:00		38	107		
12:15		29	120		
12:30		16	123		
12:45		13	107	96	457
01:00		21	120		
01:15		9	129		
01:30		16	106		
01:45		23	110	69	465
02:00		7	112		
02:15		13	122		
02:30		3	139		
02:45		16	150	39	523
03:00		24	112		
03:15		6	133		
03:30		12	162		
03:45		8	127	50	534
04:00		7	147		
04:15		26	118		
04:30		24	125		
04:45		35	132	92	522
05:00		63	168		
05:15		41	140		
05:30		56	101		
05:45		81	92	241	501
06:00		87	85		
06:15		126	74		
06:30		204	95		
06:45		237	73	654	327
07:00		263	53		
07:15		316	74		
07:30		302	59		
07:45		436	60	1317	246
08:00		372	*		
08:15		380	*		
08:30		342	*		
08:45		358	*	1452	0
09:00		222	*		
09:15		177	*		
09:30		167	*		
09:45		162	*	728	0
10:00		128	*		
10:15		147	*		
10:30		139	*		
10:45		137	*	551	0
11:00		132	*		
11:15		134	*		
11:30		111	*		
11:45		113	*	490	0
Total		5779	3575		
Percent		61.8%	38.2%		
Grand Total		5779	5266		
Percent		52.3%	47.7%		
ADT		ADT 9,944		AADT 9,944	

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **RAMP** ROAD NAME: **I-787 INT 1**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 6
DATE OF COUNT: 02/01/2010
NOTES LANE 1: NORTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: DS

FROM: **US 9W**
REC. SERIAL #: 0254
PLACEMENT: I 787 NB ON RAMP
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: DOT INITIALS: MLA

TO: **I-787 NB (ON)**
FUNC. CLASS: 11
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-WW6

COUNTY: **Albany**
CITY: **ALBANY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	M		**22**	**18**	**35**	**48**	**146**	**465**	**1185**	**1245**	**744**	**495**	**479**	**507**	**463**	**518**	**711**	**741**	**594**	**372**	**266**	**178**	**134**	**103**	**95**			
2	T	**29**	**28**	**24**	**36**	**55**	**134**	**506**	**1195**	**1289**	**833**	**482**	**524**	**528**	**485**	**487**	**709**	**757**	**587**	**367**	**273**	**226**	**176**	**109**	**93**	9932	1289	8
3	W																											
4	T																											
5	F																											
6	S																											
7	S																											
8	M																											
9	T																											
10	W																											
11	T																											
12	F																											
13	S																											
14	S																											
15	M																											
16	T																											
17	W																											
18	T																											
19	F																											
20	S																											
21	S																											
22	M																											
23	T																											
24	W																											
25	T																											
26	F																											
27	S																											
28	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
26	**25**	**21**	**32**	**48**	**118**	**428**	**1048**	**1116**	**694**	**430**	**442**	**456**	**418**	**442**	**626**	**660**	**520**	**326**	**238**	**178**	**137**	**93**	**83**	**8605**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
2	47	1	42	1116	13%	0.881	0.972

ESTIMATED

AADT

8853

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **US 9W** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 41
DATE OF COUNT: 10/06/2015
NOTES LANE 0: NB travel and passing lanes

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

FROM: **END 9W/32 OLAP**
REC. SERIAL #: 4997
PLACEMENT: 45 yds S of Mount Hope Dr
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: WW

TO: **ACC RT 787I NB**
FUNC. CLASS: 14
NHS: no
JURIS: City
CC Stn:
BATCH ID: DOT-R01R01S41aTST1195

COUNTY: **Albany**
CITY:
LION#:
BIN: 1007610
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T											**664**	**782**	**855**	**872**	**1002**	**1256**	**1388**	**1499**	**1072**	**648**	**559**	**410**	**290**	**215**			
7	W	**84**	**73**	**82**	**77**	**132**	**334**	**775**	**926**	**926**	**744**	**670**	**805**	**867**	**856**	**946**	**1232**	**1393**	**1441**	**1028**	**759**	**594**	**400**	**264**	**193**	15601	1441	17
8	T	**102**	**69**	**74**	**82**	**134**	**337**	**765**	**916**	**882**	**768**	**777**	**772**	**854**	**834**	**948**	**1199**	**1390**	**1471**	**1025**	**769**	**674**	**438**	**296**	**171**	15747	1471	17
9	F	**95**	**78**	**78**	**68**	**154**	**324**	**716**	**844**	**900**	**726**	**793**	**762**	**899**	**867**	**1011**	**1178**	**1234**	**1394**	**857**	**611**	**476**	**449**	**369**	**244**	15127	1394	17
10	S	**175**	**74**	**64**	**76**	**73**	**153**	**323**	**336**	**514**	**574**	**704**	**828**	**827**	**766**	**837**	**775**	**745**	**804**	**721**	**567**	**530**	**431**	**339**	**224**	11460	837	14
11	S	**160**	**103**	**71**	**62**	**46**	**100**	**188**	**248**	**307**	**534**	**604**	**715**	**760**	**761**	**758**	**771**	**774**	**674**	**662**	**562**	**410**	**308**	**292**	**145**	10015	774	16
12	M	**77**	**74**	**68**	**80**	**116**	**286**	**644**	**673**	**748**	**661**	**715**	**802**	**880**	**850**	**973**	**1007**	**1094**	**1079**	**848**	**616**	**428**	**339**	**255**	**175**	13488	1094	16
13	T	**78**	**76**	**56**	**87**	**126**	**347**	**742**	**924**	**930**																		
14	W																											
15	T																											
16	F																											
17	S																											
18	S																											
19	M																											
20	T																											
21	W																											
22	T																											
23	F																											
24	S																											
25	S																											
26	M																											
27	T																											
28	W																											
29	T																											
30	F																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
87	**72**	**70**	**76**	**132**	**326**	**707**	**832**	**852**	**704**	**703**	**762**	**839**	**828**	**939**	**1140**	**1278**	**1332**	**964**	**678**	**548**	**385**	**268**	**183**	**14705**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	167	4	101	1332	9%	0.971	1.056

ESTIMATED (one way)

AADT

13925

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **US 9W** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 41
DATE OF COUNT: 10/06/2015
NOTES LANE 0: SB travel and passing lanes

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

FROM: **END 9W/32 OLAP**
REC. SERIAL #: 2574
PLACEMENT: 45 Yds S of Mount Hope Dr
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: WW

TO: **ACC RT 787I NB**
FUNC. CLASS: 14
NHS: no
JURIS: City
CC Stn:
BATCH ID: DOT-R01R01S41aTST1195

COUNTY: **Albany**
CITY:
LION#:
BIN: 1007610
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T											**899**	**909**	**1034**	**1002**	**1073**	**1334**	**1402**	**1140**	**930**	**651**	**457**	**310**	**190**	**204**			
7	W	**89**	**52**	**80**	**90**	**154**	**344**	**1016**	**1993**	**1754**	**1273**	**1016**	**903**	**1018**	**996**	**993**	**1407**	**1308**	**1130**	**952**	**612**	**470**	**339**	**209**	**212**	18410	1993	7
8	T	**98**	**66**	**72**	**94**	**144**	**375**	**1029**	**1952**	**1799**	**1235**	**992**	**987**	**1036**	**1049**	**1013**	**1338**	**1377**	**1162**	**998**	**663**	**523**	**322**	**230**	**215**	18769	1952	7
9	F	**63**	**78**	**64**	**110**	**119**	**366**	**911**	**1801**	**1666**	**1241**	**1000**	**1038**	**1090**	**1028**	**1171**	**1354**	**1228**	**1099**	**958**	**636**	**449**	**359**	**284**	**223**	18336	1801	7
10	S	**116**	**84**	**52**	**60**	**110**	**138**	**355**	**483**	**571**	**897**	**968**	**1029**	**1034**	**1021**	**929**	**949**	**813**	**843**	**837**	**607**	**384**	**314**	**279**	**216**	13089	1034	12
11	S	**102**	**80**	**47**	**40**	**50**	**89**	**211**	**315**	**503**	**683**	**807**	**942**	**1029**	**967**	**885**	**824**	**709**	**620**	**622**	**553**	**343**	**234**	**193**	**155**	11003	1029	12
12	M	**76**	**70**	**57**	**86**	**118**	**281**	**653**	**1068**	**962**	**931**	**1051**	**1006**	**1068**	**1036**	**1034**	**1237**	**1253**	**1054**	**802**	**591**	**405**	**275**	**219**	**192**	15525	1253	16
13	T	**81**	**69**	**48**	**83**	**149**	**357**	**991**	**1875**	**1821**																		
14	W																											
15	T																											
16	F																											
17	S																											
18	S																											
19	M																											
20	T																											
21	W																											
22	T																											
23	F																											
24	S																											
25	S																											
26	M																											
27	T																											
28	W																											
29	T																											
30	F																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
81	**64**	**64**	**91**	**138**	**350**	**893**	**1688**	**1554**	**1136**	**963**	**941**	**1009**	**991**	**998**	**1290**	**1296**	**1089**	**893**	**611**	**451**	**303**	**206**	**200**	**17300**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	167	4	101	1688	10%	0.971	1.056

ESTIMATED (one way)

AADT
16383

STATION: 110902

New York State Department of Transportation
Roadway Traffic Count Hourly Report

ROUTE/ROAD:	910A Glenmont Rd	FROM:	RT 9W JCT	TO:	RT 144	REGION-COUNTY:	1-ALBANY
FED DIR CODE:	3, 7	REF. MARKER:	910A11011027	FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Bethlehem-Town-0071
ST DIR CODE:	6	END MILEPOST:	4.03	FACTOR GROUP:	30	BIN:	1022440
DOT ID:	100564	LANES BY DIR:	1 East 1 West	CC STN:		RR CROSSING:	
BEGIN DATE:	5/6/2014	WEEK OF YEAR:	18	ADDL DATA:	CLS SPD	HPMS SAMPLE:	6931009
NOTES 1:	EB travel lane	PLACEMENT:	60' W of Glenmont Ct î	JURISDICTION:	01-NYSDOT	1 WAY CODE:	
NOTES 2:	WB travel lane					COUNT TYPE:	Vehicle
TAKEN BY:	TST-BEK	PROCESSED BY:	DOT-JLB	BATCH ID:	DOT-R1WW19B C	SPEED LIMIT:	40

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
5/06, Tue															**384**	**446**	**556**	**589**	**452**	**336**	**237**	**128**	**54**	**50**	3232		
5/07, Wed	**9**	**8**	**6**	**7**	**27**	**70**	**164**	**304**	**352**	**309**	**314**	**352**	**401**	**413**	**368**	**474**	**576**	**605**	**468**	**338**	**276**	**157**	**72**	**40**	6110	605	17-18
5/08, Thu	**25**	**8**	**5**	**5**	**17**	**62**	**149**	**316**	**356**	**325**	**294**	**382**	**456**	**390**	**392**	**510**	**605**	**603**	**482**	**419**	**257**	**139**	**72**	**40**	6309	605	16-17
5/09, Fri	**18**	**21**	**16**	**14**	**18**	**66**	**165**	**319**	**401**	**351**	**385**	**439**	**458**	**445**	**454**	**557**	**639**	**653**	**515**	**337**	**222**	**124**	**68**	**54**	6739	653	17-18
5/10, Sat	**27**	**9**	**7**	**4**	**11**	**22**	**56**	**121**	**251**	**384**	**506**	**596**	**600**	**556**	**540**	**480**	**432**	**442**	**394**	**326**	**210**	**128**	**80**	**48**	6230	600	12-13
5/11, Sun	**31**	**14**	**7**	**13**	**5**	**10**	**51**	**124**	**169**	**346**	**410**	**468**	**518**	**509**	**457**	**393**	**380**	**330**	**339**	**238**	**185**	**86**	**42**	**21**	5146	518	12-13
5/12, Mon	**6**	**13**	**1**	**11**	**24**	**71**	**153**	**339**	**379**	**307**	**324**														1628		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	17	**12**	**9**	**9**	**21**	**66**	**158**	**320**	**372**	**323**	**329**	**391**	**429**	**402**	**381**	**477**	**579**	**599**	**467**	**364**	**257**	**141**	**66**	**43**	6231		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day
6	141	3	75	599	9.6	210	8.8	427	11.1

ESTIMATED AADT		
Roadway	East	West
5783	2172	3518

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
5	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

STATION: 110902

New York State Department of Transportation
EB Traffic Count Hourly Report

ROUTE/ROAD:	910A Glenmont Rd	FROM:	RT 9W JCT	TO:	RT 144	REGION-COUNTY:	1-ALBANY
FED DIR CODE:	3	REF. MARKER:	910A11011027	FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Bethlehem-Town-0071
ST DIR CODE:	6	END MILEPOST:	4.03	FACTOR GROUP:	30	BIN:	1022440
DOT ID:	100564	LANES BY DIR:	1 East	CC STN:		RR CROSSING:	
BEGIN DATE:	5/6/2014	WEEK OF YEAR:	18	ADDL DATA:	CLS SPD	HPMS SAMPLE:	6931009
NOTES 1:	EB travel lane	PLACEMENT:	60' W of Glenmont Ct î	JURISDICTION:	01-NYSDOT	1 WAY CODE:	
NOTES 2:	WB travel lane					COUNT TYPE:	Vehicle
TAKEN BY:	TST-BEK	PROCESSED BY:	DOT-JLB	BATCH ID:	DOT-R1WW19B C	SPEED LIMIT:	40

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
5/06, Tue															**135**	**146**	**199**	**175**	**153**	**112**	**97**	**50**	**21**	**27**	1115		
5/07, Wed	**3**	**1**	**3**	**4**	**16**	**36**	**74**	**160**	**204**	**145**	**115**	**130**	**151**	**148**	**123**	**168**	**200**	**171**	**163**	**128**	**124**	**67**	**20**	**12**	2366	204	08-09
5/08, Thu	**8**	**5**	**2**	**1**	**12**	**35**	**66**	**173**	**203**	**136**	**121**	**134**	**173**	**148**	**131**	**181**	**186**	**169**	**166**	**145**	**100**	**61**	**28**	**14**	2398	203	08-09
5/09, Fri	**9**	**11**	**8**	**4**	**11**	**32**	**82**	**164**	**222**	**154**	**168**	**160**	**173**	**153**	**167**	**196**	**186**	**195**	**185**	**130**	**76**	**44**	**25**	**22**	2577	222	08-09
5/10, Sat	**11**	**3**	**1**	**1**	**3**	**11**	**28**	**57**	**123**	**156**	**197**	**234**	**247**	**211**	**170**	**180**	**157**	**154**	**125**	**107**	**74**	**53**	**31**	**19**	2353	247	12-13
5/11, Sun	**14**	**4**	**4**	**3**	**1**	**4**	**22**	**55**	**64**	**150**	**144**	**165**	**207**	**179**	**162**	**138**	**155**	**109**	**130**	**89**	**71**	**37**	**19**	**10**	1936	207	12-13
5/12, Mon	**4**	**6**	**0**	**6**	**16**	**35**	**76**	**181**	**209**	**120**	**123**														776		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	7	**6**	**4**	**3**	**13**	**34**	**75**	**170**	**210**	**139**	**132**	**141**	**162**	**148**	**130**	**165**	**195**	**172**	**161**	**128**	**107**	**59**	**23**	**18**	2400		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day	ESTIMATED AADT Roadway	East	West
6	141	3	75	599	9.6	210	8.8	427	11.1	5783	2172	3518

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
5	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

STATION: 110902

New York State Department of Transportation
WB Traffic Count Hourly Report

ROUTE/ROAD:	910A Glenmont Rd	FROM:	RT 9W JCT	TO:	RT 144	REGION-COUNTY:	1-ALBANY
FED DIR CODE:	7	REF. MARKER:	910A11011027	FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Bethlehem-Town-0071
ST DIR CODE:	6	END MILEPOST:	4.03	FACTOR GROUP:	30	BIN:	1022440
DOT ID:	100564	LANES BY DIR:	1 West	CC STN:		RR CROSSING:	
BEGIN DATE:	5/6/2014	WEEK OF YEAR:	18	ADDL DATA:	CLS SPD	HPMS SAMPLE:	6931009
NOTES 1:	EB travel lane	PLACEMENT:	60' W of Glenmont Ct î	JURISDICTION:	01-NYSDOT	1 WAY CODE:	
NOTES 2:	WB travel lane					COUNT TYPE:	Vehicle
TAKEN BY:	TST-BEK	PROCESSED BY:	DOT-JLB	BATCH ID:	DOT-R1WW19B C	SPEED LIMIT:	40

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
5/06, Tue															**249**	**300**	**357**	**414**	**299**	**224**	**140**	**78**	**33**	**23**	2117		
5/07, Wed	**6**	**7**	**3**	**3**	**11**	**34**	**90**	**144**	**148**	**164**	**199**	**222**	**250**	**265**	**245**	**306**	**376**	**434**	**305**	**210**	**152**	**90**	**52**	**28**	3744	434	17-18
5/08, Thu	**17**	**3**	**3**	**4**	**5**	**27**	**83**	**143**	**153**	**189**	**173**	**248**	**283**	**242**	**261**	**329**	**419**	**434**	**316**	**274**	**157**	**78**	**44**	**26**	3911	434	17-18
5/09, Fri	**9**	**10**	**8**	**10**	**7**	**34**	**83**	**155**	**179**	**197**	**217**	**279**	**285**	**292**	**287**	**361**	**453**	**458**	**330**	**207**	**146**	**80**	**43**	**32**	4162	458	17-18
5/10, Sat	**16**	**6**	**6**	**3**	**8**	**11**	**28**	**64**	**128**	**228**	**309**	**362**	**353**	**345**	**370**	**300**	**275**	**288**	**269**	**219**	**136**	**75**	**49**	**29**	3877	370	14-15
5/11, Sun	**17**	**10**	**3**	**10**	**4**	**6**	**29**	**69**	**105**	**196**	**266**	**303**	**311**	**330**	**295**	**255**	**225**	**221**	**209**	**149**	**114**	**49**	**23**	**11**	3210	330	13-14
5/12, Mon	**2**	**7**	**1**	**5**	**8**	**36**	**77**	**158**	**170**	**187**	**201**														852		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	11	**7**	**5**	**6**	**8**	**32**	**83**	**150**	**163**	**184**	**198**	**250**	**267**	**254**	**252**	**312**	**384**	**427**	**307**	**236**	**150**	**82**	**43**	**26**	3832		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day
6	141	3	75	599	9.6	210	8.8	427	11.1

ESTIMATED AADT Roadway	East	West
5783	2172	3518

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
5	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

STATION: 113276

New York State Department of Transportation
Roadway Traffic Count Hourly Report

ROUTE/ROAD:	A I787 EB to 9W	FROM:	I-787 NB/ I-87 EX23 (OFF)	TO:	US 9W	REGION-COUNTY:	1-ALBANY
FED DIR CODE:	3	REF. MARKER:		FUNC. CLASS:	11 - U Principal Arterial - Interstate	MUNI:	Albany-City-2001
ST DIR CODE:	3	END MILEPOST:	.1	FACTOR GROUP:	30	BIN:	
DOT ID:	272801	LANES BY DIR:	2 East 0 West	CC STN:		RR CROSSING:	
BEGIN DATE:	5/1/2014	WEEK OF YEAR:	18	ADDL DATA:		HPMS SAMPLE:	
NOTES 1:	EB travel and passing lanes	PLACEMENT:	50' W of SR 9W î	JURISDICTION:	01-NYSDOT	1 WAY CODE:	Y
NOTES 2:						COUNT TYPE:	Axle
TAKEN BY:	TST-BEK	PROCESSED BY:	R01-TDB	BATCH ID:	DOT-R01R1 WW1	SPEED LIMIT:	

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
5/01, Thu										**894**	**681**	**597**	**717**	**714**	**802**	**930**	**908**	**1098**	**750**	**518**	**449**	**349**	**277**	**158**	9842		
5/02, Fri	**164**	**88**	**101**	**125**	**165**	**257**	**989**	**1700**	**1448**	**862**	**685**	**689**	**729**	**613**	**820**	**919**	**1018**	**1012**	**739**	**538**	**441**	**412**	**338**	**246**	15098	1700	07-08
5/03, Sat	**135**	**116**	**110**	**108**	**127**	**119**	**291**	**230**	**350**	**371**	**467**	**533**	**598**	**553**	**665**	**675**	**603**	**499**	**541**	**414**	**463**	**362**	**333**	**239**	8902	675	15-16
5/04, Sun	**123**	**104**	**44**	**63**	**47**	**64**	**253**	**170**	**217**	**435**	**357**	**447**	**649**	**635**	**636**	**691**	**593**	**647**	**673**	**438**	**448**	**317**	**172**	**116**	8339	691	15-16
5/05, Mon	**70**	**34**	**34**	**26**	**111**	**240**	**1015**	**1702**	**1544**	**883**	**695**	**593**	**723**	**643**	**719**	**886**	**901**	**975**	**702**	**430**	**331**	**252**	**225**	**170**	13904	1702	07-08
5/06, Tue	**75**	**76**	**115**	**105**	**135**	**278**	**1002**	**1833**	**1509**	**739**	**696**	**568**	**623**	**622**	**784**	**768**	**896**	**1075**	**721**	**391**	**341**	**343**	**255**	**143**	14093	1833	07-08
5/07, Wed	**96**	**64**	**76**	**93**	**186**	**279**	**1085**	**1761**	**1489**	**960**	**646**	**670**													7405		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	101	**69**	**88**	**97**	**146**	**245**	**925**	**1581**	**1354**	**784**	**615**	**564**	**622**	**596**	**695**	**779**	**815**	**949**	**655**	**403**	**338**	**284**	**228**	**142**	13075		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day
6	147	3	81	1581	12.1				

ESTIMATED AADT Roadway	East	West
10579		

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
5	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **RAMP** ROAD NAME: **I-787 INT 1**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 6
DATE OF COUNT: 02/01/2010
NOTES LANE 1: SOUTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: DS

FROM: **US 9W**
REC. SERIAL #: 1165
PLACEMENT: I 787 SB ON RAMP
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: MLA

TO: **I-787 NB/ I-87 EX23 (ON)**
FUNC. CLASS: 11
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-WW6

COUNTY: **Albany**
CITY: **ALBANY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	M		**46**	**52**	**77**	**57**	**122**	**324**	**625**	**629**	**397**	**398**	**390**	**379**	**382**	**468**	**768**	**1056**	**772**	**357**	**231**	**210**	**138**	**105**	**99**			
2	T	**55**	**60**	**71**	**55**	**87**	**162**	**324**	**637**	**569**	**413**	**362**	**421**	**362**	**404**	**438**	**746**	**1003**	**793**	**347**	**250**	**238**	**185**	**104**	**129**	8215	1003	16
3	W																											
4	T																											
5	F																											
6	S																											
7	S																											
8	M																											
9	T																											
10	W																											
11	T																											
12	F																											
13	S																											
14	S																											
15	M																											
16	T																											
17	W																											
18	T																											
19	F																											
20	S																											
21	S																											
22	M																											
23	T																											
24	W																											
25	T																											
26	F																											
27	S																											
28	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
48	**53**	**63**	**48**	**77**	**143**	**285**	**556**	**528**	**357**	**335**	**358**	**326**	**346**	**399**	**667**	**907**	**689**	**310**	**211**	**197**	**143**	**92**	**100**	**7238**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
2	47	1	42	907	13%	0.881	0.972

ESTIMATED

AADT
7447

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 32** ROAD NAME: **Corning Hill Rd**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 6 WK OF YR: 15
DATE OF COUNT: 04/06/2015
NOTES LANE 1: NB travel lane

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

FROM: **END 9W/32 OLAP** TO: **RT 144 JCT**
REC. SERIAL #: DR74 FUNC. CLASS: 16
PLACEMENT: 277 Yd W of Retreat House Rd NHS: no
@ REF MARKER: JURIS: City
ADDL DATA: CC Stn:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01 WW15a Vol
PROCESSED BY: ORG CODE: DOT INITIALS: dc

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M								**118**	**104**	**77**	**72**	**85**	**90**	**106**	**98**	**89**	**99**	**92**	**42**	**40**	**34**	**29**	**13**	**11**			
7	T	**7**	**7**	**4**	**15**	**23**	**44**	**71**	**110**	**118**	**86**	**81**	**87**	**107**	**113**	**85**	**69**	**92**	**78**	**70**	**38**	**35**	**22**	**19**	**16**	1397	118	8
8	W	**5**	**8**	**8**	**9**	**16**	**44**	**77**	**103**	**106**	**84**	**79**	**75**	**96**	**106**	**80**	**82**	**87**	**86**	**53**	**44**	**30**	**30**	**22**	**8**	1338	106	8
9	T	**10**	**7**	**11**	**11**	**18**	**44**	**74**																				
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
7	**7**	**8**	**12**	**19**	**44**	**74**	**110**	**109**	**82**	**77**	**82**	**98**	**108**	**88**	**80**	**93**	**85**	**55**	**41**	**33**	**27**	**18**	**12**	**1369**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	110	8%	1.000	1.052

ESTIMATED

AADT

1301

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 32** ROAD NAME: **Corning Hill Rd**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 7 WK OF YR: 15
DATE OF COUNT: 04/06/2015
NOTES LANE 1: SB travel lane

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

FROM: **END 9W/32 OLAP** TO: **RT 144 JCT**
REC. SERIAL #: DR74 FUNC. CLASS: 16
PLACEMENT: 277 Yd W of Retreat House Rd NHS: no
@ REF MARKER: JURIS: City
ADDL DATA: CC Stn:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01 WW15a Vol

PROCESSED BY: ORG CODE: DOT INITIALS: dc

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M								122	111	114	100	135	146	138	145	171	254	226	118	55	40	35	37	23			
7	T	8	16	14	25	16	38	59	106	126	127	122	124	160	151	147	201	259	256	107	81	54	47	31	29	2304	259	16
8	W	9	7	15	21	17	23	60	116	98	118	113	132	145	131	162	207	245	245	105	82	61	42	31	18	2203	245	16
9	T	13	16	12	12	12	30	67																				
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
10	**13**	**14**	**19**	**15**	**30**	**62**	**115**	**112**	**120**	**112**	**130**	**150**	**140**	**151**	**193**	**253**	**242**	**110**	**73**	**52**	**41**	**33**	**23**	**2213**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	253	11%	1.000	1.052

ESTIMATED

AADT
2104

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **913H** ROAD NAME: **US9W/NY32 JCT** FROM: **JCT RTS 9W & 32 SOUTHERN RAM** TO: **END AT RT 32** COUNTY: **Albany**

DIRECTION: Eastbound FACTOR GROUP: 30 REC. SERIAL #: FY23 FUNC. CLASS: 16 TOWN: **BETHLEHEM**

STATE DIR CODE: 3 WK OF YR: 15 PLACEMENT: 80 Yds E of SR 9W NHS: no LION#:

DATE OF COUNT: 04/06/2015 @ REF MARKER: JURIS: City BIN:

NOTES LANE 1: EB travel lane ADDL DATA: CC Stn: RR CROSSING:

COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01 WW15a Vol HPMS SAMPLE:

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK PROCESSED BY: ORG CODE: DOT INITIALS: dc

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M								**163**	**187**	**112**	**113**	**117**	**138**	**150**	**120**	**112**	**97**	**100**	**70**	**61**	**39**	**40**	**19**	**20**			
7	T	**5**	**4**	**7**	**9**	**25**	**53**	**105**	**170**	**172**	**120**	**103**	**110**	**126**	**140**	**117**	**86**	**81**	**82**	**95**	**48**	**53**	**27**	**26**	**15**	1779	172	8
8	W	**12**	**12**	**10**	**5**	**14**	**52**	**110**	**161**	**175**	**120**	**100**	**94**	**114**	**122**	**90**	**120**	**86**	**78**	**52**	**45**	**45**	**37**	**22**	**17**	1693	175	8
9	T	**9**	**8**	**10**	**20**	**22**	**54**	**91**																				
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
9	**8**	**9**	**11**	**20**	**52**	**100**	**162**	**175**	**115**	**103**	**105**	**124**	**135**	**107**	**104**	**86**	**85**	**71**	**50**	**45**	**34**	**22**	**17**	**1749**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	175	10%	0.982	1.052

ESTIMATED

AADT

1663

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **913J** ROAD NAME: **913J**
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 13
DATE OF COUNT: 03/25/2009
NOTES LANE 1: Week 12-Wb One Way only

COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV

FROM: **RT 32 NORTHERN RAMP**
REC. SERIAL #: 0087
PLACEMENT: 300' E of SR9W
@ REF MARKER:
ADDL DATA:
COUNT TYPE: VEHICLES
PROCESSED BY: ORG CODE: DOT INITIALS: SJW

TO: **END AT RT 9W**
FUNC. CLASS: 14
NHS: yes
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-SJWr1ww12

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	M																											
3	T																											
4	W																											
5	T																											
6	F																											
7	S																											
8	S																											
9	M																											
10	T																											
11	W																											
12	T																											
13	F																											
14	S																											
15	S																											
16	M																											
17	T																											
18	W																											
19	T																											
20	F																											
21	S																											
22	S																											
23	M																											
24	T																											
25	W													71	125	99	120	133	126	123	107	51	46	29	41	27			
26	T	18	17	19	27	33	30	126	207	178	140	121	74	144	137	116	132	120	126	95	56	38	34	27	26	2041	207	7
27	F	14	15	23	26	20	31	92	143	157	108	120	126	149	120	128	135	149	120	98	57	41	40	31	37	1980	157	8
28	S	29	18	7	20	14	18	45	84	72	106	110	142	118	94	103	89	79	82	76	63	50	33	34	42	1528	142	11
29	S	11	18	14	12	15	21	33	35	39	62	80	97	102	98	89	80	64	64	73	72	61	38	20	28	1226	102	12
30	M	20	15	10	33	35	36	92	154	149	112	82	102	117	90	112	115	105	111	93	64	40	36	38	36	1797	154	7
31	T	20	13	11	19	27	57	120	154	196	139	67																
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)		17	15	18	24	27	39	108	164	170	125	98	93	129	109	116	127	117	120	98	57	41	33	35	30	**ADT** 1910		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	144	4	78	170	9%	1.000	1.025

ESTIMATED

AADT

1863

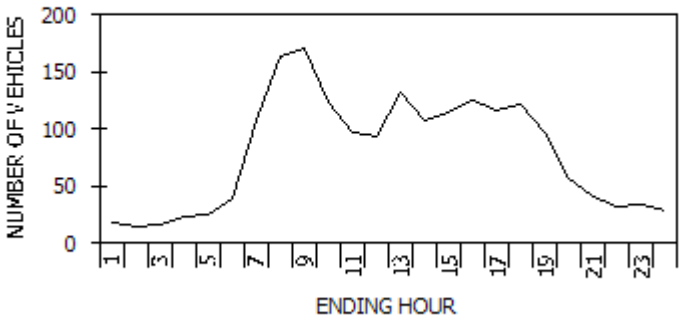
New York State Department of Transportation
Classification Count Average Weekday Data Report

ROUTE #: 913J ROAD NAME: 913J YEAR: 2009 STATION: 110926
COUNTY NAME: Albany MONTH: March
REGION CODE: 1
FROM: RT 32 NORTHERN RAMP
TO: END AT RT 9W
REF-MARKER:
END MILEPOINT: 0110006 NO. OF LANES: 1
FUNC-CLASS: 14 HPMS NO:
STATION NO: 0926 LION#:
COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV
PROCESSED BY: ORG CODE: DOT INITIALS: SJW BATCH ID: DOT-SJWr1ww12

DIRECTION	West	TOTAL
NUMBER OF VEHICLES	**1903**	**1903**
NUMBER OF AXLES	**4018**	**4018**
% HEAVY VEHICLES (F4-F13)	**6.25%**	**6.25%**
% TRUCKS AND BUSES (F3-F13)	**16.82%**	**16.82%**
AXLE CORRECTION FACTOR	**0.95**	**0.95**

VEHICLE CLASS		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES		2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	1:00	0	14	2	0	1	1	0	0	0	0	0	0	0	**18**
	2:00	1	11	1	0	0	0	0	0	0	0	0	0	1	**14**
	3:00	1	15	1	0	0	0	0	0	0	0	0	0	0	**17**
	4:00	1	21	1	0	0	0	0	0	0	0	0	0	1	**24**
	5:00	1	20	3	0	0	0	0	0	0	0	0	0	2	**26**
	6:00	2	29	5	0	0	1	0	0	0	0	0	0	2	**39**
	7:00	8	86	6	1	1	4	0	0	0	0	0	0	1	**107**
	8:00	8	136	9	0	2	7	0	0	0	0	0	0	2	**164**
	9:00	8	139	13	1	1	8	0	0	0	0	0	0	1	**171**
	10:00	5	98	12	1	2	5	0	0	0	0	0	0	1	**124**
DIRECTION	11:00	4	77	10	1	2	3	0	0	0	0	0	0	1	**98**
West	12:00	4	68	14	1	2	2	0	0	0	0	0	0	2	**93**
	13:00	6	102	17	0	5	2	0	0	0	0	0	0	1	**133**
	14:00	5	80	15	1	3	3	0	0	0	0	0	0	1	**108**
	15:00	4	83	20	3	2	1	0	0	0	0	0	0	2	**115**
	16:00	1	100	19	1	2	2	0	0	0	0	0	0	0	**125**
	17:00	2	91	14	1	2	5	0	0	0	1	0	0	1	**117**
	18:00	2	98	13	1	2	3	0	0	0	0	0	0	2	**121**
	19:00	2	82	9	1	2	1	0	0	0	0	0	0	0	**97**
	20:00	1	48	4	0	0	2	0	0	0	0	0	0	1	**56**
	21:00	1	36	4	0	0	0	0	0	0	0	0	0	0	**41**
	22:00	1	26	4	0	0	1	0	0	0	0	0	0	0	**32**
	23:00	1	29	2	0	0	2	0	0	0	0	0	0	0	**34**
	24:00	0	25	3	0	0	1	0	0	0	0	0	0	0	**29**
TOTAL VEHICLES		**69**	**1514**	**201**	**13**	**29**	**54**	**0**	**0**	**0**	**1**	**0**	**0**	**22**	**1903**
TOTAL AXLES		138	3028	402	32	58	162	0	0	0	6	0	0	192	4018
GRAND TOTAL VEHICLES		**69**	**1514**	**201**	**13**	**29**	**54**	**0**	**0**	**0**	**1**	**0**	**0**	**22**	**1903**
GRAND TOTAL AXLES		138	3028	402	32	58	162	0	0	0	6	0	0	192	4018

TRAFFIC FLOW BY DIRECTION



--- West

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
West	**9**	**171**	**A.M.**	**9**	**171**

VEHICLE CLASSIFICATION CODES:

F1. Motorcycles
F2. Autos*
F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
F4. Buses
F5. 2 Axle, 6-Tire Single Unit Trucks
F6. 3 Axle Single Unit Trucks
F7. 4 or More Axle Single Unit Trucks
F8. 4 or Less Axle Vehicles, One Unit is a Truck
F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
F10. 6 or More Double Unit Vehicles, One Unit is a Truck
F11. 5 or Less Axle Multi-Unit Trucks
F12. 6 Axle Multi-Unit Trucks
F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
01	11	PRINCIPAL ARTERIAL-INTERSTATE
02	12	PRINCIPAL ARTERIAL-EXPRESSWAY
02	14	PRINCIPAL ARTERIAL-OTHER
06	16	MINOR ARTERIAL
07	17	MAJOR COLLECTOR
08	17	MINOR COLLECTOR
09	19	LOCAL SYSTEM

SOURCE: NYSDOT DATA SERVICES BUREAU

New York State Department of Transportation
Speed Count Average Weekday Report

Date: 04/29/2009

Station:	110926		Start date:	Wed 03/25/2009 11:00	Count duration:	144 hours
Route #:	913J Road name: 913J		End date:	Tue 03/31/2009 10:45	Functional class:	14
From:	RT 32 NORTHERN RAMP		County:	Albany	Factor group:	30
To:	END AT RT 9W		Town:	BETHLEHEM	Batch ID:	DOT-SJWr1ww12
Direction:	West		Speed limit:	25	Count taken by:	Org: TST Init: JSV
			LION#:		Processed by:	Org: DOT Init: SJW

Speeds, mph

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	2	9	9	3	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	23.7	25.3	29.8	23
2:00	4	4	10	1	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.8	25.8	29.1	19
3:00	4	9	6	3	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.8	23.9	29.8	22
4:00	4	7	16	1	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.9	26.0	29.0	28
5:00	5	21	7	2	1	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.8	23.1	28.3	36
6:00	8	18	18	4	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.6	24.9	29.9	51
7:00	37	52	32	14	2	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	20.3	23.1	29.3	137
8:00	81	72	48	14	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	18.9	22.0	28.4	218
9:00	69	79	47	18	4	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	19.6	22.6	28.9	217
10:00	29	48	49	20	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.0	24.8	30.2	149
11:00	21	43	41	8	2	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.8	24.3	29.2	115
12:00	18	44	38	6	2	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.9	24.1	29.0	108
13:00	27	46	58	15	2	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.1	25.1	29.6	148
14:00	25	34	50	10	1	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.7	25.2	29.4	120
15:00	20	44	43	18	4	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.7	25.1	30.8	129
16:00	18	52	53	20	1	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	23.1	25.2	30.0	144
17:00	18	39	55	21	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	23.4	26.0	30.9	136
18:00	14	37	70	18	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	24.2	26.5	30.0	142
19:00	11	37	59	12	2	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	24.0	26.1	29.7	121
20:00	10	23	24	9	1	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.7	25.2	30.0	67
21:00	9	16	21	6	1	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	22.4	25.4	29.8	53
22:00	4	21	17	3	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	23.2	24.5	28.9	45
23:00	9	21	16	3	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.5	23.7	28.7	49
24:00	4	15	16	3	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	23.2	25.0	29.2	38
Avg. Daily Total	451	791	803	232	38	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	21.8	24.5	29.6	2315
Percent	19.5%	34.2%	34.7%	10.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	19.5%	53.7%	88.3%	98.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	19	33	33	10	2	0	0	0	0	0	0	0	0									96

	Avg. Speed	50th% Speed	85th% Speed
West	21.8	24.5	29.6

Peak Hour Data

Direction	Hour	Count	1-way	Hour	Count
West	8	218	A.M.	8	218
			P.M.	13	148

TRAFFIC FLOW BY DIRECTION

--- West

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 144** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 49
DATE OF COUNT: 11/30/2010
NOTES LANE 1: Week 49 North Bound

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

FROM: **ACC RT 87I**
REC. SERIAL #: 0006
PLACEMENT: .50 Mi N of NYS Thwy Ex 22
@ REF MARKER: 144 11021077
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: JSR

TO: **RT 910A JCT**
FUNC. CLASS: 16
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-R1_DOTWW49c

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN: 1038120
RR CROSSING:
HPMS SAMPLE:

		AM												PM													
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
DATE	DAY																										
30	T	**8**	**4**	**6**	**8**	**19**	**50**	**150**	**309**	**228**	**155**	**104**	**107**	**97**	**129**	**106**	**133**	**124**	**92**	**73**	**43**	**32**	**24**	**19**	**15**	2035	309	7
1	W	**12**	**9**	**6**	**4**	**12**	**49**	**146**	**286**	**221**	**119**	**99**	**93**	**85**	**94**	**97**	**140**	**110**	**99**	**79**	**43**	**31**	**27**	**24**	**19**	1904	286	7
2	T	**11**	**8**	**3**	**9**	**20**	**48**	**133**	**282**	**212**	**133**	**114**	**94**	**106**	**123**	**138**	**149**	**149**	**138**	**78**	**49**	**38**	**43**	**19**	**19**	2116	282	7
3	F	**5**	**10**	**7**	**14**	**24**	**52**	**134**	**266**	**236**	**120**	**123**	**108**	**121**	**111**	**145**	**163**	**136**	**137**	**100**	**60**	**43**	**35**	**31**	**29**	2210	266	7
4	S	**9**	**9**	**5**	**9**	**13**	**19**	**46**	**52**	**69**	**113**	**114**	**127**	**100**	**98**	**122**	**109**	**102**	**101**	**75**	**55**	**37**	**37**	**37**	**20**	1478	127	11
5	S	**9**	**9**	**3**	**4**	**6**	**12**	**19**	**31**	**49**	**89**	**78**	**118**	**111**	**124**	**98**	**99**	**77**	**78**	**74**	**59**	**44**	**30**	**26**	**15**	1262	124	13
6	M	**9**	**5**	**2**	**14**	**22**	**48**	**142**	**286**	**247**	**128**	**118**	**106**	**104**	**121**	**125**	**147**	**121**	**119**	**76**	**38**	**41**	**28**	**20**	**22**	2089	286	7
7	T	**10**	**9**	**4**	**14**	**19**	**57**	**136**	**299**	**232**	**164**																

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
9	**8**	**5**	**10**	**19**	**50**	**137**	**282**	**224**	**133**	**110**	**100**	**96**	**114**	**113**	**139**	**123**	**110**	**74**	**42**	**35**	**29**	**20**	**19**	**2001**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	178	4	112	282	14%	0.978	1.030

ESTIMATED (one way)

AADT

1943

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 144** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 49
DATE OF COUNT: 11/30/2010
NOTES LANE 1: Week 49 South Bound

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

FROM: **ACC RT 87I**
REC. SERIAL #: 0006
PLACEMENT: .50 Mi N of NYS Thwy Ex 22
@ REF MARKER: 144 11021077
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: JSR

TO: **RT 910A JCT**
FUNC. CLASS: 16
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-R1_DOTWW49c

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN: 1038120
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
30	T	**20**	**6**	**12**	**10**	**20**	**30**	**91**	**132**	**130**	**113**	**86**	**115**	**101**	**123**	**161**	**206**	**263**	**235**	**109**	**59**	**56**	**57**	**37**	**25**	2197	263	16
1	W	**28**	**4**	**16**	**7**	**12**	**39**	**96**	**121**	**107**	**84**	**105**	**98**	**94**	**104**	**143**	**187**	**255**	**209**	**137**	**66**	**71**	**50**	**39**	**29**	2101	255	16
2	T	**23**	**16**	**10**	**11**	**16**	**35**	**83**	**126**	**111**	**87**	**85**	**89**	**124**	**125**	**148**	**217**	**278**	**248**	**125**	**89**	**68**	**61**	**43**	**39**	2257	278	16
3	F	**22**	**19**	**9**	**19**	**19**	**30**	**80**	**132**	**136**	**104**	**95**	**94**	**122**	**133**	**160**	**235**	**260**	**245**	**129**	**85**	**61**	**67**	**59**	**45**	2360	260	16
4	S	**26**	**14**	**10**	**6**	**11**	**18**	**43**	**50**	**56**	**78**	**99**	**117**	**117**	**151**	**112**	**134**	**113**	**112**	**66**	**55**	**44**	**45**	**53**	**36**	1566	151	13
5	S	**29**	**10**	**8**	**9**	**7**	**23**	**24**	**26**	**42**	**68**	**88**	**92**	**95**	**94**	**111**	**121**	**114**	**71**	**75**	**67**	**40**	**38**	**28**	**17**	1297	121	15
6	M	**10**	**8**	**8**	**10**	**19**	**36**	**97**	**123**	**123**	**108**	**108**	**104**	**104**	**130**	**152**	**205**	**233**	**223**	**142**	**80**	**67**	**48**	**30**	**31**	2199	233	16
7	T	**19**	**10**	**9**	**15**	**14**	**38**	**80**	**137**	**125**	**107**																	

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
22	**11**	**11**	**12**	**16**	**33**	**86**	**125**	**119**	**98**	**94**	**98**	**104**	**117**	**148**	**200**	**251**	**224**	**125**	**72**	**65**	**53**	**36**	**30**	**2150**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	178	4	112	251	12%	0.978	1.030

ESTIMATED (one way)

AADT
2087

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 32** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 45
DATE OF COUNT: 11/03/2010
NOTES LANE 1: Week 45 North Bound

COUNT TAKEN BY: ORG CODE: TST INITIALS: ---

FROM: **RT 144 JCT**
REC. SERIAL #: 0048
PLACEMENT: 50 Ft S of S port rd
@ REF MARKER: 32 11042000
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: DOT INITIALS: JSR

TO: **ALBANY S CITY LN**
FUNC. CLASS: 16
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-R1_SC_WW45a

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN: 1022450
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	M																											
2	T																											
3	W																				**96**	**55**	**42**	**42**	**19**			
4	T	**28**	**14**	**17**	**26**	**37**	**110**	**269**	**606**	**577**	**327**	**227**	**248**	**288**	**237**	**243**	**250**	**243**	**236**	**137**	**88**	**63**	**51**	**42**	**26**	4390	606	7
5	F	**24**	**15**	**14**	**23**	**28**	**114**	**264**	**634**	**545**	**341**	**237**	**285**	**286**	**264**	**267**	**271**	**234**	**235**	**167**	**107**	**53**	**50**	**52**	**28**	4538	634	7
6	S	**21**	**13**	**10**	**18**	**19**	**39**	**85**	**116**	**128**	**140**	**164**	**190**	**180**	**158**	**155**	**168**	**154**	**157**	**119**	**80**	**61**	**55**	**40**	**28**	2298	190	11
7	S	**22**	**13**	**4**	**11**	**5**	**16**	**19**	**57**	**50**	**84**	**107**	**130**	**133**	**144**	**153**	**148**	**149**	**126**	**119**	**99**	**76**	**45**	**35**	**22**	1767	153	14
8	M	**20**	**25**	**18**	**17**	**13**	**31**	**137**	**278**	**615**	**559**	**321**	**236**	**197**	**211**	**219**	**201**	**205**	**209**	**171**	**121**	**76**	**46**	**30**	**35**	3991	615	8
9	T	**23**	**20**	**17**	**14**	**30**	**26**	**116**	**314**	**620**	**543**	**342**	**234**	**253**	**291**	**265**	**252**	**233**	**222**	**202**	**172**	**89**	**69**	**47**	**34**	4428	620	8
10	W	**20**	**32**	**14**	**16**	**19**	**30**	**113**	**299**	**613**	**535**	**346**	**249**	**251**	**261**	**289**	**267**	**277**	**247**	**244**	**143**	**88**	**60**	**52**	**41**	4506	613	8
11	T	**25**	**27**	**14**	**21**	**22**	**24**	**99**	**259**	**376**	**358**	**264**	**258**	**229**	**272**	**233**	**260**	**221**	**241**	**210**	**146**	**79**	**70**	**48**	**31**	3787	376	8
12	F	**21**	**28**	**15**	**17**	**20**	**29**	**119**	**264**	**448**																		
13	S																											
14	S																											
15	M																											
16	T																											
17	W																											
18	T																											
19	F																											
20	S																											
21	S																											
22	M																											
23	T																											
24	W																											
25	T																											
26	F																											
27	S																											
28	S																											
29	M																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
23	**22**	**15**	**20**	**25**	**55**	**156**	**371**	**530**	**434**	**284**	**246**	**239**	**248**	**244**	**241**	**231**	**226**	**189**	**125**	**73**	**55**	**43**	**30**	**4125**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
10	206	7	140	530	13%	0.978	1.030

ESTIMATED (one way)

AADT
4005

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 32** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 45
DATE OF COUNT: 11/03/2010
NOTES LANE 1: Week 45 South Bound

COUNT TAKEN BY: ORG CODE: TST INITIALS: ---

FROM: **RT 144 JCT**
REC. SERIAL #: 0048
PLACEMENT: 50 Ft S of S port rd
@ REF MARKER: 32 11042000
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: DOT INITIALS: JSR

TO: **ALBANY S CITY LN**
FUNC. CLASS: 16
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-R1_SC_WW45a

COUNTY: **Albany**
TOWN: **BETHLEHEM**
LION#:
BIN: 1022450
RR CROSSING:
HPMS SAMPLE:

		AM												PM													
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
DATE	DAY																											
1	M																											
2	T																											
3	W																				**205**	**145**	**123**	**85**	**67**			
4	T	**47**	**30**	**19**	**30**	**48**	**60**	**150**	**252**	**274**	**268**	**235**	**305**	**366**	**319**	**365**	**504**	**689**	**702**	**283**	**178**	**144**	**115**	**114**	**64**	5561	702	17
5	F	**32**	**30**	**27**	**30**	**33**	**82**	**172**	**253**	**287**	**279**	**262**	**317**	**378**	**336**	**431**	**526**	**729**	**640**	**308**	**167**	**146**	**119**	**109**	**85**	5778	729	16
6	S	**65**	**36**	**25**	**26**	**22**	**46**	**69**	**122**	**119**	**141**	**177**	**219**	**272**	**264**	**261**	**261**	**247**	**227**	**170**	**128**	**118**	**120**	**86**	**79**	3300	272	12
7	S	**49**	**33**	**33**	**24**	**14**	**19**	**26**	**46**	**67**	**67**	**123**	**132**	**197**	**232**	**225**	**228**	**222**	**201**	**188**	**146**	**123**	**88**	**79**	**41**	2603	232	13
8	M	**37**	**35**	**26**	**17**	**24**	**29**	**83**	**196**	**256**	**249**	**265**	**239**	**283**	**284**	**279**	**304**	**441**	**651**	**646**	**226**	**139**	**107**	**105**	**66**	4987	651	17
9	T	**55**	**41**	**33**	**26**	**45**	**39**	**58**	**170**	**253**	**274**	**270**	**270**	**315**	**338**	**343**	**378**	**549**	**711**	**684**	**307**	**164**	**118**	**120**	**81**	5642	711	17
10	W	**71**	**48**	**22**	**22**	**22**	**41**	**74**	**168**	**284**	**270**	**309**	**298**	**323**	**329**	**354**	**426**	**543**	**700**	**710**	**295**	**180**	**167**	**138**	**89**	5883	710	18
11	T	**70**	**30**	**41**	**29**	**22**	**27**	**68**	**161**	**265**	**229**	**257**	**289**	**284**	**339**	**338**	**394**	**457**	**533**	**467**	**229**	**139**	**149**	**115**	**77**	5009	533	17
12	F	**54**	**40**	**24**	**25**	**30**	**30**	**75**	**182**	**254**																		
13	S																											
14	S																											
15	M																											
16	T																											
17	W																											
18	T																											
19	F																											
20	S																											
21	S																											
22	M																											
23	T																											
24	W																											
25	T																											
26	F																											
27	S																											
28	S																											
29	M																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
54	**35**	**27**	**26**	**32**	**45**	**95**	**193**	**262**	**256**	**260**	**280**	**307**	**315**	**329**	**392**	**524**	**645**	**546**	**235**	**149**	**127**	**111**	**72**	**5317**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
10	206	7	140	645	12%	0.978	1.030

ESTIMATED (one way)

AADT
5162

APPENDIX B

TRAFFIC CALCULATIONS

- Gateway Commerce Center Trip Generation Table
- Gateway Commerce Center Trip Generation Figure
- CME Oversized Truck Route Figure
- Route 9W/Feura Bush LOS Table
- NYS Route 144 (River Road) Accident Data
- HCS7 Freeway Merge Report
- Truck LOS Table
- Figure 14a
- Figure 15a
- Figure SD-01
- NYS Route 144 at Glenmont Road Gap Analysis Calculations
- NYSDOT Traffic Volume Report – Historic Volumes
- Background Traffic Growth Regression Analysis
- Trip Generation Calculations
- Truck Trip Generation Calculations

3.0 Traffic Assessment

Trip Generation

Trip generation determines the quantity of traffic expected to travel to and from a given site. The Institute of Transportation Engineers' (ITE) *Trip Generation*, 9th Edition, is the industry standard used for estimating trip generation for proposed land uses based on data collected at similar uses. Since the tenants for the site are currently unknown, the exact mix of passenger and heavy vehicle traffic at the site cannot be determined; however, generally peak hour trips occurring during commuter travel periods to and from light industrial sites are primarily passenger vehicle trips rather than heavy vehicle trips. Trip generation for the proposed project was estimated using land use code (LUC) 110 for General Light Industrial. Table 2 summarizes the trip generation estimate for the AM and PM peak hours which includes both passenger vehicles and heavy vehicles.

Table 2 – Trip Generation Summary

General Light Industrial	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Trips	97	13	110	10	74	84

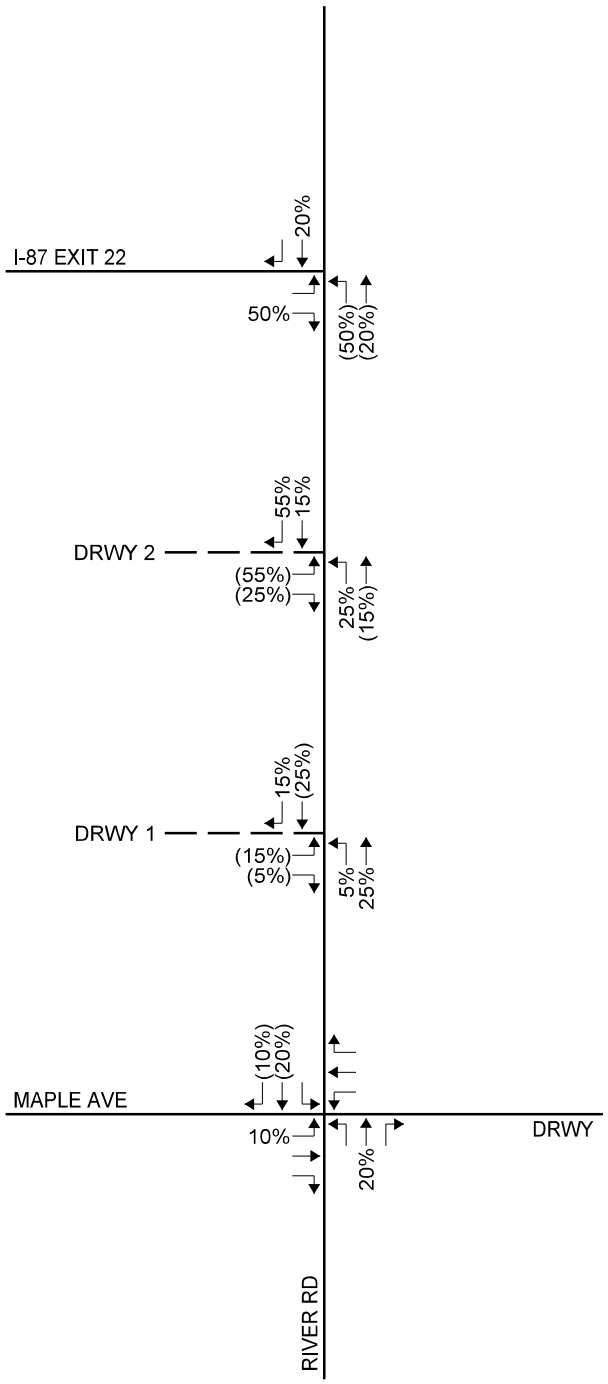
Table 2 shows that the site will generate 110 new vehicle trips during the AM peak hour (97 entering and 13 exiting) and 84 new vehicle trips during the PM peak hour (10 entering and 74 exiting). It is noted that the new trips generated by the site are less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one approach for off-site intersection analysis. This guidance was developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersections and screen out locations from requiring detailed analysis that do not reach the 100 vehicle threshold. However, due to the proximity of the adjacent intersections to the north and south of the site and as requested by the Town of Bethlehem, a detailed analysis of the River Road/I-87 Interchange 22 and River Road/Maple Avenue intersections were included in this study along with the detailed analysis of the site driveways.

Future Traffic Volumes

Future traffic volume projections typically include trips associated with specific "other development" projects approved in the study area and a general background growth rate. Conversations with a representative from the Town of Bethlehem indicated that there are no "other development" projects that will increase traffic volumes in the study area. A regression analysis using traffic volume data published by the NYSDOT shows that traffic volumes in the study area have increased by approximately one percent per year over the last several years; therefore, the 2016 Existing traffic volumes were increased by one percent per year to represent the 2018 No-Build traffic volumes as illustrated on Figure 1.

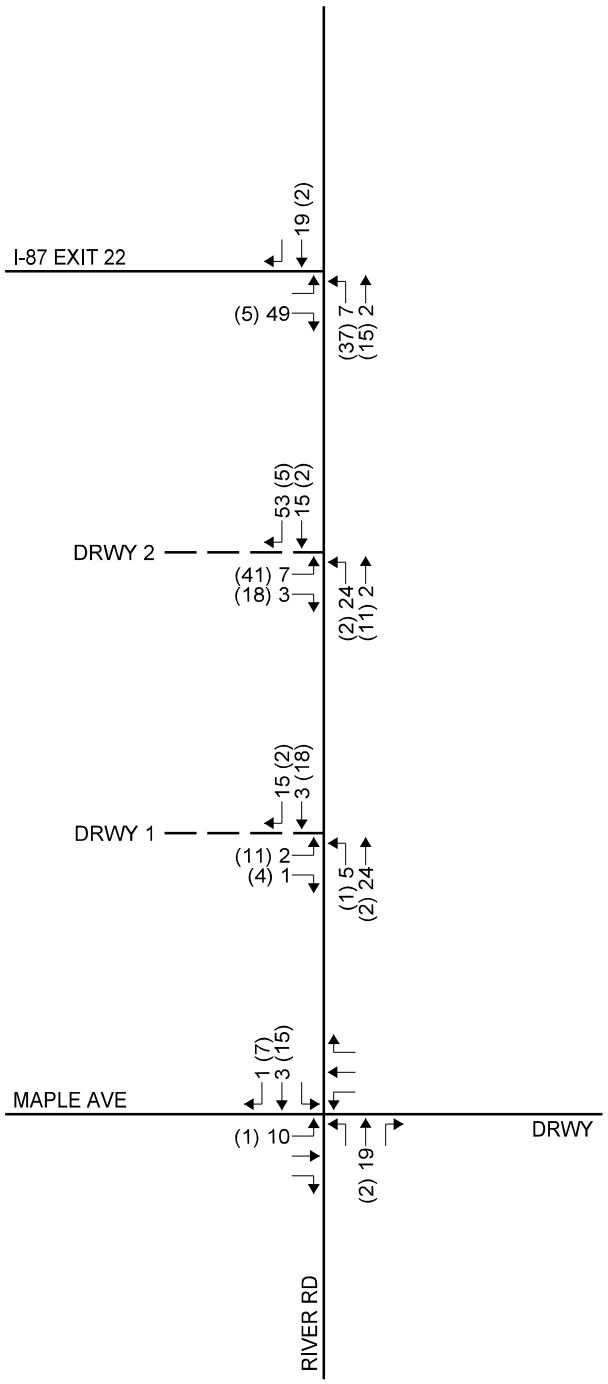
Trips associated with the proposed project were distributed at the study area intersections based on existing and anticipated travel patterns. It is expected that 20% of the site generated traffic will travel to and from the north, 50% will travel to and from the site via I-87 Exit 22, 20% will travel to and from the south, and the remaining 10% will travel to and from the west on Maple Avenue as shown on Figure 2. Trips were assigned to the site driveways and the two adjacent intersections to the north and south of the site (as shown on Figure 2) to develop the 2018 Build

TRIP DISTRIBUTION



ENTERING (EXITING)

TRIP ASSIGNMENT



AM PEAK HOUR (PM PEAK HOUR)

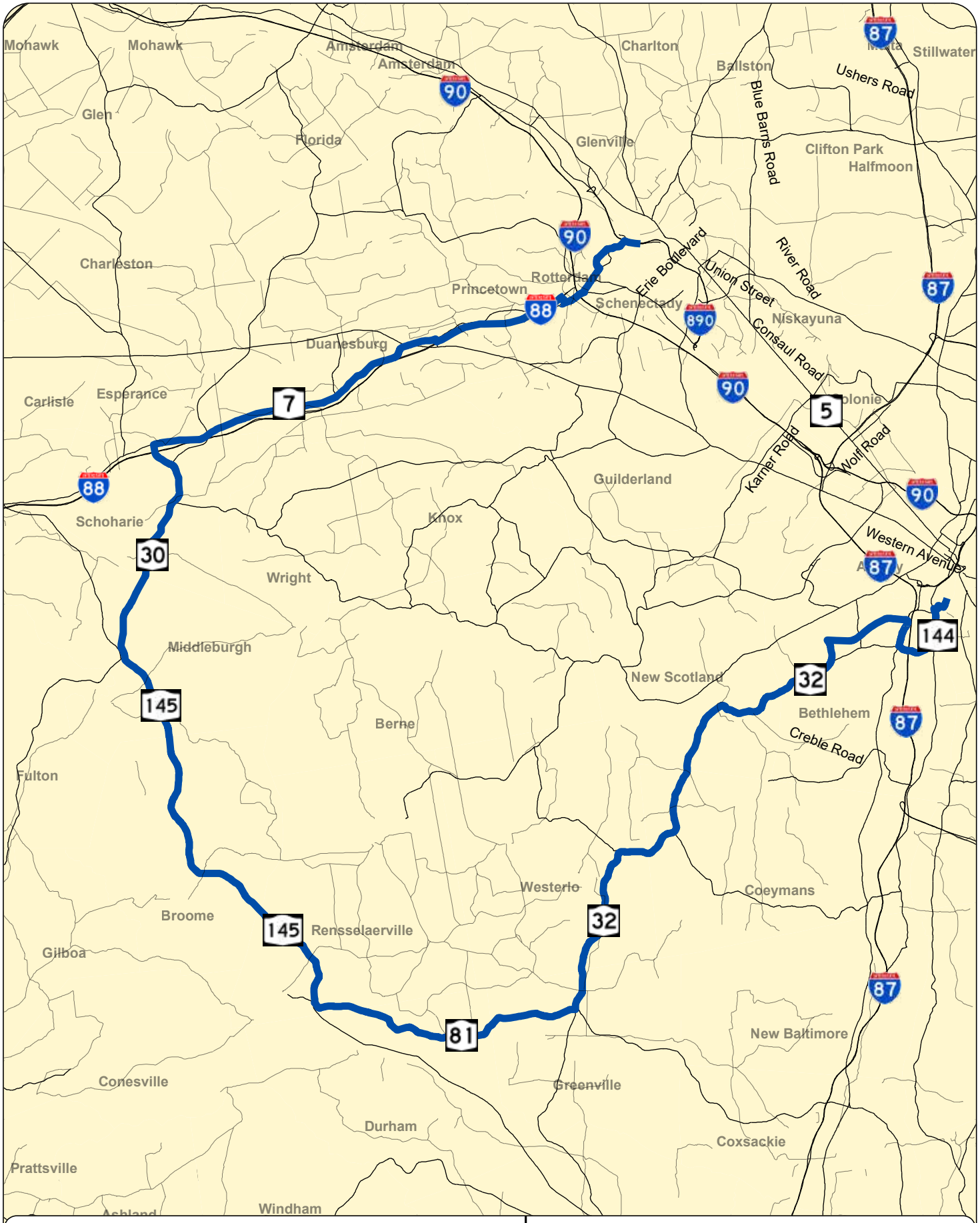
TRIP DISTRIBUTION / ASSIGNMENT

GATEWAY COMMERCE CENTER
TOWN OF BETHLEHEM, NEW YORK

Creighton Manning

PROJECT: 115-301	DATE: 03/2016	FIGURE: 2

N:\Projects\2015\115-301 Selkirk Industrial\cadd\dgn\figures\115-301_fig_traf.dgn



PROPOSED OVERSIZED TRUCK ROUTE

PORT TO GE TRAFFIC PLAN
DAGEN TRUCKING

Creighton Manning

PROJECT: 119-187	DATE: 09/2019	FIGURE: 1


90
Western Avenue
Albany
87
443
144
Glenmont Road
32
9W
Bethlehem
87
Creble Road
Maple Avenue

Table C-3 – Build Level of Service and Delay (sec) – AM Peak Hour

US Route 9W/Glenmont Rd/ Feura Bush Rd Intersection			Control	AM Peak Hour								
				ETC (2020)			ETC+10 (2030)			ETC+20 (2040)		
				LOS (Delay)	V/C	95th % Queue	LOS (Delay)	V/C	95th % Queue	LOS (Delay)	V/C	95th % Queue
Signalized Geometric Improvements	Feura Bush Rd EB	L	S	B (17.1)	0.53	175	C (24.4)	0.64	225	C (24.7)	0.65	225
		TR		B (16.5)	0.32	75	C (22.3)	0.47	150	C (22.6)	0.50	150
	Glenmont Rd WB	L		C (22.7)	0.16	50	C (26.1)	0.22	50	C (26.2)	0.22	50
		T		C (26.7)	0.49	75	C (31.6)	0.60	100	C (31.7)	0.60	100
		R		C (28.4)	0.57	25	C (31.7)	0.47	50	C (31.9)	0.48	50
	US Route 9W NB	L		B (13.0)	0.02	25	B (14.1)	0.03	25	B (14.1)	0.03	25
		TR		B (18.8)	0.83	300	C (26.1)	0.90	450	C (26.3)	0.90	450
	US Route 9W SB	L		C (24.8)	0.13	25	C (30.5)	0.10	25	C (30.7)	0.11	25
		T		B (11.4)	0.31	100	B (11.5)	0.40	150	B (11.5)	0.40	150
		R		A (2.7)	0.00	0	A (2.7)	0.00	0	A (2.7)	0.01	0
	Overall			B (18.1)	--	--	C (23.3)	--	--	C (23.5)	--	--
Single Lane	US Route 9W NB	LTR	R	C (32.5)	0.88	475	**F (98.8)**	**1.16**	1425	**F (107)**	**1.16**	1500
	US Route 9W SB	LTR		A (7.3)	0.37	75	A (9.4)	0.49	100	A (9.5)	0.49	100
	Feura Bush Rd EB	LTR		B (11.1)	0.55	125	B (17.4)	0.70	225	B (18.4)	0.72	250
	Glenmont Rd WB	LTR		B (16.2)	0.46	75	C (21.4)	0.58	100	C (21.1)	0.57	100
	Overall			B (18.9)	--	--	D (47.3)	--	--	D (50.6)	--	--
Hybrid	US Route 9W NB	LT	R	B (16.5)	0.70	225	C (32.5)	0.89	475	C (34.8)	0.90	500
		R		A (5.6)	0.09	25	A 6.1)	0.12	25	A (6.2)	0.12	25
	US Route 9W SB	LT		A (5.4)	0.24	50	A (6.8)	0.34	50	A (6.8)	0.34	50
		R		A (4.5)	0.12	25	A (4.7)	0.13	25	A (4.7)	0.13	25
	Feura Bush Rd EB	L		A (6.8)	0.33	50	A (8.1)	0.38	50	A (8.2)	0.39	50
		TR		A (5.6)	0.19	25	A (7.2)	0.27	50	A (7.4)	0.28	50
	Glenmont Rd WB	L		A (8.3)	0.11	25	B (10.3)	0.16	25	B (10.4)	0.16	25
		TR		B (10.1)	0.29	50	B (12.9)	0.37	50	B (13.0)	0.37	50
	Overall			A (9.9)	--	--	B (16.3)	--	--	B (17.1)	--	--

Table C-4 – Build Level of Service and Delay (sec) – PM Peak Hour

US Route 9W/Glenmont Rd/ Feura Bush Rd Intersection			Control	PM Peak Hour								
				ETC (2020)			ETC+10 (2030)			ETC+20 (2040)		
				LOS (Delay)	V/C	95th % Queue	LOS (Delay)	V/C	95th % Queue	LOS (Delay)	V/C	95th % Queue
Signalized Geometric Improvements	Feura Bush Rd EB	L	S	B (12.9)	0.39	100	C (20.7)	0.56	175	C (20.7)	0.57	175
		TR		B (14.9)	0.23	75	B (19.5)	0.34	125	B (19.3)	0.35	125
	Glenmont Rd WB	L		B (18.7)	0.34	100	C (23.1)	0.42	125	C (22.7)	0.41	125
		T		C (25.1)	0.71	150	C (33.0)	0.81	250	C (34.1)	0.82	250
		R		C (23.2)	0.27	50	C (26.9)	0.28	75	C (26.5)	0.27	75
	US Route 9W NB	L		C (23.3)	0.13	25	C (33.0)	0.17	25	C (33.2)	0.12	25
		TR		B (17.2)	0.64	200	B (18.6)	0.63	275	B (19.4)	0.65	300
	US Route 9W SB	L		C (22.2)	0.17	25	C (24.1)	0.05	25	C (25.1)	0.05	25
		T		B (18.0)	0.70	225	C (26.5)	0.84	425	C (27.8)	0.86	425
		R		A (5.1)	0.26	25	A (6.0)	0.24	75	A (6.3)	0.24	75
	Overall			B (16.6)	--	--	C (22.4)	--	--	C (23.0)	--	--
Single Lane	US Route 9W NB	LTR	R	B (11.5)	0.54	125	B (15.6)	0.66	200	B (16.1)	0.66	200
	US Route 9W SB	LTR		**F (65.9)**	**1.05**	1250	**F (190)**	**1.37**	2825	**F (196)**	1.38	2900
	Feura Bush Rd EB	LTR		B (15.4)	0.58	125	C (24.3)	0.76	225	C (25.6)	0.77	225
	Glenmont Rd WB	LTR		C (20.1)	0.70	175	D (51.8)	0.96	500	E (59.0)	0.99	600
	Overall			D (36.1)	--		**F (94.0)**	--		**F (97.8)**	--	--
Hybrid	US Route 9W NB	LT	R	A (8.8)	0.44	75	B (10.6)	0.51	100	B (10.7)	0.52	100
		R		A (4.5)	0.05	25	A (5.1)	0.08	25	A (5.2)	0.08	25
	US Route 9W SB	LT		B (11.2)	0.56	125	C (22.5)	0.80	325	C (23.1)	0.81	350
		R		A (9.0)	0.42	75	B (10.1)	0.45	75	B (10.3)	0.45	75
	Feura Bush Rd EB	L		A (8.6)	0.33	50	B (12.0)	0.44	75	B (12.1)	0.44	75
		TR		A(7.6)	0.20	25	B (11.5)	0.36	50	B (12.0)	0.38	50
	Glenmont Rd WB	L		A (8.0)	0.25	25	A (9.3)	0.30	50	A (9.3)	0.30	50
		TR		A (9.3)	0.38	50	B (13.4)	0.55	100	B (14.2)	0.57	125
	Overall			A (9.2)	--	--	B (14.0)	--	--	B (14.4)	--	--

Table C-5 – Build Level of Service and Delay (sec) – Saturday Peak Hour

US Route 9W/Glenmont Rd/ Feura Bush Rd Intersection			Control	Saturday Peak Hour								
				ETC (2020)			ETC+10 (2030)			ETC+20 (2040)		
				LOS (Delay)	V/C	95th % Queue	LOS (Delay)	V/C	95th % Queue	LOS (Delay)	V/C	95th % Queue
Signalized Geometric Improvements	Feura Bush Rd EB	L	S	B (17.4)	0.57	175	C (34.3)	0.85	250	D (35.3)	0.86	250
		TR		B (16.1)	0.14	50	B (19.3)	0.39	150	B (19.5)	0.40	175
	Glenmont Rd WB	L		B (19.8)	0.28	75	C (21.1)	0.31	100	C (21.3)	0.31	100
		T		C (27.0)	0.72	150	D (38.6)	0.85	325	D (39.6)	0.86	325
		R		C (25.1)	0.32	50	C (26.2)	0.31	75	C (26.2)	0.30	75
	US Route 9W NB	L		B (19.0)	0.10	25	C (25.3)	0.15	50	C (25.1)	0.12	25
		TR		B (18.3)	0.72	275	C (25.3)	0.79	375	C (25.9)	0.80	400
	US Route 9W SB	L		C (25.4)	0.22	50	C (33.5)	0.26	50	C (34.1)	0.26	50
		T		B (15.1)	0.49	175	B (19.1)	0.58	250	B (19.1)	0.57	250
		R		A (4.8)	0.21	50	A (6.8)	0.17	50	A (6.9)	0.17	50
	Overall			B (17.6)	--	--	C (25.8)	--	--	C (26.4)	--	--
Single Lane	US Route 9W NB	LTR	R	C (21.4)	0.76	275	D (53.2)	0.97	600	D (53.4)	0.97	600
	US Route 9W SB	LTR		C (30.5)	0.89	600	D (43.0)	0.96	775	D (41.5)	0.95	775
	Feura Bush Rd EB	LTR		B (18.5)	0.70	200	D (43.2)	0.94	550	D (43.2)	0.94	550
	Glenmont Rd WB	LTR		C (33.1)	0.82	225	**F (181)**	**1.32**	1575	**F (186)**	**1.33**	1600
	Overall			C (26.0)	--	--	E (77.7)	--	--	E (78.6)	--	--
Hybrid	US Route 9W NB	LT	R	B (13.3)	0.61	150	C (20.2)	0.74	225	C (20.3)	0.74	225
		R		A (5.1)	0.07	25	A (6.3)	0.11	25	A (6.3)	0.11	25
	US Route 9W SB	LT		A (8.6)	0.43	75	B (13.1)	0.59	125	B (13.0)	0.58	125
		R		A (8.5)	0.41	50	A (9.6)	0.40	75	A (9.7)	0.40	75
	Feura Bush Rd EB	L		A (8.8)	0.40	75	B (11.6)	0.51	100	B (11.6)	0.51	100
		TR		A (7.3)	0.24	25	A (9.6)	0.36	50	A (9.7)	00.37	50
	Glenmont Rd WB	L		A (8.9)	0.23	25	B (10.6)	0.28	50	B (10.8)	0.29	50
		TR		B (12.7)	0.48	75	C (33.1)	0.83	250	C (33.5)	0.84	250
	Overall			B (10.0)	--	--	B (16.9)	--	--	B (17.0)	--	--

Summary of Level of Service (LOS) Findings:

Alternative 1 – Traffic Signal with Geometric Improvements:

The level of service analysis indicates that the following geometric improvements will be required to provide adequate operations at this intersection:

- Exclusive northbound and southbound left turn lanes on US Route 9W
- An exclusive left turn lane and a separate right turn lane on the westbound Glenmont Road approach.

The analysis indicates that a traffic signal will operate at an overall LOS B/C through the design year. All intersection movements will operate at LOS C or better during the AM and PM peak hours through ETC+20 conditions while all intersection movements will operate at LOS D or better during the midday Saturday peak hour through ETC+20 conditions.

Alternative 2 – Single Lane Roundabout:

The level of service analysis for the AM peak hour indicates that a single lane roundabout will operate at an overall LOS B during ETC conditions and an overall LOS D during ETC+10 and ETC+20 conditions with the southbound US Route 9W approach operating at LOS F during ETC+10 conditions. During the PM peak hour, a single lane roundabout will operate at an overall LOS D during ETC conditions and an overall LOS F during ETC+10 and ETC+20 conditions with the northbound US Route 9W approach operating at LOS F through ETC+20 conditions. The level of service analysis for the Saturday peak hour indicates that a single lane roundabout will operate at an overall LOS C during ETC conditions and an overall LOS E during ETC+10 and ETC+20 conditions with the westbound Glenmont Road approach operating at LOS F during ETC+10 conditions.

ACCIDENT ANALYSIS DATA -NYS ROUTE 144 (RIVER ROAD)

Accident Date	Accident Time	First Harmful Event	Distance Type	At Intersection	Intersection	No Fatal Injuries	LightConditions	Number Injured	Location of F	Contributing	Road	Property Damage	Reference Marker	Number Killed	Weather Cor	Number Vehicles
2/3/2016	19:56	07		Y	READ RD	0.00	5	0	1	61	RIVER RD	N	144 11021084	0	2	1
2/13/2016	17:46	01		Y	SIMMONS RD	0.00	5	0	1	18	RIVER RD	N	144 11021077	0	1	2
2/26/2016	15:59	01		Y	NYS THRUWAY	0.00	1	0	1	04	1273 RIVER RD	N	144 11021052	0	1	2
2/28/2016	19:55	07	1	N		0.00	5	0	1	61	SR 144	N	144 11021073	0	2	1
3/21/2016	15:13	12	1	N		0.00	1	0	1	61	RIVER RD	Y	144 11021098	0	2	1
4/8/2016	20:27	07	1	N		0.00	5	0	1	61	RIVER RD	N	144 11021072	0	1	1
4/17/2016	01:00	07	1	N		0.00	5	0	1	61	1083 RIVER RD	N		0	1	1
5/14/2016	21:18	01		Y	I 87 CONN	0.00	5	0	1	27	RIVER RD	Y	144 11021053	0	3	2
5/16/2016	16:01	23		Y	BEAVER DAM RD	0.00	1	0	2	26	SR 144	Y	144 11021061	0	1	1
5/25/2016	07:50	30	1	N		0.00	1	1	1	08	RIVER RD	Y	144 11021067	0	1	1
6/2/2016	17:53	01		Y	RIVER RD	0.00	1	0	1	09	EXIT 22 RAMP	N	144 11021052	0	1	2
6/5/2016	20:29	07	2	N		0.00	5	0	1	61	SR 144	N		0	3	1
6/13/2016	15:17	01		Y	I87 RAMP	0.00	1	0	1	04	RIVER RD	N		0	1	2
6/16/2016	22:37	07		Y	SIMMONS RD	0.00	5	0	1	61	RIVER RD	N	144 11021077	0	1	1
6/30/2016	18:31	01		Y	RIVER RD	0.00	1	1	1	07	ST RT. 144	N		0	1	2
7/8/2016	16:20	01		Y	GIBSON RD	0.00	1	1	1	77	RIVER RD	Y	144 11021076	0	2	2
7/15/2016	19:04	12	2	N		0.00	1	0	1	19	RIVER RD	N	144 11021089	0	3	1
7/21/2016	07:13	07		Y	OLD RIVER RD	0.00	1	0	1	61	RIVER RD	N	144 11021000	0	1	1
7/26/2016	11:27	07	1	N		0.00	1	0	1	61	RIVER RD	N	144 11021081	0	1	1
8/28/2016	04:36	01		Y	BARENT WINNE RD	0.00	5	1	1	02	RIVER RD	N	144 11021066	0	1	2
9/8/2016	15:15	01		Y	GLENMONT RD	0.00	1	0	1	05	RIVER RD	N	144 11021000	0	2	2
9/27/2016	16:31	01		Y	HALTER RD	0.00	1	0	1	04	RIVER RD	N	144 11021107	0	1	2
10/4/2016	13:50	01	1	N		0.00	1	1	1	77	RIVER RD	N	144 11021079	0	1	2
10/11/2016	21:04	23	1	N		0.00	5	0	2	61	RIVER RD	N	144 11021057	0	1	1
10/13/2016	17:39	01		Y	RIVER RD	0.00	1	0	1	09	RAMP	N	144 11021052	0	2	2
10/25/2016	18:01	07	2	N		0.00	5	0	1	61	SR 144	N	144 11021074	0	2	1
10/27/2016	15:49	23	1	N		0.00	1	0	2	66	RIVER RD	N	144 11021046	0	5	1
11/9/2016	07:08	07	1	N		0.00	1	0	1	61	1455 RIVER RD	N	144 11021046	0	3	1
11/27/2016	03:45	07	1	N		0.00	5	0	1	61	1019 RIVER RD	N		0	1	1
12/7/2016	22:10	07	1	N		0.00	5	0	1	61	RIVER RD	N	144 11021064	0	6	1
12/7/2016	13:40	12	1	N		0.00	1	0	1	42	1273 RIVER RD	Y	144 11021054	0	2	1
12/20/2016	07:21	07	1	N		0.00	1	0	1	61	822 RIVER RD	N	144 11021074	0	1	1
12/30/2016	11:22	01	1	N		0.00	1	0	1	19	461 RIVER RD	N	144 11021092	0	2	2
1/14/2017	14:57	11		Y	CORNING HILL RD	0.00	1	0	1	27	RIVER RD	Y	144 11021114	0	1	1
1/26/2017	16:47	01	1	N		0.00	1	0	1	09	RIVER RD	N	144 11021106	0	1	2
2/11/2017	19:48	07	1	N		0.00	5	0	1	61	RIVER RD	N	144 11021075	0	2	1
2/13/2017	18:20	12	1	N		0.00	5	1	1	66	RIVER RD	Y	144 11021054	0	4	1
2/13/2017	12:49	12	1	N		0.00	1	0	2	66	RIVER RD	Y	144 11021054	0	1	1
2/14/2017	00:40	07	1	N		0.00	5	0	1	61	RIVER RD	N	144 11021099	0	1	1
2/16/2017	10:11	04	1	N		0.00	1	0	1	61	RIVER RD	N	144 11021057	0	1	1
2/20/2017	14:04	01	1	N		0.00	1	0	1	04	SR 144	N	144 11021080	0	1	2
2/23/2017	21:00	07	2	N		0.00	5	0	1	61	RIVER RD	N	144 11021100	0	1	2
3/23/2017	08:45	01		Y	I 87 EXIT RAMP	0.00	1	0	1	07	RIVER RD	N	144 11021053	0	1	2
3/30/2017	17:01	10		Y	HALTER RD	0.00	1	0	1	64	RIVER RD	N	144 11021107	0	2	1
4/10/2017	04:59	11	1	N		0.00	5	1	2	06	738 RIVER RD	Y		0	1	1
4/25/2017	09:19	01	1	N		1.00	1	1	1	27	RIVER RD	N	144 11021074	1	3	2
5/2/2017	15:38	01		Y	GLENMONT RD	0.00	1	0	1	09	RIVER RD	N	144 11021000	0	2	2
5/18/2017	16:00	01		Y	ANDERS LN	0.00	1	2	1	04	RIVER RD	N	144 11021102	0	1	2
5/27/2017	06:09	30	1	N		0.00	1	0	2	21	928 RIVER RD	Y	144 11021071	0	1	1
6/12/2017	17:39	01		Y	MAPLE AVE	0.00	1	0	1	09	RIVER RD	N		0	1	2
6/22/2017	12:14	17		Y	PARKER RD	0.00	1	0	2	04	RIVER RD	N	144 11021062	0	1	1
6/29/2017	16:34	01		Y	RIVER RD	0.00	1	2	1	77	RIVER RD	N	144 11021102	0	2	2
6/30/2017	08:08	01		Y	SR32	0.00	1	3	1	19	SR144	N	144 11021114	0	3	2
7/3/2017	22:30	30	1	N		0.00	4	0	2	06	175 RIVER RD	Y	144 11021104	0	1	1
7/10/2017	08:26	01		Y	GIBSON RD	0.00	1	2	1	04	RIVER RD	N	144 11021076	0	1	2
7/15/2017	18:47	07	1	N		0.00	1	0	1	61	RIVER RD	N	144 11021061	0	1	1
7/16/2017	14:25	01	2	N		0.00	1	0	1	13	SR 144	N	144 11021054	0	1	2
7/18/2017	12:06	01		Y	SMULTZ ROAD	0.00	1	0	1	04	RIVER ROAD	N	144 11021091	0	1	2
7/26/2017	12:08	01	1	N		0.00	1	2	1	04	RIVER ROAD	N	32 11041221	0	1	2
8/9/2017	17:00	01		Y	ANDERS LANE	0.00	1	0	1	69	RIVER ROAD	N	144 11021102	0	1	2
8/27/2017	04:58	11	1	N		0.00	5	1	2	08	1489 STATE ROUTE	Y	144 11021044	0	1	1
9/18/2017	16:34	01		Y	READ ROAD	0.00	1	0	1	64	RIVER ROAD	N	144 11021084	0	1	2
9/29/2017	18:27	01		Y	INTERSTATE 87 CONN	0.00	3	0	1	07	RIVER ROAD	N	144 11021053	0	1	2
10/7/2017	19:24	01		Y	GLENMONT ROAD	0.00	5	0	1	09	RIVER ROAD	N	144 11021104	0	1	2
11/6/2017	17:22	07		Y	PARSONS ROAD	0.00	5	0	1	61	RIVER ROAD	N	144 11021071	0	2	1
11/6/2017	18:10	07	1	N		0.00	5	0	1	61	RIVER ROAD	Y	144 11021055	0	2	1
11/11/2017	18:10	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021076	0	1	1
11/16/2017	13:27	01		Y	INTERSTATE 87 CONN	0.00	1	0	1	09	RIVER ROAD	N	144 11021053	0	2	2
11/17/2017	23:47	07	1	N		0.00	5	0	1	61	983 RIVER ROAD	N	144 11021068	0	1	1
11/18/2017	06:40	15	1	N		0.00	5	1	2	10	895 RIVER ROAD	N	144 11021072	0	1	1
11/19/2017	18:35	07	1	N		0.00	5	1	1	61	RIVER ROAD	N	144 11021079	0	1	1
11/21/2017	16:50	01	1	N		0.00	3	0	1	19	RIVER ROAD	N	144 11021057	0	2	2
11/27/2017	19:45	07	1	N		0.00	4	0	1	61	1480 RIVER ROAD	N	144 11021044	0	1	1
11/29/2017	17:17	07		Y	WEMPLE ROAD	0.00	5	0	1	61	RIVER ROAD	N	144 11021082	0	2	1
11/30/2017	12:51	01	1	N		0.00	1	0	1	27	RIVER ROAD	N	144 11021046	0	1	2
12/6/2017	23:10	04	1	N		0.00	4	0	1	61	RIVER ROAD	N	144 11021046	0	2	1
12/10/2017	01:13	15	1	N		0.00	5	0	1	66	709 RIVER ROAD	N	144 11021081	0	4	1
12/13/2017	05:40	07		Y	OLD RIVER ROAD	0.00	4	0	1	61	RIVER ROAD	N	144 11021103	0	1	1

12/15/2017	17:22	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021082	0	2	1
12/17/2017	17:30	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021057	0	1	1
12/22/2017	09:09	11	1	N		0.00	1	0	2	24	RIVER ROAD	Y	144 11021089	0	2	1
12/23/2017	07:37	31	1	N		0.00	2	1	1	19	RIVER ROAD	N	144 11021047	0	5	1
12/24/2017	20:42	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021067	0	2	1
1/1/2018	13:52	15	2	N		0.00	1	0	2	11	822 SR 144	N	144 11021076	0	1	1
1/2/2018	07:29	01	1	N		0.00	1	1	1	66	RIVER RD	N		0	2	2
1/3/2018	09:15	01		Y	ANDERS LANE	0.00	1	0	1	13	RIVER ROAD	N	144 11021102	0	2	2
1/3/2018	21:54	07		Y	HALTER ROAD	0.00	5	0	1	61	RIVER ROAD	N	144 11021107	0	1	1
1/5/2018	13:04	30	1	N		0.00	1	0	2	26	783 RIVER ROAD	Y	144 11021077	0	1	1
1/8/2018	03:56	15	2	N		0.00	5	0	2	05	461 RIVER ROAD	N	144 11021094	0	1	1
1/11/2018	11:59	01		Y	OLD RIVER ROAD	0.00	1	1	1	04	RIVER ROAD	N	144 11021104	0	2	2
1/13/2018	05:57	15	1	N		0.00	5	0	1	66	RIVER ROAD	N	144 11021112	0	5	1
1/16/2018	17:16	07	2	N		0.00	5	0	1	61	822 RIVER ROAD	N	144 11021073	0	2	1
1/19/2018	02:15	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021076	0	1	1
1/23/2018	06:15	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021048	0	3	1
2/7/2018	11:21	11	1	N		0.00	1	0	2	13	RIVER ROAD	N	144 11021081	0	4	1
2/10/2018	15:22	01	1	N		0.00	1	0	1	13	RIVER ROAD	N	144 11021082	0	2	2
2/18/2018	08:07	12	1	N		0.00	1	1	1	66	SR 144	N	144 11021099	0	2	1
2/22/2018	16:08	11	1	N		0.00	1	0	2	66	RIVER ROAD	Y	144 11021069	0	4	1
3/7/2018	15:57	30		Y	SIMMONS RD	0.00	1	0	1	66	RIVER ROAD	Y	144 11021077	0	4	1
3/7/2018	16:33	01		Y	GLENMONT ROAD	0.00	1	0	1	66	RIVER ROAD	N	144 11021104	0	4	2
3/10/2018	02:50	15	1	N		0.00	5	0	1	08	RIVER ROAD	Y	144 11021048	0	1	1
4/17/2018	15:18	01		Y	GLENMONT ROAD	0.00	1	4	1	07	RIVER ROAD	N	144 11021104	0	2	2
4/26/2018	16:30	01	1	N		0.00	1	0	1	13	RIVER ROAD	Y	144 11021051	0	1	2
6/9/2018	08:01	07	1	N		0.00	1	0	1	61	SR 144	N	144 11021063	0	1	1
6/9/2018	14:38	01	1	N		0.00	1	1	1	09	SR 144	N	144 11021069	0	2	2
6/11/2018	08:55	01	2	N		0.00	1	0	1	13	RIVER ROAD	N	144 11021093	0	1	2
6/11/2018	10:00	01		Y	RIVER ROAD	0.00	1	0	1	09	1275 RIVER RD ROU	N	144 11021053	0	1	2
6/14/2018	18:58	07	1	N		0.00	1	0	1	61	RIVER ROAD	N	144 11021111	0	1	1
6/20/2018	07:40	01	1	N		0.00	1	0	1	18	RIVER ROAD	N	144 11021066	0	1	2
6/20/2018	15:07	01		Y	EXIT 22 RAMP	0.00	1	0	1	77	RIVER ROAD/EXIT 2	N	144 11021052	0	2	2
7/3/2018	10:28	01		Y	INTERSTATE 87 NYS THI	0.00	1	0	1	07	SR 144	N	144 11021053	0	1	2
7/5/2018	05:18	07	1	N		0.00	1	0	1	61	593 RIVER ROAD	N	144 11021086	0	1	1
8/23/2018	08:26	01		Y	BARENT WINNE RD	0.00	1	2	1	09	1021 RIVER RD	N	144 11021066	0	1	2
8/25/2018	20:16	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021076	0	1	1
8/27/2018	15:00	01		Y	BARENT WINNE RD	0.00	1	4	1	77	RIVER ROAD	N	144 11021066	0	1	2
9/9/2018	19:33	07	2	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021074	0	2	1
9/12/2018	11:52	01	1	N		0.00	1	0	1	04	RIVER ROAD	N	144 11021063	0	2	2
9/14/2018	09:48	01		Y	GLENMONT RD	0.00	1	0	1	69	RIVER RD	N	144 11021104	0	2	2
9/18/2018	12:16	01		Y	ANDERS LANE	0.00	1	0	1	04	RIVER ROAD	N	144 11021102	0	2	2
9/22/2018	20:41	07	1	N		0.00	5	0	1	61	1370 RIVER ROAD	N	144 11021051	0	2	1
9/28/2018	00:12	07	1	N		0.00	5	0	1	61	1021 RIVER RD	N	144 11021066	0	3	1
10/5/2018	19:13	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021066	0	1	1
10/9/2018	16:24	01		Y	INTERSTATE 87 CONN	0.00	1	0	1	18	RIVER ROAD	N	144 11021053	0	1	2
10/16/2018	22:08	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021047	0	1	1
10/16/2018	22:01	12	1	N		0.00	5	0	2	02	RIVER ROAD	Y	144 11021080	0	1	1
10/20/2018	03:14	23	2	N		0.00	5	0	2	02	380 RIVER ROAD	Y	144 11021097	0	2	1
10/20/2018	22:48	07	2	N		0.00	5	0	1	61	552 RIVER ROAD	N	144 11021088	0	2	1
10/23/2018	13:10	01		Y	BASK RD (TR)	0.00	1	0	1	77	SR 144	N	144 11021088	0	2	2
10/26/2018	03:18	07	1	N		0.00	5	0	1	61	SR 144	N	144 11021075	0	2	1
10/29/2018	06:50	07	1	N		0.00	2	0	1	61	SR144	N	144 11021052	0	3	1
10/29/2018	18:22	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021049	0	1	1
11/1/2018	18:32	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021085	0	1	1
11/1/2018	18:32	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021085	0	1	1
11/15/2018	19:27	14	1	N		0.00	5	0	2	66	1332 RIVER ROAD	Y	144 11021051	0	4	1
11/24/2018	13:22	07	1	N		0.00	1	0	1	61	SR 144	N	144 11021098	0	2	1
11/24/2018	13:22	07	1	N		0.00	1	1	1	61	SR 144	N	144 11021099	0	2	1
11/26/2018	16:55	07	2	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021073	0	3	1
11/28/2018	16:52	07		Y	SMULTZ ROAD	0.00	5	0	1	61	RIVER ROAD	N	144 11021091	0	1	1
11/28/2018	21:36	07		Y	BARENT WINNE ROAD	0.00	4	0	1	61	RIVER RD	N	144 11021066	0	1	1
11/29/2018	08:40	01		Y	LYONS ROAD	0.00	1	0	1	07	RIVER ROAD	N	144 11021064	0	1	2
12/6/2018	18:30	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021046	0	1	1
12/26/2018	18:47	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021058	0	1	1
1/8/2019	17:14	07	1	N		0.00	5	1	1	61	963 RIVER RD.	N	144 11021068	0	3	1
1/14/2019	17:26	07	1	N		0.00	5	0	1	61	RIVER ROAD	N	144 11021068	0	2	1
1/21/2019	09:21	07		Y	DINMORE RD	0.00	1	0	1	61	RIVER ROAD	N	144 11021063	0	2	1
1/31/2019	09:00	01		Y	WEMPLE ROAD	0.00	1	0	1	09	RIVER ROAD	N	144 11021081	0	1	2
2/5/2019	17:39	07		Y	READ ROAD	0.00	5	0	1	61	RIVER ROAD	N	144 11021084	0	1	1
2/8/2019	10:05	01		Y	CORNING HILL ROAD	0.00	1	1	1	07	RIVER ROAD	N	32 11041221	0	2	2
2/11/2019	06:45	07	2	N		0.00	2	0	1	61	RIVER ROAD	N	144 11021070	0	2	1
2/13/2019	10:19	22	1	N		0.00	1	1	2	66	RIVER ROAD	N	144 11021046	0	2	1
2/15/2019	16:34	01		Y	EXIT 22	0.00	1	0	1	04	RAMP FROM EXIT 2	N	144 11021053	0	1	2
2/27/2019	16:49	34	1	N		0.00	1	0	1	19	RIVER ROAD	N	144 11021087	0	4	1
3/9/2019	20:00	16	1	N		0.00	5	0	2	03	REAR PARKING LOT	Y		0	9	1
3/14/2019	07:14	04	1	N		0.00	1	0	1	61	1424 RIVER ROAD	N	144 11021047	0	2	1
4/6/2019	13:49	01	1	N		0.00	1	2	1	77	RIVER ROAD	N	32 11041221	0	2	2
4/6/2019	13:49	01	1	N		0.00	1	2	1	27	RIVER ROAD	N	32 11041221	0	2	2
4/23/2019	12:30	01	1	N		0.00	1	0	1	04	RIVER ROAD	N	144 11021092	0	1	2
5/10/2019	04:15	15	1	N		0.00	4	0	1	64	495 RIVER RD	N	144 11021089	0	2	1

5/13/2019	15:32	15	1	N		0.00	1	1	2	10	1370 RIVER ROAD	Y	144 11021050	0	3	1
5/24/2019	13:28	01		Y	LYONS ROAD	0.00	1	3	1	07	1074 RIVER RD	N	144 11021064	0	2	2
5/31/2019	21:14	01		Y	GLENMONT RD	0.00	5	0	1	09	RIVER ROAD	N	144 11021104	0	1	2
6/5/2019	18:17	01		Y	INTERSTATE 87 CONN	0.00	1	2	1	07	RIVER ROAD	N	144 11021053	0	2	2
6/7/2019	16:03	23	1	N		0.00	1	0	2	13	RIVER ROAD	Y	144 11021087	0	1	1
6/9/2019	15:20	03		Y	BARENT WINNE ROAD	0.00	1	1	1	14	RIVER ROAD	N	144 11021066	0	1	2
6/10/2019	18:25	07	1	N		0.00	1	0	1	61	1111 RIVER ROAD	N	144 11021062	0	3	1
6/15/2019	19:05	07	1	N		0.00	1	0	1	61	RIVER ROAD	N	32 11041221	0	2	1
6/17/2019	15:42	23	1	N		0.00	1	1	2	19	RIVER ROAD	Y	144 11021053	0	1	1
6/17/2019	14:52	01	2	N		0.00	1	2	1	07	RIVER ROAD	N	144 11021076	0	1	2
6/23/2019	21:13	18	1	N		0.00	4	0	1	04	AREA OF 495 RIVER	Y	144 11021090	0	1	1
6/24/2019	17:02	01		Y	NEW STATE THRUWAY	0.00	1	2	1	07	RIVER ROAD	N		0	2	2
7/2/2019	05:54	07	1	N		0.00	1	0	1	61	79 RIVER ROAD	N	144 11021108	0	2	1
7/2/2019	18:22	07	1	N		0.00	1	0	1	61	RIVER ROAD	N	144 11021075	0	1	1
7/5/2019	05:47	04	1	N		0.00	2	0	1	61	1255 SR 144	N		0	1	1
7/14/2019	09:00	12		Y	WEMPLE RD	0.00	1	0	1	26	RIVER ROAD	N	144 11021082	0	1	1
7/24/2019	12:55	01		Y	CORNING HILL ROAD	0.00	1	0	1	07	RIVER ROAD	N	32 11041221	0	1	2
7/31/2019	09:40	01		Y	WHEELER RD	0.00	1	1	1	09	RIVER ROAD	N	144 11021087	0	2	2
8/13/2019	15:01	01		Y	ANDERS LANE	0.00	1	0	1	69	RIVER ROAD	N	144 11021102	0	2	2
9/3/2019	17:18	01		Y	RAMP I87 EXCHANGE	0.00	1	3	1	07	RIVER ROAD	N	144 11021053	0	1	2
9/6/2019	17:32	07	2	N		0.00	1	0	1	61	RIVER ROAD	N	144 11021096	0	1	1
9/11/2019	15:33	01	1	N		0.00	1	1	1	09	RIVER ROAD	N	144 11021092	0	1	2
9/15/2019	15:15	15	1	N		0.00	1	1	1	04	1119 RIVER ROAD	Y	144 11021061	0	1	1

HCS7 Freeway Merge Report

Project Information

Analyst	TCH	Date	10-3-2019
Agency	McFarland Johnson	Analysis Year	2019
Jurisdiction		Time Period Analyzed	Existing AM
Project Description	9W/I-87 Merge with I-787 Northbound		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	54.5	51.0
Segment Length (L) / Acceleration Length (L_A), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	2625	1316
Peak Hour Factor (PHF)	0.88	0.93
Total Trucks, %	2.70	2.60
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.974	0.975
Flow Rate (v_i), pc/h	3063	1451
Capacity (c), pc/h	6750	2200
Volume-to-Capacity Ratio (v/c)	0.67	0.66

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	27.0
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_S)	0.368
Downstream Equilibrium Distance (L_{EQ}), ft	1474.4	Flow Outer Lanes (v_{OA}), pc/h/ln	1195
Distance to Downstream Ramp (L_{DOWN}), ft	1100	On-Ramp Influence Area Speed (S_R), mi/h	49.9
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.610	Outer Lanes Freeway Speed (S_O), mi/h	52.0
Flow in Lanes 1 and 2 (v_{12}), pc/h	1868	Ramp Junction Speed (S), mi/h	50.4
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3319	Average Density (D), pc/mi/ln	29.9
Level of Service (LOS)	C		

HCS7 Freeway Merge Report

Project Information

Analyst	TCH	Date	10-3-2019
Agency	McFarland Johnson	Analysis Year	2019
Jurisdiction		Time Period Analyzed	Existing PM
Project Description	9W/I-87 Merge with I-787 Northbound		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	54.5	51.0
Segment Length (L) / Acceleration Length (L_A), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	1414	761
Peak Hour Factor (PHF)	0.93	0.89
Total Trucks, %	1.13	2.89
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.989	0.972
Flow Rate (v_i), pc/h	1537	880
Capacity (c), pc/h	6750	2200
Volume-to-Capacity Ratio (v/c)	0.36	0.40

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	15.4
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_S)	0.283
Downstream Equilibrium Distance (L_{EQ}), ft	760.8	Flow Outer Lanes (v_{OA}), pc/h/ln	624
Distance to Downstream Ramp (L_{DOWN}), ft	1100	On-Ramp Influence Area Speed (S_R), mi/h	51.0
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.594	Outer Lanes Freeway Speed (S_O), mi/h	54.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	913	Ramp Junction Speed (S), mi/h	51.8
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	1793	Average Density (D), pc/mi/ln	15.6
Level of Service (LOS)	B		

HCS7 Freeway Merge Report

Project Information

Analyst	TCH	Date	10-3-2019
Agency	McFarland Johnson	Analysis Year	2019
Jurisdiction		Time Period Analyzed	Existing AM
Project Description	9W/I-87 Merge with I-787 Northbound		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	54.5	51.0
Segment Length (L) / Acceleration Length (L_A), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	2707	1316
Peak Hour Factor (PHF)	0.88	0.93
Total Trucks, %	5.43	2.60
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.948	0.975
Flow Rate (v_i), pc/h	3245	1451
Capacity (c), pc/h	6750	2200
Volume-to-Capacity Ratio (v/c)	0.70	0.66

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	27.9
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_S)	0.380
Downstream Equilibrium Distance (L_{EQ}), ft	1474.4	Flow Outer Lanes (v_{OA}), pc/h/ln	1266
Distance to Downstream Ramp (L_{DOWN}), ft	1100	On-Ramp Influence Area Speed (S_R), mi/h	49.8
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.610	Outer Lanes Freeway Speed (S_O), mi/h	51.7
Flow in Lanes 1 and 2 (v_{12}), pc/h	1979	Ramp Junction Speed (S), mi/h	50.3
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3430	Average Density (D), pc/mi/ln	31.1
Level of Service (LOS)	C		

HCS7 Freeway Merge Report

Project Information

Analyst	TCH	Date	10-3-2019
Agency	McFarland Johnson	Analysis Year	2019
Jurisdiction		Time Period Analyzed	Existing PM
Project Description	9W/I-87 Merge with I-787 Northbound		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	54.5	51.0
Segment Length (L) / Acceleration Length (L_A), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	1470	761
Peak Hour Factor (PHF)	0.93	0.89
Total Trucks, %	3.95	2.89
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.962	0.972
Flow Rate (v_i), pc/h	1643	880
Capacity (c), pc/h	6750	2200
Volume-to-Capacity Ratio (v/c)	0.37	0.40

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	15.9
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_S)	0.285
Downstream Equilibrium Distance (L_{EQ}), ft	760.8	Flow Outer Lanes (v_{OA}), pc/h/ln	667
Distance to Downstream Ramp (L_{DOWN}), ft	1100	On-Ramp Influence Area Speed (S_R), mi/h	50.9
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.594	Outer Lanes Freeway Speed (S_O), mi/h	53.9
Flow in Lanes 1 and 2 (v_{12}), pc/h	976	Ramp Junction Speed (S), mi/h	51.7
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	1856	Average Density (D), pc/mi/ln	16.3
Level of Service (LOS)	B		

NORTHBOUND / EASTBOUND SINGLE DESTINATION

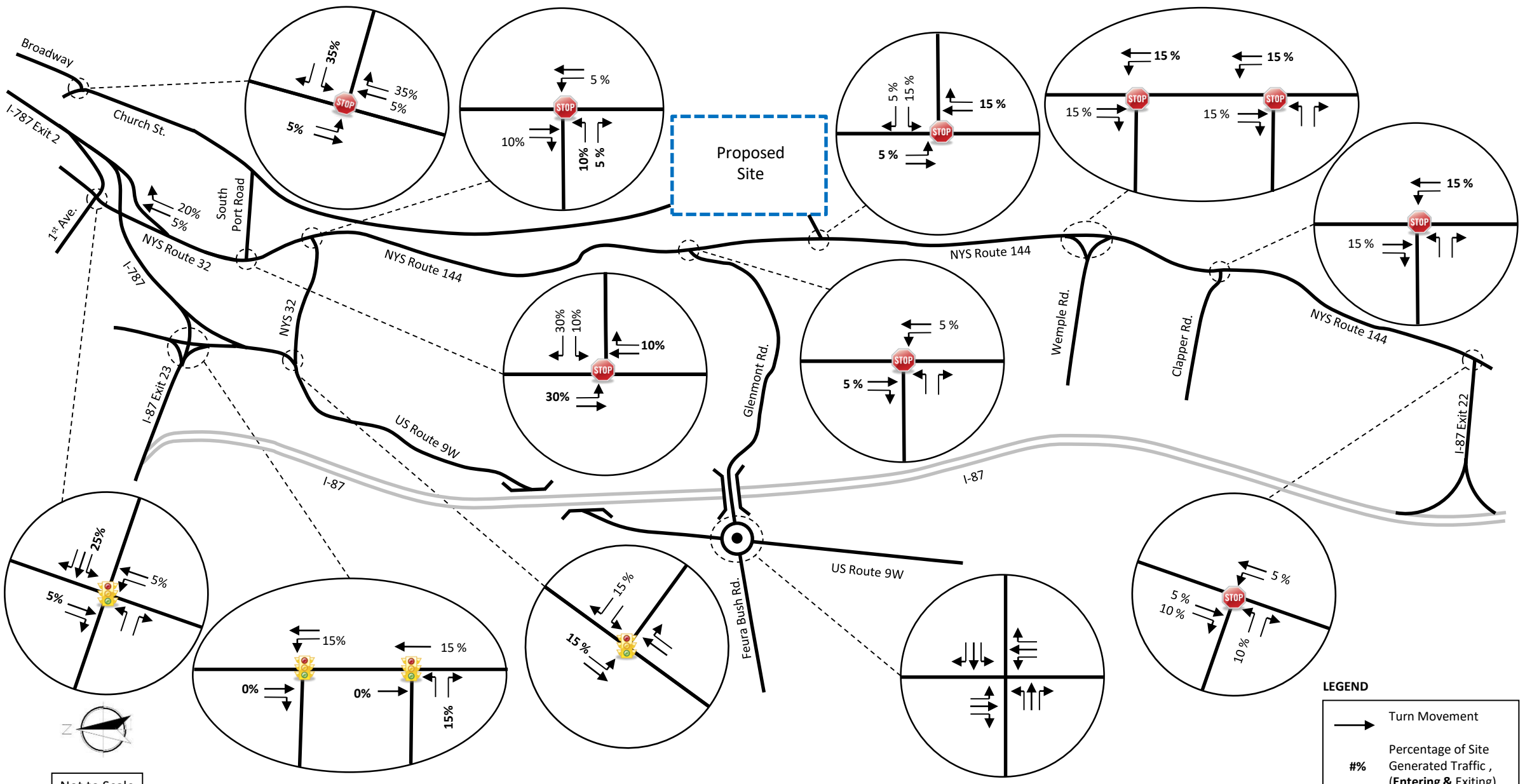
Study Intersection	Approach and Movement		MORNING PEAK HOUR						EVENING PEAK HOUR					
			2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION		2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Church Street at Broadway *(Un-Signalized)*	Westbound	L	15.5	C			20.3	C	12.3	B			13.5	B
		R	9.0	A			9.1	A	9.7	A			9.8	A
	Southbound	L	7.6	A			7.7	A	7.9	A			7.9	A
	OVERALL		**7.6**	**A**			**10.2**	**B**	**3.3**	**A**			**3.9**	**A**

SOUTHBOUND SINGLE DESTINATION

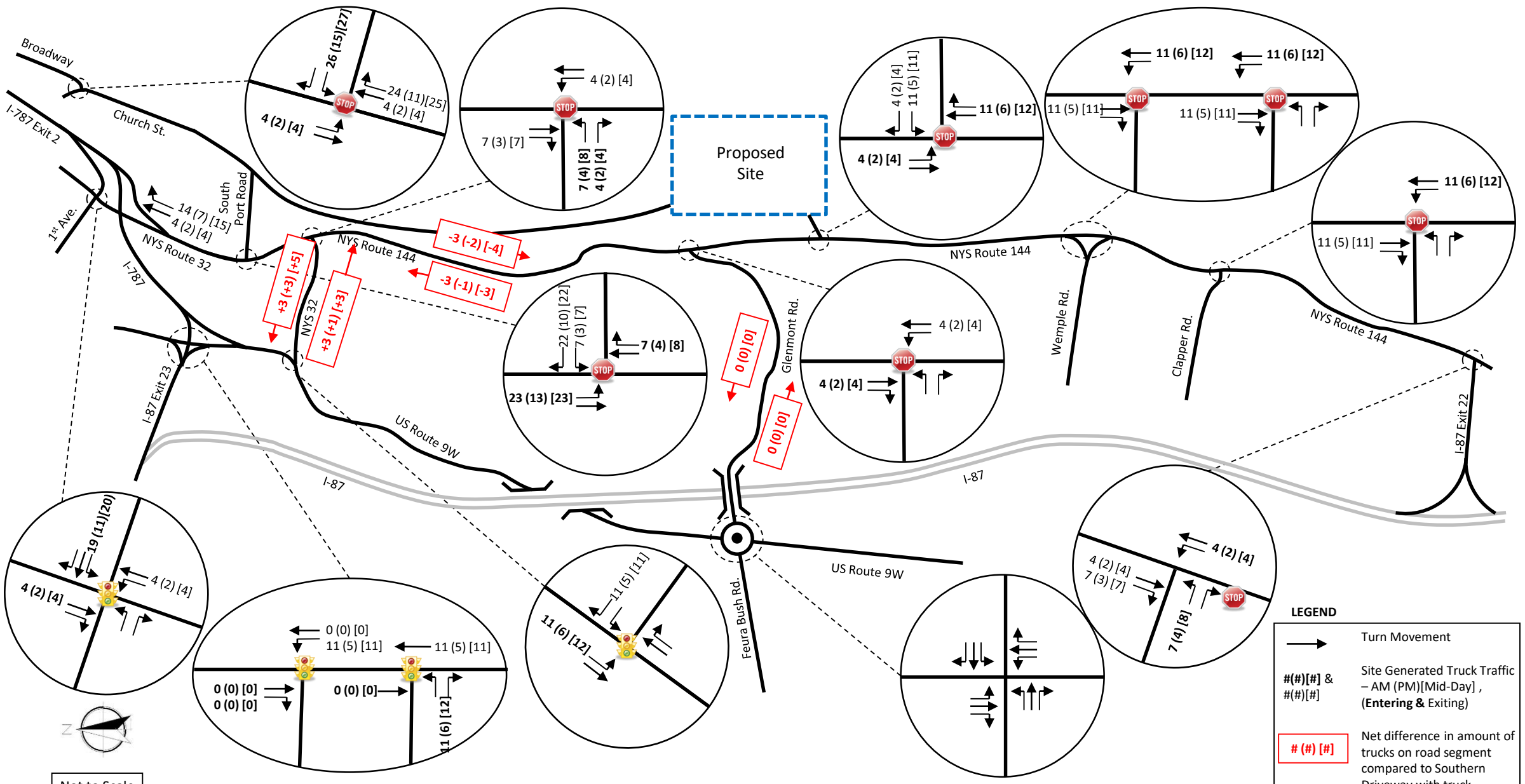
Study Intersection	Approach and Movement		MORNING PEAK HOUR						EVENING PEAK HOUR					
			2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION		2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NYS Route 32 at South Port Road (Signalized)	Westbound	L	21.8	C	47.7	D	55.3	E	30.7	C	31.8	C	35.9	D
		R			18.4	B	6.8	A			1.3	A	3.4	A
	Northbound	R	15.4	B	19.2	B	44.8	D	8.5	A	5.7	A	16.3	B
	Southbound	L	158.1	F	13.5	B	46.4	D	65.2	E	4.6	A	5.7	A
		T			2.5	A	4.7	A			13.7	B	17.8	B
	OVERALL		**59.5**	**E**	**16.4**	**B**	**36.4**	**D**	**46.0**	**D**	**11.6**	**B**	**17.2**	**B**
NYS Route 144 at NYS Route 32 *(Un-Signalized/Signalized)*	Northbound	T-L	8.4	A	14.8	B	18.4	B	12.1	B	5.9	A	7.7	A
	Eastbound	L	119.9	F	31.1	C	30.5	C	60.0	F	30.3	C	29.7	C
		R	10.8	B	8.0	A	8.7	A	21.5	C	10.2	B	10.9	B
	Southbound	T-R			5.5	A	6.0	A			16.9	B	19.2	B
	OVERALL		**15.5**	**C**	**14.2**	**B**	**16.0**	**B**	**3.9**	**A**	**14.8**	**B**	**16.6**	**B**
NYS Route 144 at Glenmont Road *(Un-Signalized)*	Eastbound	L-R	68.7	F			149.1	F	25.6	D			30.0	D
	Northbound	T-L	8.0	A			8.3	A	9.8	A			10.0	A
	OVERALL		**13.3**	**F**			**25.0**	**C**	**2.8**	**A**			**3.0**	**A**
NYS Route 144 at I-87 Exit 22 Ramp *(Un-Signalized)*	Northbound	T-L	8.3	A			8.4	A	8.8	A			8.5	A
	Eastbound	L	21.1	C			565.1	F	13.2	B			52.9	F
	OVERALL		**7.5**	**A**			**63.7**	**F**	**6.2**	**A**			**10.5**	**B**

WESTBOUND SINGLE DESTINATION

Study Intersection	Approach and Movement		MORNING PEAK HOUR						EVENING PEAK HOUR					
			2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION		2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NYS Route 32 at South Port Road (Signalized)	Westbound	L	21.8	C	47.7	D	55.3	E	30.7	C	31.8	C	35.9	D
		R			18.4	B	6.8	A			1.3	A	3.4	A
	Northbound	R	15.4	B	19.2	B	44.8	D	8.5	A	5.7	A	16.3	B
	Southbound	L	158.1	F	13.5	B	46.4	D	65.2	E	4.6	A	5.7	A
		T			2.5	A	4.7	A			13.7	B	17.8	B
	OVERALL		**59.5**	**E**	**16.4**	**B**	**36.4**	**D**	**46.0**	**D**	**11.6**	**B**	**17.2**	**B**
NYS Route 144 at NYS Route 32 *(Un-Signalized/Signalized)*	Northbound	T-L	8.4	A	14.8	B	21.1	C	12.1	B	5.9	A	6.3	A
	Eastbound	L	119.9	F	31.1	C	42.4	D	60.0	F	30.3	C	30.3	C
		R	10.8	B	8.0	A	6.8	A	21.5	C	10.2	B	10.2	B
	Southbound	T-R			5.5	A	8.3	A			16.9	B	20.7	C
	OVERALL		**15.5**	**C**	**14.2**	**B**	**20.5**	**C**	**3.9**	**A**	**14.8**	**B**	**17.7**	**B**
NYS Route 32 at US Route 9W *(Signalized)*	Westbound	L	61.0	E	72.0	E	77.3	E	39.6	D			41.9	D
		R	13.1	B	14.9	B	20.7	C	18.9	B			21.4	C
	Northbound	T	60.0	E	48.8	D	74.0	E	29.3	C			30.4	C
		R	5.6	A	4.9	A	6.5	A	4.9	A			4.9	A
	Southbound	L	52.9	D	52.2	D	101.8	F	24.4	C			52.7	D
		T	4.7	A	4.0	A	3.9	A	17.8	B			17.1	B
	OVERALL		**40.6**	**D**	**34.4**	**C**	**51.9**	**D**	**23.7**	**C**			**25.4**	**C**



Proposed Truck Trip Distribution Percentages without Southern Driveway Restriction



Not to Scale

Trip Generation Truck Volumes without Southern Driveway Restriction – Phase III

LEGEND

- EXISTING SIGHT DISTANCE (ORIGINAL DRIVEWAY LOCATTION)
- SIGHT DISTANCE AFTER PROPOSED VEGETATION REMOVAL (ORIGINAL DRIVEWAY LOCATION)
- EXISTING SIGHT DISTANCE (ADJUSTED DRIVEWAY LOCATION)
- SIGHT DISTANCE AFTER PROPOSED VEGETATION REMOVAL (ADJUSTED DRIVEWAY LOCATION)

0 100 200 300 FT
SCALE

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
TRAFFIC ANALYSIS

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK
PROJECT: PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=100'
DATE	SEPTEMBER 2019
PROJECT	18437.00

DRAWING TITLE
SIGHT DISTANCE PLAN

DRAWING NUMBER
SD-01

McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY, 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NO
Counts Performed via Count Board

File Name : NYS Route 144 @ Glenmont - AM
Site Code : 18437.00
Start Date : 4/8/2019
Page No : 1

Directions Printed: Combined

Start Time	Volume	2 - 3	4 - 5	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	>29	Int. Total	Average
07:00 AM	0	16	14	6	6	5	5	5	3	1	1	1	3	3	1	1	71	6 - 7
07:15 AM	0	27	10	12	3	5	3	2	4	3	2	1	0	1	1	3	77	6 - 7
07:30 AM	0	30	16	6	12	1	5	4	2	1	1	1	0	0	1	3	83	4 - 5
07:45 AM	0	29	11	8	5	5	1	3	3	1	0	0	2	0	1	5	74	4 - 5
Total	0	102	51	32	26	16	14	14	12	6	4	3	5	4	4	12	305	4 - 5
08:00 AM	0	25	8	8	5	7	6	6	5	2	1	1	0	0	0	3	77	6 - 7
Grand Total	0	127	59	40	31	23	20	20	17	8	5	4	5	4	4	15	382	6 - 7
Total %		33.2	15.4	10.5	8.1	6.0	5.2	5.2	4.5	2.1	1.3	1.0	1.3	1.0	1.0	3.9		

Peak Data Not Available

Total Gaps	102	51	32	26	16	14	14	12	6	4	3	5	4	4	12	
# of Cars per Gap			1	1	1	1	1	2	2	2	2	2	3	3	3	
Available Gaps	0	0	32	26	16	14	14	24	12	8	6	10	12	12	36	

Total Gaps for Eastbound Left: 222

McFarland Johnson Inc.

2525 NYS Route 332
Canandaigua, NY, 14424
Traffic Count Data

Counts by McFarland Johnson
Counted by NO
Counts Performed via Count Board

File Name : NYS Route 144 @ Glenmont - AM
Site Code : 18437.00
Start Date : 4/8/2019
Page No : 1

Directions Printed: Southbound

Start Time	Volume	2 - 3	4 - 5	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	>29	Int. Total	Average
07:00 AM	30	4	0	0	0	1	0	3	0	2	1	0	1	0	0	13	25	>29
07:15 AM	40	2	7	0	1	1	0	1	1	2	1	0	1	1	1	13	32	24 - 25
07:30 AM	27	1	1	0	1	0	0	1	2	0	0	1	2	0	0	9	18	>29
07:45 AM	34	4	3	2	2	1	1	0	1	0	1	1	1	1	0	10	28	20 - 21
Total	131	11	11	2	4	3	1	5	4	4	3	2	5	2	1	45	103	24 - 25
08:00 AM	44	13	2	2	1	3	0	1	1	0	1	0	1	0	0	12	37	10 - 11
Grand Total	175	24	13	4	5	6	1	6	5	4	4	2	6	2	1	57	140	20 - 21
Total %		17.1	9.3	2.9	3.6	4.3	0.7	4.3	3.6	2.9	2.9	1.4	4.3	1.4	0.7	40.7		

Peak Hour Analysis From 07:00 AM to 08:00 AM - Peak 1 of 1

Peak Occurred:	07:15 AM
Volume	145
High Int.	08:00 AM
Volume	44
PHF	0.824

Total Gaps	11	11	2	4	3	1	5	4	4	3	2	5	2	1	45
# of Cars per Gap	0	0	x1	x1	x1	x1	x1	x1	x2	x2	x2	x2	x3	x3	x3
Available Gaps	0	0	2	4	3	1	5	4	8	6	4	10	6	3	135

Total Gaps for Eastbound Rights: 191

Total Gaps	11	11	2	4	3	1	5	4	4	3	2	5	2	1	45
# of Cars per Gap	0	1	1	1	2	2	2	3	3	3	3	4	4	4	5
Available Gaps	0	11	2	4	6	2	10	12	12	9	6	20	8	4	225

Total Gaps for Northbound Left: 331

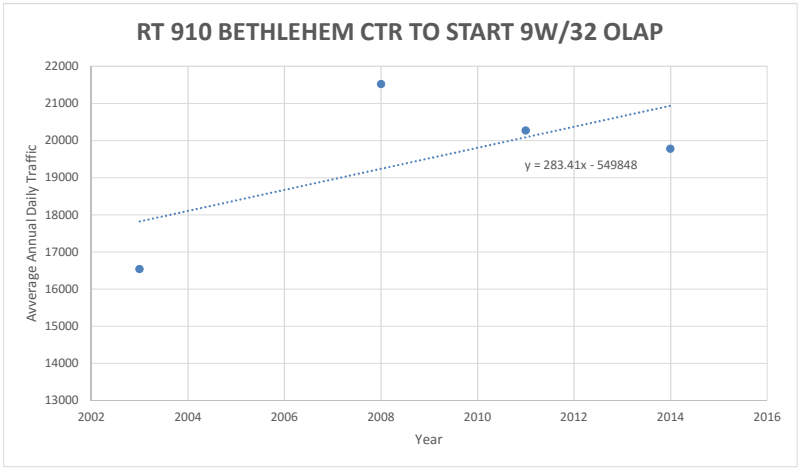
Station	FC	County Order	End Mile Point	Section Length	Road Name	Beginning Description	End Description	2017 Estimate AADT	2017 Estimate % Trucks	<<< Previous Counts YEAR	AADT	YEAR	AADT	YEAR	AADT	YEAR	AADT >>>
14_0490	16	01	0324	0036	NORTHERN DR	END 40/142 OLAP/LEVERSEE RD	OIL MILL HILL RD		4.3								
14_0034	16	01	0368	0044	NORTHERN DR	OIL MILL HILL RD	125TH ST	6826	3.2	2015	6890	2009	10190	2008	10521	2004	13199
14_0052	16	01	0387	0019	125TH ST	125TH ST	RT 4 END RT 142	7321	4.8	2015	7389	2013	8514	2009	7378	2008	7528
Route	**NY143**	**County**	**001**	**Albany**		**Region**	**01**										
11_0001	8	01	0610	0610		RT 85 FORDS CORNERS	START 32/143 OLAP	693	7.1	2016	693	2013	788	2010	844	2006	994
11_0041	7	01	0841	0231		START 32/143 OLAP	END 32/143 OLAP	4876	6	2017	4876	2008	4759	2005	4624	2002	4454
11_0040	8	01	1124	0283		END 32/143 OLAP	CR 111	998	9.5	2015	998	2010	830	2006	1057	2005	913
11_0036	8	01	1371	0247		CR 111	CR 106	1513	8.4	2016	1513	2010	1480	2007	1596	2004	1813
11_0241	8	01	1744	0373		CR 106	RT 9W W OF RAVENA	2555	6.4	2017	2555	2010	2180	2006	3497	2004	3258
11_0170	17	01	1771	0027	MAIN ST	RT 9W W OF RAVENA	MOUNTAIN RD	4817	10.9	2016	4842	2010	4560	2007	5314	2004	5244
11_0038	17	01	1880	0109		MOUNTAIN RD	RT 144 COEYMANS END RT 143	3691	7	2015	3730	2009	4570	2004	3881	2001	3869
Route	**NY144**	**County**	**039**	**Greene**		**Region**	**01**										
13_0051	7	01	0202	0202		RT 9W JCT	CR 61 NEW BALTIMORE	870	7.9	2016	872	2013	850	2010	760	2007	831
13_0052	17	01	0335	0133		CR 61 NEW BALTIMORE	Greene/Alb Co Line	1259	8.9	2016	1266	2013	1300	2010	1281	2006	1277
Route	**NY144**	**County**	**001**	**Albany**		**Region**	**01**										
11_0039	17	02	0080	0080		Greene/Alb Co Line	RT 143 COEYMANS	1386	4	2015	1400	2014	1299	2009	1339	2005	1491
11_0501	7	02	0481	0401		RT 143 COEYMANS	RT 396 SELKIRK	4584	7	2016	4596	2015	4406	2010	4054	2007	4220
11_0509	7	02	0525	0044		RT 396 SELKIRK	ACC RT 87I	6973	11.8	2017	6973	2008	7223	2006	6453	2001	7563
11_0061	16	02	1033	0508		ACC RT 87I	RT 910A JCT	5177	12.4	2016	5201	2010	4030	2006	4415	2001	4688
11_0062	16	02	1136	0103		RT 910A JCT	RT 32 END RT 144	6239	12.2	2017	7807	2011	6597	2007	8515	2003	6616
Route	**NY145**	**County**	**039**	**Greene**		**Region**	**01**										
13_0058	6	01	0270	0270		RT 23	CR 31 ACRA	4805	7.6	2016	4807	2010	4341	2007	4727	2004	4853
13_0403	6	01	0560	0290		CR 31 ACRA	CR 67A TO FREEHOLD	4214	7.6	2016	4215	2013	4094	2010	4007	2006	3868
13_0031	6	01	1255	0695		CR 67A TO FREEHOLD	Greene/Alb Co Line	3604	8.4	2015	3607	2013	3388	2009	3550	2007	3552
Route	**NY145**	**County**	**001**	**Albany**		**Region**	**01**										
11_0116	6	02	0051	0051		Greene/Alb Co Line	RT 81 & RT 910G JCT	1765	10.4	2016	1766	2010	1530	2007	1899	2004	2115
11_0203	6	02	0495	0444		RT 81 & RT 910G JCT	Alb/Schoh Co Line	1550	11.4	2014	1552	2008	1985	2000	3002		
Route	**NY145**	**County**	**095**	**Schoharie**		**Region**	**09**										

Station	FC	County Order	End Mile Point	Section Length	Road Name	Beginning Description	End Description	2017 Estimate AADT	2017 Estimate % Trucks	Previous Counts YEAR	Previous Counts AADT	Previous Counts YEAR	Previous Counts AADT	Previous Counts YEAR	Previous Counts AADT	Previous Counts YEAR	Previous Counts AADT
13_0012	6	03	0619	0247		GAME FARM RD	CR 46	3314	7.8	2016	3315	2013	3357	2010	3047	2006	3465
13_0048	6	03	0893	0274		CR 46	CR 23B	3088	6.6	2014	3091	2008	3297	2005	3467	2002	3506
13_0557	6	03	0921	0028		CR 23B	START 23/32 OLAP	4016	8.7	2016	4017	2013	3977	2010	4089	2007	3734
13_0037	16	03	1032	0111		START 23/32 OLAP	START 23/32 OLAP	11378	7.1	2016	11431	2013	10887	2010	10595	2007	10666
13_0402	7	03	1478	0446		START 23/32 OLAP	CR 67 FREEHOLD	3389	6.5	2016	3398	2010	2994	2007	3451	2003	4054
13_0028	7	03	1904	0426		CR 67 FREEHOLD	RT 81 GREENVILLE	3119	5.9	2015	3135	2010	2748	2006	3162	2003	3615
13_0049	7	03	2054	0150		RT 81 GREENVILLE	Greene/Alb Co Line	5053	4.8	2015	5079	2013	7551	2009	4836	2005	7796
Route	**NY32**		**County**	**001**	**Albany**	**Region**	**01**										
11_0034	7	04	0046	0046		Greene/Alb Co Line	CR 405	4224	5.5	2016	4235	2010	4647	2007	5206	2004	4563
11_0042	7	04	0465	0419		CR 405	START 32/143 OLAP DORMANS	3801	7.7	2016	3811	2010	3144	2006	3783	2005	3558
11_0041	7	04	0696	0231		START 32/143 OLAP DORMANS	END 32/143 OLAP	4876	6	2017	4876	2008	4759	2005	4624	2002	4454
11_0483	7	04	1041	0345		END 32/143 OLAP	CR 301 MEADS COR	5070	4.4	2016	5083	2014	5098	2010	4742	2007	4696
11_0510	7	04	1415	0374		CR 301 MEADS COR	CR 308 FEURA BUSH	5280	4.7	2016	5294	2014	5333	2010	3896	2007	4347
11_0058	7	04	1493	0078		CR 308 FEURA BUSH	SPEEDER RD	7892	9.4	2016	7913	2010	6734	2006	7555	2005	8549
11_0059	16	04	1682	0189		SPEEDER RD	RT 910A FEURA BUSH RD	8089	10.3	2016	8127	2010	7444	2006	7518	2004	8726
11_0060	16	04	1731	0049	ELM AVE EXT	RT 910A FEURA BUSH RD	ELM AVE	6305	9.3	2014	6394	2008	5484	2004	6717		
11_0102	16	04	1762	0031	ELM AVE	ELM AVE	DELMAR BYPASS	9927	7.6	2015	10020	2010	9215	2006	10944	2003	11824
11_0103	12	04	1885	0123		DELMAR BYPASS	RT 335	10793	6.5	2017	10793	2006	11051	2005	10945	2004	10984
11_0104	12	04	2094	0209		RT 335	START 9W/32 OLAP	10732	6.7	2014	11009	2011	12816	2007	11923	2004	12760
11_0063	14	04	2127	0033		START 9W/32 OLAP	END 9W/32 OLAP	29304	6.4	2017	29304	2009	30128	2005	31753	2002	27573
11_0106	16	04	2192	0065		END 9W/32 OLAP	RT 144 JCT	3762	16.3	2017	3762	2015	3405	2013	3539	2006	3725
11_0107	16	04	2200	0008		RT 144 JCT	BEG NORMANS KILL BRIDGE/CITY	9538	14.2	2016	9582	2010	9167	2006	9107	2002	8304
11_0005	16	04	2291	0091	PEARL ST S	BEG NORMANS KILL BRIDGE/CITY	ACC TO I787	11738	14.1	2017	11738	2016	9280	2010	10956	2006	10724
11_0020	17	04	2344	0053		ACC TO I787	JCT CHURCH ST	3286	17.2	2017	3286	2009	4295	2002	3775		
11_0605	17	04	2349	0005	GREEN ST	JCT CHURCH ST	ACC TO I-787 SB	2800	4.6	2017	2800						
11_0009	16	04	2414	0065	PEARL ST S	ACC TO I-787 SB	START RT 20 OLAP	2204	4.8	2016	2214	2010	2565	2008	2737	2005	5226
11_0140	14	04	2422	0008	PEARL ST S	START RT 20 OLAP	END 20/32 OLAP	9839	5.4	2015	9888	2009	13628	2008	11249		
11_0010	14	04	2444	0022	PEARL ST S	END 20/32 OLAP	RT 5 STATE ST	8962	5.4	2011	9096	2008	9989	2005	11360		
11_0072	16	04	2478	0034	PEARL ST N	RT 5 STATE ST	RT 9 CLINTON AVE	8198	4.3	2015	8275	2009	10589	2005	12807	2002	8965
11_0016	16	04	2569	0091	PEARL ST N	RT 9 CLINTON AVE	LOUDONVILLE RD	3833	4.3	2014	3887	2011	3588	2006	3900	2005	4933
11_0088	16	04	2669	0100	PEARL ST N	LOUDONVILLE RD	RT 910C JCT BROADWAY MENANDS	2548	7.2	2015	2572	2009	3316	2004	2159	2001	1963

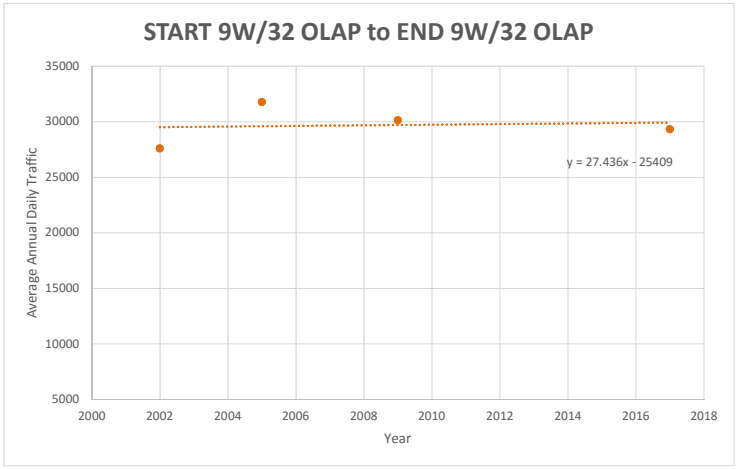
REGRESSION ANALYSIS - US 9W

RT 910A BETHLEHEM CTR to START 9W/32 OLAP	
Year	Volume
2003	16530
2008	21517
2011	20261
2014	19776

START 9W/32 OLAP to END 9W/32 OLAP	
Year	Volume
2002	27573
2005	31753
2009	30128
2017	29304



Calculated 2019 AADT = 22,357
NYSDOT 2003 AADT = 16,530
% Growth per Year = 1.875

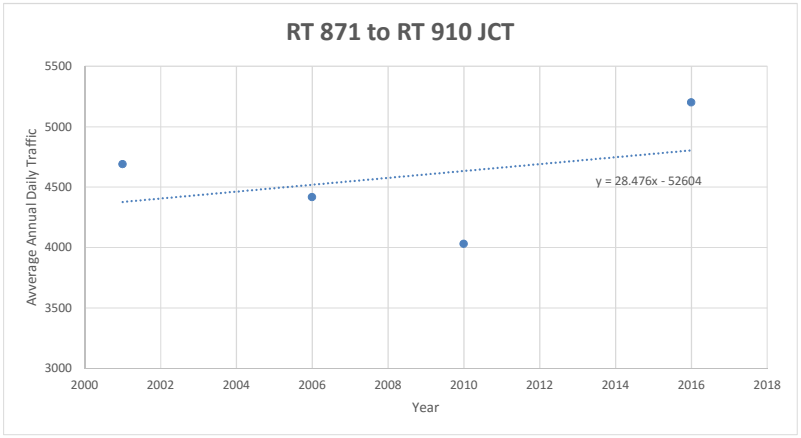


Calculated 2019 AADT = 29,984
NYSDOT 2002 AADT = 27,573
% Growth per Year = 0.49

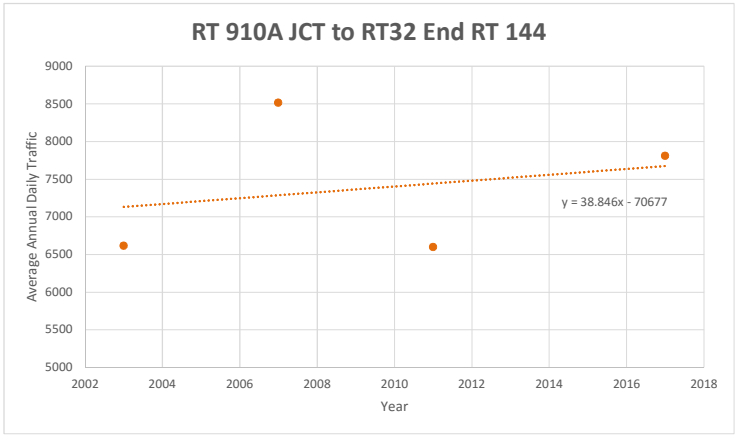
REGRESSION ANALYSIS - NYS 144

RT 871 to RT 910 JCT	
Year	Volume
2001	4688
2006	4415
2010	4030
2016	5201

RT 910A JCT to RT32 END RT 144	
Year	Volume
2003	6616
2007	8515
2011	6597
2017	7807



Calculated 2019 AADT = 4,889
NYSDOT 2001 AADT = 4,688
% Growth per Year = 0.23

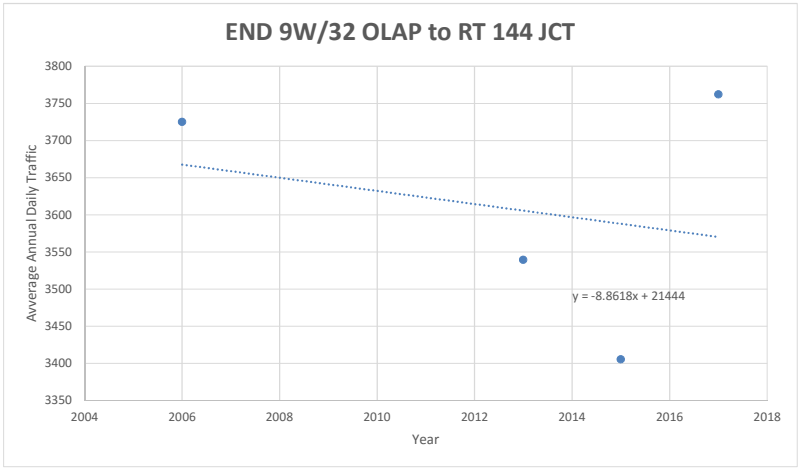


Calculated 2019 AADT = 7,753
NYSDOT 2003 AADT = 6,616
% Growth per Year = 0.99

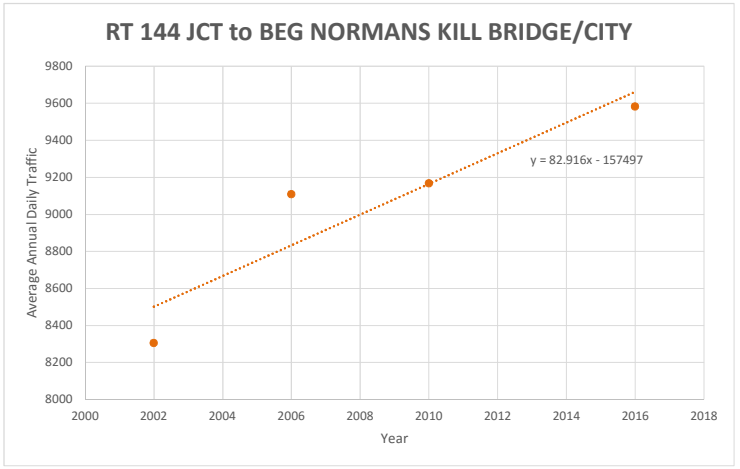
REGRESSION ANALYSIS - NY 32

END 9W/32 OLAP to RT 144 JCT	
Year	Volume
2006	3725
2013	3539
2015	3405
2017	3762

RT 144 JCT to BEG NORMANS KILL BRIDGE/CITY	
Year	Volume
2002	8304
2006	9107
2010	9167
2016	9582



Calculated 2019 AADT = 3,552
NYSDOT 2006 AADT = 3,725
% Growth per Year = -0.37



Calculated 2019 AADT = 9,910
NYSDOT 2002 AADT = 8,304
% Growth per Year = 0.96

TRIP GENERATION CALCULATIONS

Type of Land Use	ITE Code	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
Existing Port of Albany (2009 Volumes)	NA	925 1000 SF	Generation Rate =		0.57	Generation Rate =		0.47
			59%	41%	100%	33%	67%	100%
			310	215	525	143	293	436
Total Projected Trips			**310**	**215**	**525**	**143**	**293**	**436**

Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
Industrial Park	130	1,130 1000 SF	Generation Rate =		0.41	Generation Rate =		0.4
			87%	13%	100%	21%	79%	100%
			403	60	463	95	358	452
Total Projected Trips			**403**	**60**	**463**	**95**	**358**	**452**
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
Manufacturing	140	1,130 1000 SF	Generation Rate =		0.81	Generation Rate =		0.79
			72%	28%	100%	43%	57%	100%
			659	256	915	384	509	893
Total Projected Trips			**659**	**256**	**915**	**384**	**509**	**893**
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
General Light Industrial	110	1,130 1000 SF	Generation Rate =		0.92	Generation Rate =		0.83
			87%	13%	100%	18%	82%	100%
			904	135	1040	169	769	938
Total Projected Trips			**904**	**135**	**1040**	**169**	**769**	**938**

* Trip generation rates is based on ITE Trip Generation Manual 10th Edition for Trips Generated during the existing morning and evening peak hours at the study area intersections.

Type of Land Use	ITE Code**	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
Previous Study:								
Gen. Heavy Industrial	120	277 1000 SF	124	17	141	23	165	188
Industrial Park	130	277 1000 SF	185	41	226	54	201	255
Warehouse	150	277 1000 SF	115	30	145	29	86	115
Total Projected Trips			**424**	**88**	**512**	**106**	**452**	**558**

** Trip generation rates is based on ITE Trip Generation Manual 8th Edition for Trips Generated during the existing morning and evening peak hours at the study area intersections.

TRIP GENERATION CALCULATION TABLE

Type of Land Use	ITE Code	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
Existing Port of Albany	NA	925 1000 SF	Generation Rate =		0.13	Generation Rate =		0.07
			51%	49%	100%	56%	44%	100%
			61	59	120	34	27	61
Total Projected Trips			**61**	**59**	**120**	**34**	**27**	**61**

Type of Land Use	ITE Code	Unit	Weekday Morning Peak			Weekday Evening Peak			Mid-Day Peak		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Based on Existing Port of Albany Truck Traffic Generation	NA	1,130 1000 SF	Generation Rate =		0.13	Generation Rate =		0.07	Generation Rate =		0.13
			51%	49%	100%	56%	44%	100%	52%	48%	100%
			75	72	147	42	33	75	78	73	151
Total Projected Trips			**75**	**72**	**147**	**42**	**33**	**75**	**78**	**73**	**151**

APPENDIX C

SYNCHRO MODEL CAPACITY ANALYSIS RESULTS

- 2019 Existing Conditions
  - AM Peak
  - PM Peak

- 2029 Background Conditions
  - AM Peak
  - PM Peak

- 2029 Build-Phase I Conditions
  - AM Peak
  - PM Peak

- 2029 Build-Phase II Conditions
  - AM Peak
  - PM Peak

- 2029 Build-Phase III Conditions
  - AM Peak
  - PM Peak

- 2029 Build-Phase III-Mitigation Conditions
  - AM Peak
  - PM Peak

- 2029 Build-Phase III-Truck Sensitivity North/East
  - AM Peak
  - PM Peak

- 2029 Build-Phase III-Truck Sensitivity South
  - AM Peak
  - PM Peak

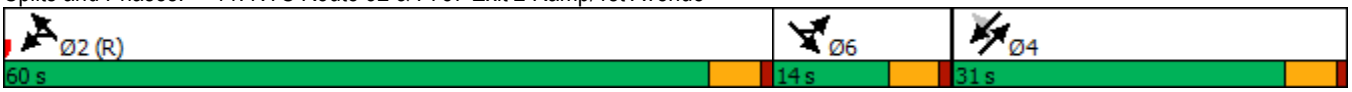
- 2029 Build-Phase III-Truck Sensitivity West
  - AM Peak
  - PM Peak

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	0	29	358	51	86	7	58	0	0	94	4
Future Volume (vph)	3	0	29	358	51	86	7	58	0	0	94	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88										
Frt		0.879			0.906						0.995	
Flt Protected		0.995		0.950				0.994				
Satd. Flow (prot)	0	1383	0	1444	1425	0	0	1644	0	0	1598	0
Flt Permitted		0.995		0.950				0.960				
Satd. Flow (perm)	0	1370	0	1444	1425	0	0	1588	0	0	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			97						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.91	0.91	0.91	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	7%	25%	0%	33%	14%	15%	0%	0%	18%	25%
Adj. Flow (vph)	4	0	35	402	57	97	8	64	0	0	121	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	402	154	0	0	72	0	0	126	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		5.7		75.0	75.0			13.5			13.5	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.05		0.71	0.71			0.13			0.13	
v/c Ratio		0.27		0.39	0.15			0.35			0.61	
Control Delay		7.6		8.9	3.3			45.2			54.5	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		7.6		8.9	3.3			45.2			54.5	
LOS		A		A	A			D			D	
Approach Delay		7.6			7.4			45.2			54.5	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)		0		108	12			45			80	
Queue Length 95th (ft)		5		200	39			85			114	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		185		1032	1046			393			397	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.21		0.39	0.15			0.18			0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



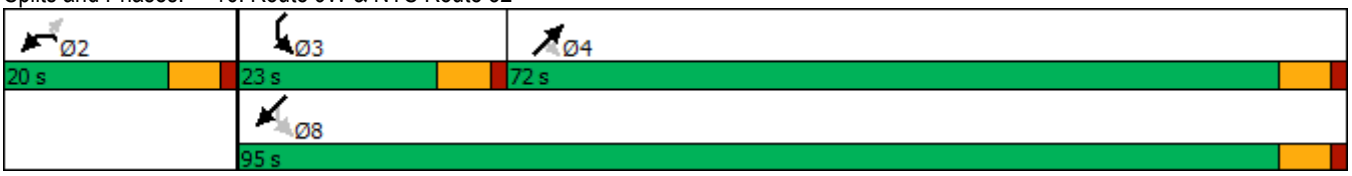
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	89	146	1939	157	96	782
Future Volume (vph)	89	146	1939	157	96	782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1442	3505	1482	1388	3406
Flt Permitted	0.950				0.055	
Satd. Flow (perm)	1530	1442	3505	1482	80	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		168		102		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.87	0.87	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	12%	3%	9%	30%	6%
Adj. Flow (vph)	102	168	2085	169	113	920
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	168	2085	169	113	920
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	20.0	20.0	72.0	72.0	23.0	95.0
Total Split (%)	17.4%	17.4%	62.6%	62.6%	20.0%	82.6%
Maximum Green (s)	14.0	14.0	66.0	66.0	17.0	89.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	14.0	14.0	66.1	66.1	82.3	82.3
Actuated g/C Ratio	0.13	0.13	0.61	0.61	0.76	0.76
v/c Ratio	0.52	0.51	0.97	0.18	0.62	0.36
Control Delay	55.1	12.7	35.8	4.7	34.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	12.7	35.8	4.7	34.3	4.7
LOS	E	B	D	A	C	A
Approach Delay	28.7		33.5			7.9
Approach LOS	C		C			A
Queue Length 50th (ft)	67	0	670	17	35	92
Queue Length 95th (ft)	125	58	#1002	52	85	106
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	198	332	2139	944	266	2803
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.51	0.97	0.18	0.42	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.3			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 25.7		Intersection LOS: C	
Intersection Capacity Utilization 78.8%		ICU Level of Service D	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	29	681	37	35	228
Future Volume (vph)	16	29	681	37	35	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912		0.993			
Flt Protected	0.983					0.993
Satd. Flow (prot)	1035	0	1769	0	0	1507
Flt Permitted	0.983					0.861
Satd. Flow (perm)	1035	0	1769	0	0	1307
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	39		7			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.75	0.75	0.87	0.87	0.84	0.84
Heavy Vehicles (%)	60%	67%	6%	18%	52%	21%
Adj. Flow (vph)	21	39	783	43	42	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	826	0	0	313
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	7.6		55.9			55.9
Actuated g/C Ratio	0.11		0.84			0.84
v/c Ratio	0.39		0.56			0.29
Control Delay	22.1		5.7			3.7
Queue Delay	0.0		0.0			0.0
Total Delay	22.1		5.7			3.7
LOS	C		A			A
Approach Delay	22.1		5.7			3.7
Approach LOS	C		A			A
Queue Length 50th (ft)	9		116			31
Queue Length 95th (ft)	29		256			71
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	340		1484			1096
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.18		0.56			0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 66.7			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	56	172	303	316	53	122
Future Vol, veh/h	56	172	303	316	53	122
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	88	88
Heavy Vehicles, %	9	20	10	10	18	17
Mvmt Flow	62	191	333	347	60	139

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1143	130	60	0	-	0
Stage 1	130	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Critical Hdwy	6.49	6.4	4.2	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.48	2.29	-	-	-
Pot Cap-1 Maneuver	214	874	1494	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	874	1494	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	340	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	14.5	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1494	-	631	-	-
HCM Lane V/C Ratio	0.223	-	0.401	-	-
HCM Control Delay (s)	8.1	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.9	-	1.9	-	-

Intersection	
Int Delay, s/veh	7.7

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	18	514	166	59	162	16
Future Vol, veh/h	18	514	166	59	162	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	83	83
Heavy Vehicles, %	3	0	22	10	12	11
Mvmt Flow	21	612	205	73	195	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	278	0	-	0	896	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	654	-
Critical Hdwy	4.13	-	-	-	6.52	6.31
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.227	-	-	-	3.608	3.399
Pot Cap-1 Maneuver	1279	-	-	-	298	775
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1279	-	-	-	291	775
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	499	-

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	39.6
HCM LOS			E

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	308	1279	-	-	-
HCM Lane V/C Ratio	0.696	0.017	-	-	-
HCM Control Delay (s)	39.6	7.9	0	-	-
HCM Lane LOS	E	A	A	-	-
HCM 95th %tile Q(veh)	4.9	0.1	-	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	97	46	53	621	195	49
Future Vol, veh/h	97	46	53	621	195	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	86	86	90	90
Heavy Vehicles, %	13	28	20	9	23	28
Mvmt Flow	111	53	62	722	217	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1090	244	271	0	-	0
Stage 1	244	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Critical Hdwy	6.53	6.48	4.3	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.552	2.38	-	-	-
Pot Cap-1 Maneuver	227	735	1195	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	207	735	1195	-	-	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	403	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.1	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1195	-	207	735	-	-
HCM Lane V/C Ratio	0.052	-	0.539	0.072	-	-
HCM Control Delay (s)	8.2	0	41	10.3	-	-
HCM Lane LOS	A	A	E	B	-	-
HCM 95th %tile Q(veh)	0.2	-	2.8	0.2	-	-

Intersection	
Int Delay, s/veh	6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	106	6	40	38	41	50
Future Vol, veh/h	106	6	40	38	41	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	84	84	62	62
Heavy Vehicles, %	25	17	42	42	0	25
Mvmt Flow	163	9	48	45	66	81

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	284	71	0	0	93	0
Stage 1	71	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.1	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	660	951	-	-	1514	-
Stage 1	897	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	631	951	-	-	1514	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	3.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	631	951	1514	-
HCM Lane V/C Ratio	-	-	0.258	0.01	0.044	-
HCM Control Delay (s)	-	-	12.7	8.8	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	1	0	0.1	-

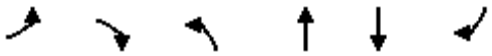
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	14	3	449	150	1
Future Vol, veh/h	5	14	3	449	150	1
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	81	75	72	93	25
Heavy Vehicles, %	0	8	0	8	20	0
Mvmt Flow	12	17	4	624	161	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	795	163	165	0	-	0
Stage 1	163	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	359	866	1426	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	866	1426	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	534	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1426	-	549	-	-
HCM Lane V/C Ratio	0.003	-	0.053	-	-
HCM Control Delay (s)	7.5	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

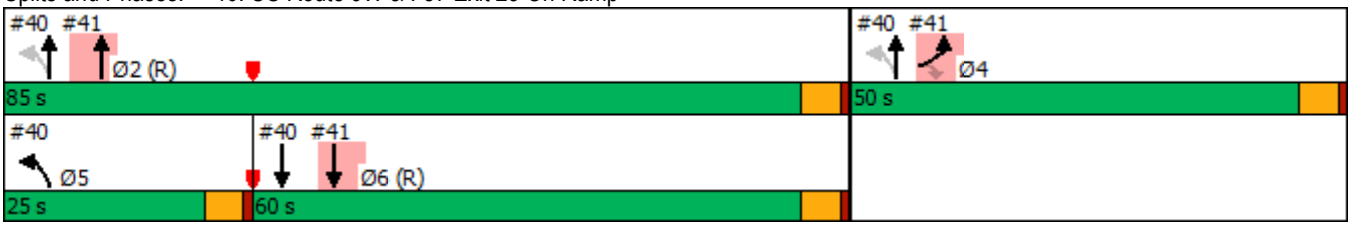


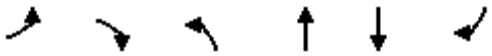
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	324	766	616	204		
Future Volume (vph)	0	0	324	766	616	204		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1656	1863	3319	0		
Flt Permitted			0.262					
Satd. Flow (perm)	0	0	457	1863	3319	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					40			
Link Speed (mph)	30			30	30			
Link Distance (ft)	392			267	305			
Travel Time (s)	8.9			6.1	6.9			
Peak Hour Factor	0.92	0.92	0.89	0.89	0.93	0.93		
Heavy Vehicles (%)	2%	2%	9%	2%	6%	1%		
Adj. Flow (vph)	0	0	364	861	662	219		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	364	861	881	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			1.0		5.0		5.0	5.0
Minimum Split (s)			10.0		22.5		22.5	50.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	68.0			
Actuated g/C Ratio			0.96	1.00	0.50			
v/c Ratio			0.73	0.46	0.52			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			12.0	1.3	23.1			
Queue Delay			0.1	0.0	0.0			
Total Delay			12.1	1.3	23.1			
LOS			B	A	C			
Approach Delay				4.5	23.1			
Approach LOS				A	C			
Queue Length 50th (ft)			45	38	247			
Queue Length 95th (ft)			m42	m23	345			
Internal Link Dist (ft)	312			187	225			
Turn Bay Length (ft)								
Base Capacity (vph)			617	1863	1691			
Starvation Cap Reductn			17	0	0			
Spillback Cap Reductn			0	0	0			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			0.61	0.46	0.52			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 79.4%		ICU Level of Service D	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 40: US Route 9W & I-87 Exit 23 On Ramp



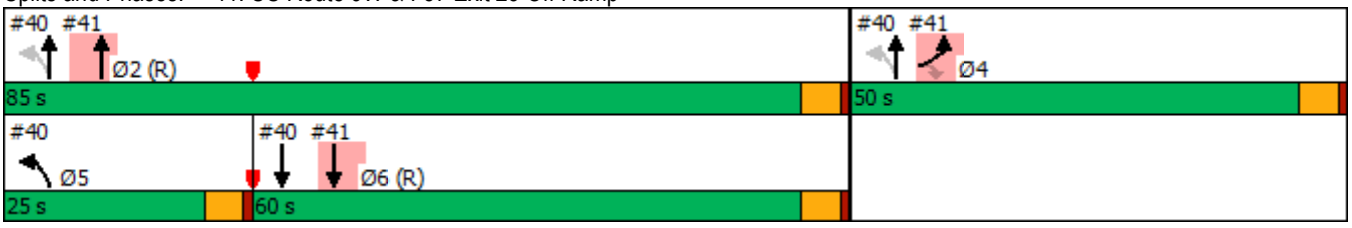


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	476	284	0	614	616	0	
Future Volume (vph)	476	284	0	614	616	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1805	1568	0	3539	3610	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	1568	0	3539	3610	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		263					
Link Speed (mph)	30			30	30		
Link Distance (ft)	385			388	267		
Travel Time (s)	8.8			8.8	6.1		
Peak Hour Factor	0.83	0.83	0.86	0.86	0.98	0.98	
Heavy Vehicles (%)	0%	3%	0%	2%	0%	0%	
Adj. Flow (vph)	573	342	0	714	629	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	573	342	0	714	629	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		1.0
Minimum Split (s)	50.0	50.0		22.5	22.5		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	45.0	45.0		80.0	68.0		
Actuated g/C Ratio	0.33	0.33		0.59	0.50		
v/c Ratio	0.95	0.49		0.34	0.35		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Control Delay	71.1	11.1		14.6	4.0		
Queue Delay	0.0	0.0		0.0	0.2		
Total Delay	71.1	11.1		14.6	4.2		
LOS	E	B		B	A		
Approach Delay	48.7			14.6	4.2		
Approach LOS	D			B	A		
Queue Length 50th (ft)	490	49		160	20		
Queue Length 95th (ft)	#625	105		187	23		
Internal Link Dist (ft)	305			308	187		
Turn Bay Length (ft)							
Base Capacity (vph)	601	698		2097	1818		
Starvation Cap Reductn	0	0		0	477		
Spillback Cap Reductn	0	0		0	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.95	0.49		0.34	0.47		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 79.4%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 41: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	1	1	461	129	18
Future Vol, veh/h	38	1	1	461	129	18
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	83	83	77	77
Heavy Vehicles, %	3	0	0	5	12	6
Mvmt Flow	58	2	1	555	168	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	737	180	191	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	384	868	1395	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	384	868	1395	-	-	-
Mov Cap-2 Maneuver	384	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	572	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1395	-	390	-	-
HCM Lane V/C Ratio	0.001	-	0.154	-	-
HCM Control Delay (s)	7.6	0	15.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	1

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	23	456	130	0	6	44
Future Vol, veh/h	23	456	130	0	6	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	83	83	83	83
Heavy Vehicles, %	4	5	12	0	0	0
Mvmt Flow	29	570	157	0	7	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	157	0	-	0	785	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	628	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1411	-	-	-	364	894
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1411	-	-	-	353	894
Mov Cap-2 Maneuver	-	-	-	-	353	-
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	536	-

Approach	NB	SB	SE
HCM Control Delay, s	0.4	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1411	-	755	-	-
HCM Lane V/C Ratio	0.02	-	0.08	-	-
HCM Control Delay (s)	7.6	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	0	44	834	96	57	5	58	0	0	193	8
Future Volume (vph)	2	0	44	834	96	57	5	58	0	0	193	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.87										
Frt		0.871			0.944						0.994	
Flt Protected		0.998		0.950				0.996				
Satd. Flow (prot)	0	1359	0	1719	1755	0	0	1690	0	0	1715	0
Flt Permitted		0.998		0.950				0.972				
Satd. Flow (perm)	0	1353	0	1719	1755	0	0	1649	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			43						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.73	0.73	0.73	0.90	0.90	0.90	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	5%	0%	6%	0%	13%	0%	0%	10%	13%
Adj. Flow (vph)	3	0	60	927	107	63	6	70	0	0	210	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	927	170	0	0	76	0	0	219	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		61.0	61.0		30.0	30.0			30.0	
Total Split (%)	13.3%	13.3%		58.1%	58.1%		28.6%	28.6%			28.6%	
Maximum Green (s)	9.0	9.0		56.0	56.0		25.0	25.0			25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		6.4		67.2	67.2			18.5			18.5	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.06		0.64	0.64			0.18			0.18	
v/c Ratio		0.42		0.84	0.15			0.26			0.73	
Control Delay		17.6		26.5	7.6			37.9			53.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		17.6		26.5	7.6			37.9			53.7	
LOS		B		C	A			D			D	
Approach Delay		17.6			23.5			37.9			53.7	
Approach LOS		B			C			D			D	
Queue Length 50th (ft)		0		461	31			45			139	
Queue Length 95th (ft)		18		#898	77			74			206	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		183		1100	1139			392			409	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.34		0.84	0.15			0.19			0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 28.6		Intersection LOS: C	
Intersection Capacity Utilization 71.8%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

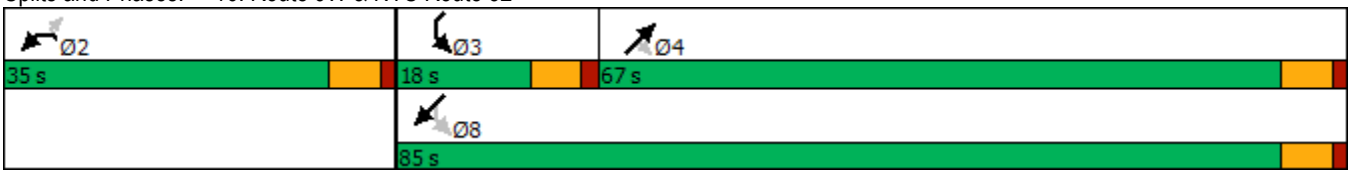
Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	278	95	1030	88	84	1371
Future Volume (vph)	278	95	1030	88	84	1371
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1455	3471	1509	1583	3539
Flt Permitted	0.950				0.104	
Satd. Flow (perm)	1719	1455	3471	1509	173	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		54		89		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	5%	11%	4%	7%	14%	2%
Adj. Flow (vph)	305	104	1132	97	89	1459
Shared Lane Traffic (%)						
Lane Group Flow (vph)	305	104	1132	97	89	1459
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	24.0
Total Split (s)	35.0	35.0	67.0	67.0	18.0	85.0
Total Split (%)	29.2%	29.2%	55.8%	55.8%	15.0%	70.8%
Maximum Green (s)	29.0	29.0	61.0	61.0	12.0	79.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	29.6	29.6	39.6	39.6	50.5	50.5
Actuated g/C Ratio	0.32	0.32	0.43	0.43	0.55	0.55
v/c Ratio	0.55	0.21	0.76	0.14	0.41	0.75
Control Delay	33.6	16.2	26.6	4.8	14.9	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	16.2	26.6	4.8	14.9	18.3
LOS	C	B	C	A	B	B
Approach Delay	29.2		24.9			18.1
Approach LOS	C		C			B
Queue Length 50th (ft)	150	21	300	3	23	317
Queue Length 95th (ft)	289	71	388	31	43	390
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	550	502	2338	1045	281	3024
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.21	0.48	0.09	0.32	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.3			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	68	12	226	13	5	883
Future Volume (vph)	68	12	226	13	5	883
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980		0.993			
Flt Protected	0.959					
Satd. Flow (prot)	1651	0	1711	0	0	1806
Flt Permitted	0.959					0.999
Satd. Flow (perm)	1651	0	1711	0	0	1805
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	13		7			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	8%	9%	8%	50%	40%	5%
Adj. Flow (vph)	80	14	314	18	5	939
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	332	0	0	944
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	8.7		51.5			51.5
Actuated g/C Ratio	0.13		0.77			0.77
v/c Ratio	0.42		0.25			0.68
Control Delay	28.6		4.0			9.5
Queue Delay	0.0		0.0			0.0
Total Delay	28.6		4.0			9.5
LOS	C		A			A
Approach Delay	28.6		4.0			9.5
Approach LOS	C		A			A
Queue Length 50th (ft)	34		36			178
Queue Length 95th (ft)	59		56			#395
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	506		1320			1391
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.19		0.25			0.68

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 66.8			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	63	265	159	108	209	79
Future Vol, veh/h	63	265	159	108	209	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	74	74	85	85
Heavy Vehicles, %	12	3	9	8	4	8
Mvmt Flow	77	323	215	146	246	93

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	869	293	246	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Critical Hdwy	6.52	6.23	4.19	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.327	2.281	-	-	-
Pot Cap-1 Maneuver	310	744	1280	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	744	1280	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.9	5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1280	-	921	-	-
HCM Lane V/C Ratio	0.168	-	0.434	-	-
HCM Control Delay (s)	8.4	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.6	-	2.2	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	21	178	383	271	56	32
Future Vol, veh/h	21	178	383	271	56	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	84	84	81	81
Heavy Vehicles, %	4	0	0	5	5	1
Mvmt Flow	27	231	456	323	69	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	779	0	-	0	903	618
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	285	-
Critical Hdwy	4.14	-	-	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.236	-	-	-	3.545	3.309
Pot Cap-1 Maneuver	829	-	-	-	304	491
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	757	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	829	-	-	-	293	491
Mov Cap-2 Maneuver	-	-	-	-	293	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	757	-

Approach	NB	SB	NE
HCM Control Delay, s	1	0	20.3
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	343	829	-	-	-
HCM Lane V/C Ratio	0.317	0.033	-	-	-
HCM Control Delay (s)	20.3	9.5	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	1.3	0.1	-	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	65	42	210	637	314
Future Vol, veh/h	29	65	42	210	637	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	91	91
Heavy Vehicles, %	29	14	10	7	7	2
Mvmt Flow	32	71	48	239	700	345

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1208	873	1045	0	-	0
Stage 1	873	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Critical Hdwy	6.69	6.34	4.2	-	-	-
Critical Hdwy Stg 1	5.69	-	-	-	-	-
Critical Hdwy Stg 2	5.69	-	-	-	-	-
Follow-up Hdwy	3.761	3.426	2.29	-	-	-
Pot Cap-1 Maneuver	179	333	636	-	-	-
Stage 1	367	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	163	333	636	-	-	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	335	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.9	1.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	636	-	163	333	-	-
HCM Lane V/C Ratio	0.075	-	0.193	0.212	-	-
HCM Control Delay (s)	11.1	0	32.3	18.7	-	-
HCM Lane LOS	B	A	D	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	0.8	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	31	83	91	15	58
Future Vol, veh/h	57	31	83	91	15	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	84	84	78	78
Heavy Vehicles, %	26	10	25	13	0	37
Mvmt Flow	69	37	99	108	19	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	265	153	0	0	207	0
Stage 1	153	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.66	6.3	-	-	4.1	-
Critical Hdwy Stg 1	5.66	-	-	-	-	-
Critical Hdwy Stg 2	5.66	-	-	-	-	-
Follow-up Hdwy	3.734	3.39	-	-	2.2	-
Pot Cap-1 Maneuver	675	872	-	-	1376	-
Stage 1	820	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	666	872	-	-	1376	-
Mov Cap-2 Maneuver	666	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	844	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	666	872	1376	-
HCM Lane V/C Ratio	-	-	0.103	0.043	0.014	-
HCM Control Delay (s)	-	-	11	9.3	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0	-

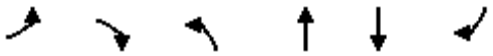
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	2	5	168	387	5
Future Vol, veh/h	4	2	5	168	387	5
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	30	80	88	63
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	8	4	17	210	440	8

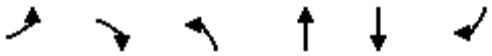
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	688	444	448	0	-	0
Stage 1	444	-	-	-	-	-
Stage 2	244	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	415	618	1123	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	408	618	1123	-	-	-
Mov Cap-2 Maneuver	408	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	801	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1123	-	460	-	-
HCM Lane V/C Ratio	0.015	-	0.026	-	-
HCM Control Delay (s)	8.3	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	361	444	1179	532		
Future Volume (vph)	0	0	361	444	1179	532		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.953			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1770	1863	3373	0		
Flt Permitted			0.042					
Satd. Flow (perm)	0	0	78	1863	3373	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					65			
Link Speed (mph)	30			30	30			
Link Distance (ft)	314			227	306			
Travel Time (s)	7.1			5.2	7.0			
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.97		
Adj. Flow (vph)	0	0	388	477	1215	548		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	388	477	1763	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	61.2			
Actuated g/C Ratio			0.96	1.00	0.45			
v/c Ratio			0.77	0.26	1.13			
Control Delay			40.7	0.4	100.1			



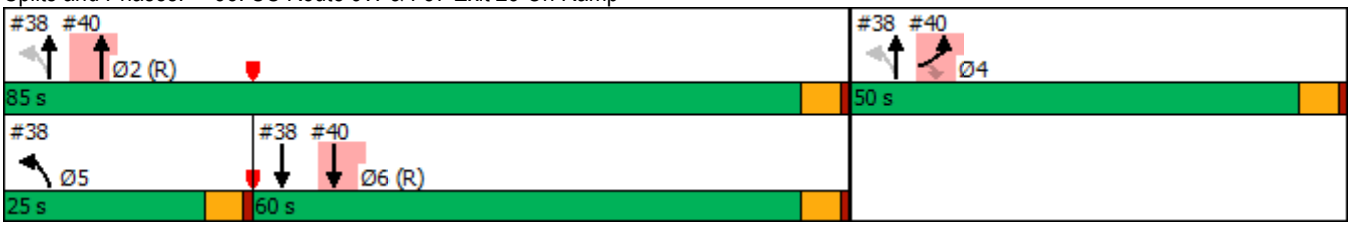
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			54.6	0.0	0.0			
Total Delay			95.3	0.4	100.1			
LOS			F	A	F			
Approach Delay				42.9	100.1			
Approach LOS				D	F			
Queue Length 50th (ft)			276	1	~918			
Queue Length 95th (ft)			#456	3	#1139			
Internal Link Dist (ft)	234			147	226			
Turn Bay Length (ft)								
Base Capacity (vph)			503	1863	1563			
Starvation Cap Reductn			151	0	0			
Spillback Cap Reductn			0	0	17			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			1.10	0.26	1.14			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 81.3		Intersection LOS: F	
Intersection Capacity Utilization 99.7%		ICU Level of Service F	
Analysis Period (min) 15			

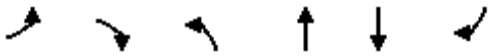
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 38: US Route 9W & I-87 Exit 23 On Ramp



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	187	331	0	618	1179	0	
Future Volume (vph)	187	331	0	618	1179	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1770	1583	0	3539	3539	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1770	1583	0	3539	3539	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		303					
Link Speed (mph)	30			30	30		
Link Distance (ft)	298			384	227		
Travel Time (s)	6.8			8.7	5.2		
Peak Hour Factor	0.97	0.97	0.89	0.89	0.95	0.95	
Adj. Flow (vph)	193	341	0	694	1241	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	193	341	0	694	1241	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	24.7	24.7		100.3	61.2		
Actuated g/C Ratio	0.18	0.18		0.74	0.45		
v/c Ratio	0.60	0.64		0.26	0.77		
Control Delay	57.1	13.0		6.5	7.7		

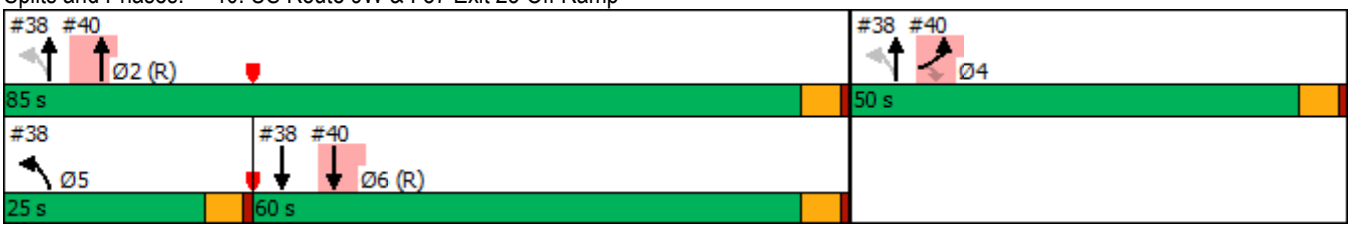


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.6	0.0		0.0	30.6		
Total Delay	57.7	13.0		6.6	38.3		
LOS	E	B		A	D		
Approach Delay	29.1			6.6	38.3		
Approach LOS	C			A	D		
Queue Length 50th (ft)	157	28		90	68		
Queue Length 95th (ft)	216	114		153	m69		
Internal Link Dist (ft)	218			304	147		
Turn Bay Length (ft)							
Base Capacity (vph)	590	729		2629	1603		
Starvation Cap Reductn	0	0		0	427		
Spillback Cap Reductn	163	0		101	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.45	0.47		0.27	1.06		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 99.7%		ICU Level of Service F	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	0	1	201	381	57
Future Vol, veh/h	11	0	1	201	381	57
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	46	46	89	89	91	91
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	24	0	1	226	419	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	679	451	482	0	-	0
Stage 1	451	-	-	-	-	-
Stage 2	228	-	-	-	-	-
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	420	613	1091	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	420	613	1091	-	-	-
Mov Cap-2 Maneuver	420	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1091	-	420	-	-
HCM Lane V/C Ratio	0.001	-	0.057	-	-
HCM Control Delay (s)	8.3	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	34	199	381	0	3	15
Future Vol, veh/h	34	199	381	0	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	88	88	75	75
Heavy Vehicles, %	3	7	4	0	0	7
Mvmt Flow	39	229	433	0	4	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	433	0	-	0	740	433
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	307	-
Critical Hdwy	4.13	-	-	-	6.4	6.27
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.363
Pot Cap-1 Maneuver	1121	-	-	-	387	612
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	751	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1121	-	-	-	372	612
Mov Cap-2 Maneuver	-	-	-	-	372	-
Stage 1	-	-	-	-	632	-
Stage 2	-	-	-	-	751	-

Approach	NB	SB	SE
HCM Control Delay, s	1.2	0	11.8
HCM LOS			B

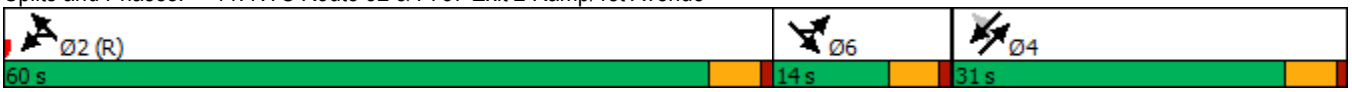
Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1121	-	553	-	-
HCM Lane V/C Ratio	0.035	-	0.043	-	-
HCM Control Delay (s)	8.3	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	0	30	395	53	90	8	61	0	0	99	4
Future Volume (vph)	3	0	30	395	53	90	8	61	0	0	99	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88										
Frt		0.878			0.906						0.995	
Flt Protected		0.995		0.950				0.994				
Satd. Flow (prot)	0	1380	0	1444	1426	0	0	1644	0	0	1599	0
Flt Permitted		0.995		0.950				0.957				
Satd. Flow (perm)	0	1368	0	1444	1426	0	0	1583	0	0	1599	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			101						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.91	0.91	0.91	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	7%	25%	0%	33%	14%	15%	0%	0%	18%	25%
Adj. Flow (vph)	4	0	37	444	60	101	9	67	0	0	127	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	444	161	0	0	76	0	0	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		5.7		74.6	74.6			13.9			13.9	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.05		0.71	0.71			0.13			0.13	
v/c Ratio		0.28		0.43	0.15			0.37			0.62	
Control Delay		8.4		9.7	3.4			45.1			54.5	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		8.4		9.7	3.4			45.1			54.5	
LOS		A		A	A			D			D	
Approach Delay		8.4			8.0			45.1			54.5	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)		0		127	12			47			84	
Queue Length 95th (ft)		7		234	41			88			118	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		185		1025	1042			391			397	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.22		0.43	0.15			0.19			0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 46.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



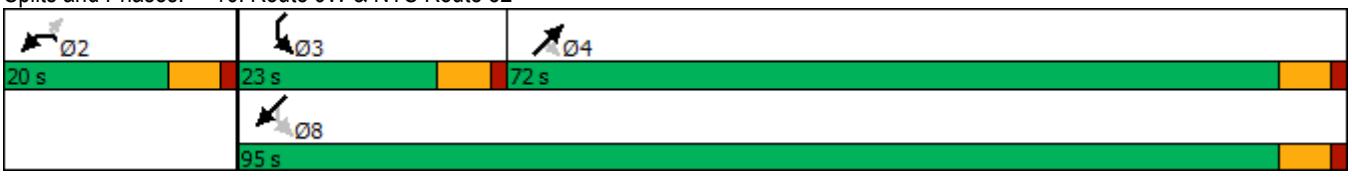
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	93	153	2035	165	101	821
Future Volume (vph)	93	153	2035	165	101	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1442	3505	1482	1388	3406
Flt Permitted	0.950				0.055	
Satd. Flow (perm)	1530	1442	3505	1482	80	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		176		102		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.87	0.87	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	12%	3%	9%	30%	6%
Adj. Flow (vph)	107	176	2188	177	119	966
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	176	2188	177	119	966
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	20.0	20.0	72.0	72.0	23.0	95.0
Total Split (%)	17.4%	17.4%	62.6%	62.6%	20.0%	82.6%
Maximum Green (s)	14.0	14.0	66.0	66.0	17.0	89.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	14.0	14.0	66.1	66.1	82.7	82.7
Actuated g/C Ratio	0.13	0.13	0.61	0.61	0.76	0.76
v/c Ratio	0.54	0.52	1.03	0.19	0.63	0.37
Control Delay	56.5	12.8	49.3	5.1	36.0	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	12.8	49.3	5.1	36.0	4.8
LOS	E	B	D	A	D	A
Approach Delay	29.3		46.0			8.2
Approach LOS	C		D			A
Queue Length 50th (ft)	70	0	~851	20	40	98
Queue Length 95th (ft)	131	58	#1095	56	91	113
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	197	339	2130	941	265	2792
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.52	1.03	0.19	0.45	0.35

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 108.7
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 33.7 Intersection LOS: C
Intersection Capacity Utilization 82.0% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	30	717	39	37	258
Future Volume (vph)	17	30	717	39	37	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.993			
Flt Protected	0.982					0.994
Satd. Flow (prot)	1037	0	1770	0	0	1512
Flt Permitted	0.982					0.859
Satd. Flow (perm)	1037	0	1770	0	0	1307
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	40		7			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.75	0.75	0.87	0.87	0.84	0.84
Heavy Vehicles (%)	60%	67%	6%	18%	52%	21%
Adj. Flow (vph)	23	40	824	45	44	307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	869	0	0	351
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	7.7		55.7			55.7
Actuated g/C Ratio	0.12		0.84			0.84
v/c Ratio	0.41		0.59			0.32
Control Delay	22.3		6.3			4.0
Queue Delay	0.0		0.0			0.0
Total Delay	22.3		6.3			4.0
LOS	C		A			A
Approach Delay	22.3		6.3			4.0
Approach LOS	C		A			A
Queue Length 50th (ft)	10		129			37
Queue Length 95th (ft)	30		289			84
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	341		1481			1093
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.18		0.59			0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 66.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 6.5		Intersection LOS: A	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	59	229	325	333	75	128
Future Vol, veh/h	59	229	325	333	75	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	88	88
Heavy Vehicles, %	9	20	10	10	18	17
Mvmt Flow	66	254	357	366	85	145

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1238	158	85	0	-	0
Stage 1	158	-	-	-	-	-
Stage 2	1080	-	-	-	-	-
Critical Hdwy	6.49	6.4	4.2	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.48	2.29	-	-	-
Pot Cap-1 Maneuver	188	842	1462	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	130	842	1462	-	-	-
Mov Cap-2 Maneuver	130	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	316	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	16.3	4.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1462	-	635	-	-
HCM Lane V/C Ratio	0.244	-	0.504	-	-
HCM Control Delay (s)	8.3	0	16.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	1	-	2.8	-	-

Intersection	
Int Delay, s/veh	10.6

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	541	194	62	170	17
Future Vol, veh/h	19	541	194	62	170	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	83	83
Heavy Vehicles, %	3	0	22	10	12	11
Mvmt Flow	23	644	240	77	205	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	317	0	-	0	969	279
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	690	-
Critical Hdwy	4.13	-	-	-	6.52	6.31
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.227	-	-	-	3.608	3.399
Pot Cap-1 Maneuver	1237	-	-	-	270	739
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	480	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1237	-	-	-	262	739
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	480	-

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	56.2
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	278	1237	-	-	-
HCM Lane V/C Ratio	0.81	0.018	-	-	-
HCM Control Delay (s)	56.2	8	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	6.5	0.1	-	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	102	48	56	654	224	51
Future Vol, veh/h	102	48	56	654	224	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	86	86	90	90
Heavy Vehicles, %	13	28	20	9	23	28
Mvmt Flow	117	55	65	760	249	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1168	278	306	0	-	0
Stage 1	278	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Critical Hdwy	6.53	6.48	4.3	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.552	2.38	-	-	-
Pot Cap-1 Maneuver	203	703	1159	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	183	703	1159	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	672	-	-	-	-	-
Stage 2	384	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40.3	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1159	-	183	703	-	-
HCM Lane V/C Ratio	0.056	-	0.641	0.078	-	-
HCM Control Delay (s)	8.3	0	54.3	10.6	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	3.7	0.3	-	-

Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	7	42	40	43	52
Future Vol, veh/h	111	7	42	40	43	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	84	84	62	62
Heavy Vehicles, %	25	17	42	42	0	25
Mvmt Flow	171	11	50	48	69	84

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	296	74	0	0	98	0
Stage 1	74	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.1	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	649	947	-	-	1508	-
Stage 1	894	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	619	947	-	-	1508	-
Mov Cap-2 Maneuver	619	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	3.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	619	947	1508	-
HCM Lane V/C Ratio	-	-	0.276	0.011	0.046	-
HCM Control Delay (s)	-	-	13	8.8	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	0.1	-

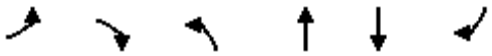
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	14	3	474	177	1
Future Vol, veh/h	6	14	3	474	177	1
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	81	75	72	93	25
Heavy Vehicles, %	0	8	0	8	20	0
Mvmt Flow	14	17	4	658	190	4

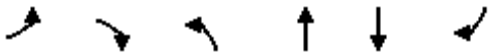
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	858	192	194	0	-	0
Stage 1	192	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	330	834	1391	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	328	834	1391	-	-	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	515	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1391	-	491	-	-
HCM Lane V/C Ratio	0.003	-	0.064	-	-
HCM Control Delay (s)	7.6	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



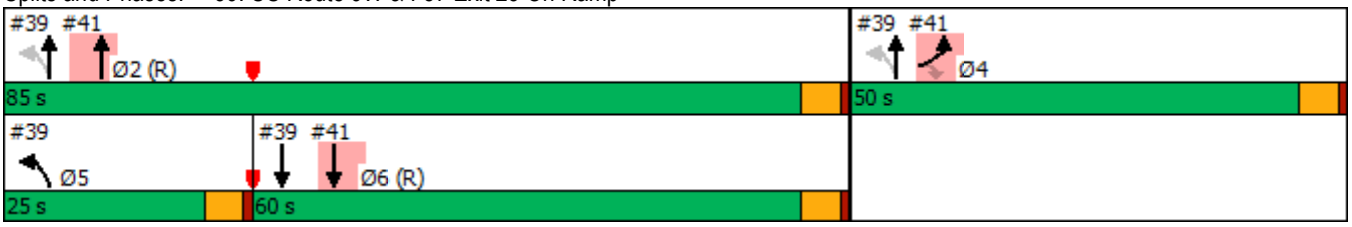
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	340	804	647	214		
Future Volume (vph)	0	0	340	804	647	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1656	1863	3319	0		
Flt Permitted			0.243					
Satd. Flow (perm)	0	0	424	1863	3319	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					40			
Link Speed (mph)	30			30	30			
Link Distance (ft)	346			240	257			
Travel Time (s)	7.9			5.5	5.8			
Peak Hour Factor	0.92	0.92	0.89	0.89	0.93	0.93		
Heavy Vehicles (%)	2%	2%	9%	2%	6%	1%		
Adj. Flow (vph)	0	0	382	903	696	230		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	382	903	926	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	66.1			
Actuated g/C Ratio			0.96	1.00	0.49			
v/c Ratio			0.78	0.48	0.56			

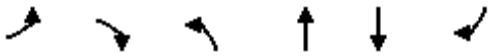


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			14.8	1.3	25.5			
Queue Delay			0.3	0.0	0.0			
Total Delay			15.1	1.3	25.5			
LOS			B	A	C			
Approach Delay				5.4	25.5			
Approach LOS				A	C			
Queue Length 50th (ft)			54	42	266			
Queue Length 95th (ft)			m65	m21	395			
Internal Link Dist (ft)	266			160	177			
Turn Bay Length (ft)								
Base Capacity (vph)			590	1863	1646			
Starvation Cap Reductn			26	0	0			
Spillback Cap Reductn			0	0	0			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			0.68	0.48	0.56			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 39: US Route 9W & I-87 Exit 23 On Ramp



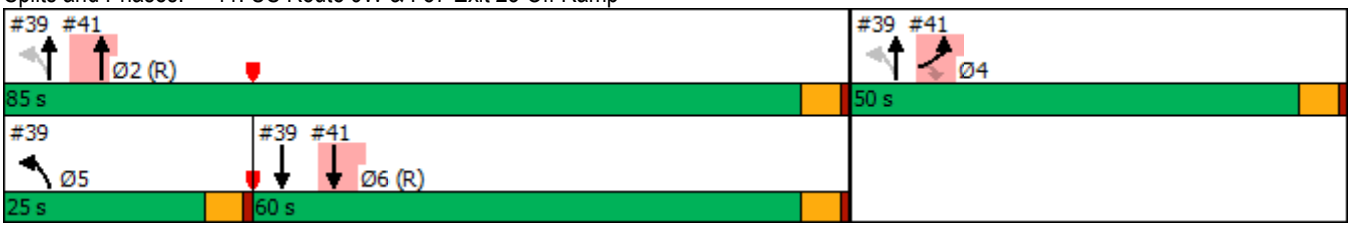


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	298	0	644	647	0	
Future Volume (vph)	500	298	0	644	647	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1805	1568	0	3539	3610	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	1568	0	3539	3610	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		262					
Link Speed (mph)	30			30	30		
Link Distance (ft)	284			365	240		
Travel Time (s)	6.5			8.3	5.5		
Peak Hour Factor	0.83	0.83	0.86	0.86	0.98	0.98	
Heavy Vehicles (%)	0%	3%	0%	2%	0%	0%	
Adj. Flow (vph)	602	359	0	749	660	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	602	359	0	749	660	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	45.0	45.0		80.0	66.1		
Actuated g/C Ratio	0.33	0.33		0.59	0.49		
v/c Ratio	1.00	0.52		0.36	0.37		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Control Delay	82.0	12.5		14.8	3.9		
Queue Delay	0.0	0.0		0.0	0.3		
Total Delay	82.0	12.5		14.8	4.2		
LOS	F	B		B	A		
Approach Delay	56.0			14.8	4.2		
Approach LOS	E			B	A		
Queue Length 50th (ft)	~528	60		170	18		
Queue Length 95th (ft)	#676	122		198	23		
Internal Link Dist (ft)	204			285	160		
Turn Bay Length (ft)							
Base Capacity (vph)	601	697		2097	1768		
Starvation Cap Reductn	0	0		0	483		
Spillback Cap Reductn	0	0		2	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	1.00	0.52		0.36	0.51		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 28.6		Intersection LOS: C	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 41: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	46	24	479	136	0
Future Vol, veh/h	6	46	24	479	136	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	83	83	83	83
Heavy Vehicles, %	4	5	12	0	0	0
Mvmt Flow	8	58	29	577	164	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	799	164	164	0	-	0
Stage 1	164	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.44	6.25	4.22	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.345	2.308	-	-	-
Pot Cap-1 Maneuver	352	873	1356	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	341	873	1356	-	-	-
Mov Cap-2 Maneuver	341	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	524	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1356	-	740	-	-
HCM Lane V/C Ratio	0.021	-	0.088	-	-
HCM Control Delay (s)	7.7	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	1	1	484	135	19
Future Vol, veh/h	40	1	1	484	135	19
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	83	83	77	77
Heavy Vehicles, %	3	0	0	5	12	6
Mvmt Flow	62	2	1	583	175	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	773	188	200	0	-	0
Stage 1	188	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	366	859	1384	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	366	859	1384	-	-	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	555	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.7	0	0
HCM LOS	C		

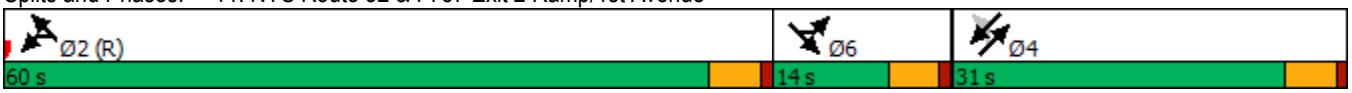
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1384	-	371	-	-
HCM Lane V/C Ratio	0.001	-	0.17	-	-
HCM Control Delay (s)	7.6	0	16.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	0	47	877	101	60	6	61	0	0	202	9
Future Volume (vph)	2	0	47	877	101	60	6	61	0	0	202	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.87										
Frt		0.871			0.944						0.994	
Flt Protected		0.998		0.950				0.996				
Satd. Flow (prot)	0	1358	0	1719	1754	0	0	1692	0	0	1715	0
Flt Permitted		0.998		0.950				0.967				
Satd. Flow (perm)	0	1353	0	1719	1754	0	0	1642	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			43						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.73	0.73	0.73	0.90	0.90	0.90	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	5%	0%	6%	0%	13%	0%	0%	10%	13%
Adj. Flow (vph)	3	0	64	974	112	67	7	73	0	0	220	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	974	179	0	0	80	0	0	230	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	23.0	23.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		6.5		66.4	66.4			19.2			19.2	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.06		0.63	0.63			0.18			0.18	
v/c Ratio		0.44		0.90	0.16			0.27			0.73	
Control Delay		19.1		31.8	8.0			37.4			53.3	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.1		31.8	8.0			37.4			53.3	
LOS		B		C	A			D			D	
Approach Delay		19.1			28.1			37.4			53.3	
Approach LOS		B			C			D			D	
Queue Length 50th (ft)		0		527	35			47			146	
Queue Length 95th (ft)		22		#979	83			76			212	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		183		1087	1125			406			426	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.37		0.90	0.16			0.20			0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 32.0		Intersection LOS: C	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue

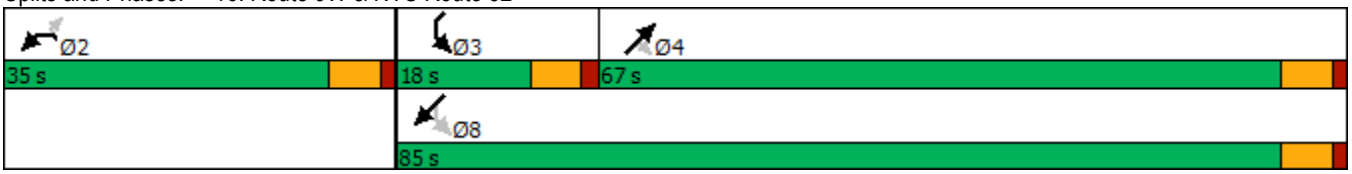


Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	291	100	1081	92	88	1439
Future Volume (vph)	291	100	1081	92	88	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1455	3471	1509	1583	3539
Flt Permitted	0.950				0.096	
Satd. Flow (perm)	1719	1455	3471	1509	160	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		54		89		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	5%	11%	4%	7%	14%	2%
Adj. Flow (vph)	320	110	1188	101	94	1531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	320	110	1188	101	94	1531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	35.0	35.0	67.0	67.0	18.0	85.0
Total Split (%)	29.2%	29.2%	55.8%	55.8%	15.0%	70.8%
Maximum Green (s)	29.0	29.0	61.0	61.0	12.0	79.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	29.5	29.5	42.4	42.4	53.5	53.5
Actuated g/C Ratio	0.31	0.31	0.44	0.44	0.56	0.56
v/c Ratio	0.60	0.23	0.77	0.14	0.45	0.77
Control Delay	36.7	17.8	26.5	4.8	16.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	17.8	26.5	4.8	16.1	18.6
LOS	D	B	C	A	B	B
Approach Delay	31.9		24.8			18.4
Approach LOS	C		C			B
Queue Length 50th (ft)	165	24	323	4	24	345
Queue Length 95th (ft)	319	80	416	32	48	421
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	532	488	2263	1014	272	2955
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.23	0.52	0.10	0.35	0.52

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 95.3			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 22.6		Intersection LOS: C	
Intersection Capacity Utilization 65.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	71	12	253	13	6	930
Future Volume (vph)	71	12	253	13	6	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981		0.993			
Flt Protected	0.959					
Satd. Flow (prot)	1653	0	1714	0	0	1806
Flt Permitted	0.959					0.998
Satd. Flow (perm)	1653	0	1714	0	0	1802
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	12		6			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	8%	9%	8%	50%	40%	5%
Adj. Flow (vph)	84	14	351	18	6	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	98	0	369	0	0	995
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	8.9		51.1			51.1
Actuated g/C Ratio	0.13		0.77			0.77
v/c Ratio	0.43		0.28			0.72
Control Delay	28.8		4.2			11.1
Queue Delay	0.0		0.0			0.0
Total Delay	28.8		4.2			11.1
LOS	C		A			B
Approach Delay	28.8		4.2			11.1
Approach LOS	C		A			B
Queue Length 50th (ft)	36		42			203
Queue Length 95th (ft)	61		64			#541
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	507		1316			1383
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.19		0.28			0.72

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 66.6			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	66	283	204	128	221	83
Future Vol, veh/h	66	283	204	128	221	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	74	74	85	85
Heavy Vehicles, %	12	3	9	8	4	8
Mvmt Flow	80	345	276	173	260	98

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1034	309	260	0	-	0
Stage 1	309	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Critical Hdwy	6.52	6.23	4.19	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.327	2.281	-	-	-
Pot Cap-1 Maneuver	246	729	1265	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	187	729	1265	-	-	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	548	-	-	-	-	-
Stage 2	462	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	12.6	5.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1265	-	899	-	-
HCM Lane V/C Ratio	0.218	-	0.473	-	-
HCM Control Delay (s)	8.6	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	2.6	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	22	202	405	285	59	33
Future Vol, veh/h	22	202	405	285	59	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	84	84	81	81
Heavy Vehicles, %	4	0	0	5	5	1
Mvmt Flow	29	262	482	339	73	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	821	0	-	0	972	652
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	320	-
Critical Hdwy	4.14	-	-	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.236	-	-	-	3.545	3.309
Pot Cap-1 Maneuver	800	-	-	-	277	470
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	800	-	-	-	265	470
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	729	-

Approach	NB	SB	NE
HCM Control Delay, s	0.9	0	22.8
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	314	800	-	-	-
HCM Lane V/C Ratio	0.362	0.036	-	-	-
HCM Control Delay (s)	22.8	9.7	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	1.6	0.1	-	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	68	44	235	673	329
Future Vol, veh/h	30	68	44	235	673	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	91	91
Heavy Vehicles, %	29	14	10	7	7	2
Mvmt Flow	33	74	50	267	740	362

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1288	921	1102	0	-	0
Stage 1	921	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.69	6.34	4.2	-	-	-
Critical Hdwy Stg 1	5.69	-	-	-	-	-
Critical Hdwy Stg 2	5.69	-	-	-	-	-
Follow-up Hdwy	3.761	3.426	2.29	-	-	-
Pot Cap-1 Maneuver	159	312	605	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	144	312	605	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.3	1.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	605	-	144	312	-	-
HCM Lane V/C Ratio	0.083	-	0.226	0.237	-	-
HCM Control Delay (s)	11.5	0	37.2	20.1	-	-
HCM Lane LOS	B	A	E	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	0.9	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	32	87	96	16	61
Future Vol, veh/h	60	32	87	96	16	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	84	84	78	78
Heavy Vehicles, %	26	10	25	13	0	37
Mvmt Flow	72	39	104	114	21	78

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	281	161	0	0	218	0
Stage 1	161	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.66	6.3	-	-	4.1	-
Critical Hdwy Stg 1	5.66	-	-	-	-	-
Critical Hdwy Stg 2	5.66	-	-	-	-	-
Follow-up Hdwy	3.734	3.39	-	-	2.2	-
Pot Cap-1 Maneuver	661	863	-	-	1364	-
Stage 1	813	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	651	863	-	-	1364	-
Mov Cap-2 Maneuver	651	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	651	863	1364	-
HCM Lane V/C Ratio	-	-	0.111	0.045	0.015	-
HCM Control Delay (s)	-	-	11.2	9.4	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0	-

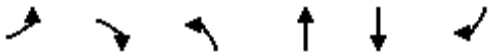
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	2	5	192	408	6
Future Vol, veh/h	4	2	5	192	408	6
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	30	80	88	63
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	8	4	17	240	464	10

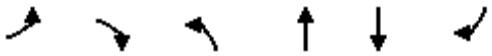
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	743	469	474	0	-	0
Stage 1	469	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	386	598	1099	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	379	598	1099	-	-	-
Mov Cap-2 Maneuver	379	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1099	-	432	-	-
HCM Lane V/C Ratio	0.015	-	0.028	-	-
HCM Control Delay (s)	8.3	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	379	466	1238	559		
Future Volume (vph)	0	0	379	466	1238	559		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.953			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1770	1863	3373	0		
Flt Permitted			0.043					
Satd. Flow (perm)	0	0	80	1863	3373	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					65			
Link Speed (mph)	30			30	30			
Link Distance (ft)	314			227	306			
Travel Time (s)	7.1			5.2	7.0			
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.97		
Adj. Flow (vph)	0	0	408	501	1276	576		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	408	501	1852	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	56.2			
Actuated g/C Ratio			0.96	1.00	0.42			
v/c Ratio			0.74	0.27	1.29			
Control Delay			37.6	0.4	166.7			



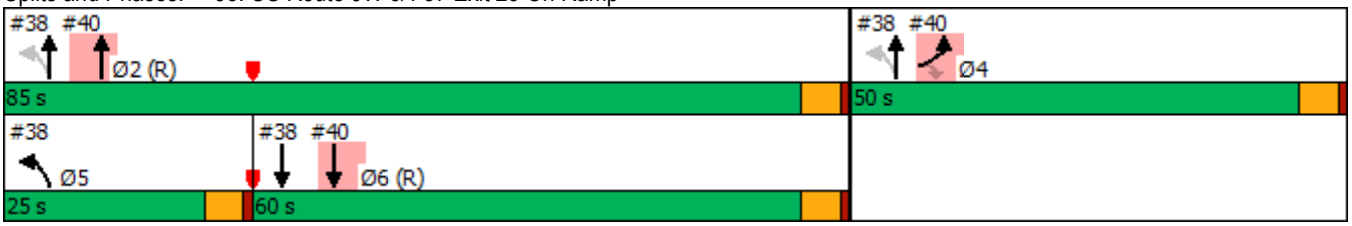
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			28.6	0.0	0.1			
Total Delay			66.2	0.4	166.8			
LOS			E	A	F			
Approach Delay				30.0	166.8			
Approach LOS				C	F			
Queue Length 50th (ft)			287	1	~1055			
Queue Length 95th (ft)			#511	3	#1224			
Internal Link Dist (ft)	234			147	226			
Turn Bay Length (ft)								
Base Capacity (vph)			552	1863	1441			
Starvation Cap Reductn			154	0	0			
Spillback Cap Reductn			0	0	23			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			1.03	0.27	1.31			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay: 121.7		Intersection LOS: F	
Intersection Capacity Utilization 104.0%		ICU Level of Service G	
Analysis Period (min) 15			

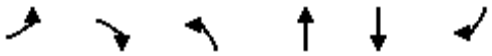
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 38: US Route 9W & I-87 Exit 23 On Ramp



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	347	0	649	1238	0	
Future Volume (vph)	196	347	0	649	1238	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1770	1583	0	3539	3539	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1770	1583	0	3539	3539	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		301					
Link Speed (mph)	30			30	30		
Link Distance (ft)	298			384	227		
Travel Time (s)	6.8			8.7	5.2		
Peak Hour Factor	0.97	0.97	0.89	0.89	0.95	0.95	
Adj. Flow (vph)	202	358	0	729	1303	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	202	358	0	729	1303	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	25.8	25.8		99.2	56.2		
Actuated g/C Ratio	0.19	0.19		0.73	0.42		
v/c Ratio	0.60	0.66		0.28	0.88		
Control Delay	55.9	14.6		7.1	10.4		

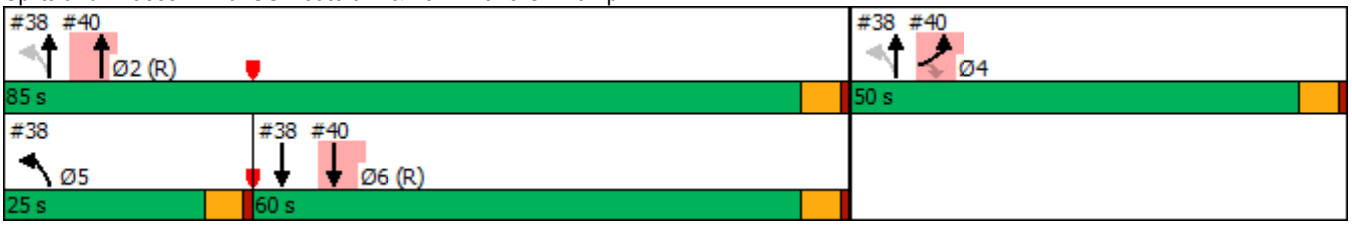


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.7	0.0		0.0	47.3		
Total Delay	56.6	14.6		7.1	57.7		
LOS	E	B		A	E		
Approach Delay	29.7			7.1	57.7		
Approach LOS	C			A	E		
Queue Length 50th (ft)	164	43		98	77		
Queue Length 95th (ft)	222	133		168	m64		
Internal Link Dist (ft)	218			304	147		
Turn Bay Length (ft)							
Base Capacity (vph)	590	728		2599	1473		
Starvation Cap Reductn	0	0		0	401		
Spillback Cap Reductn	164	0		110	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.47	0.49		0.29	1.22		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay: 37.4		Intersection LOS: D	
Intersection Capacity Utilization 104.0%		ICU Level of Service G	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	0	1	211	400	60
Future Vol, veh/h	11	0	1	211	400	60
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	46	46	89	89	91	91
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	24	0	1	237	440	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	712	473	506	0	-	0
Stage 1	473	-	-	-	-	-
Stage 2	239	-	-	-	-	-
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	402	595	1069	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	402	595	1069	-	-	-
Mov Cap-2 Maneuver	402	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	805	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1069	-	402	-	-
HCM Lane V/C Ratio	0.001	-	0.059	-	-
HCM Control Delay (s)	8.4	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	36	209	400	0
Future Vol, veh/h	3	16	36	209	400	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	75	75
Heavy Vehicles, %	3	7	4	0	0	7
Mvmt Flow	3	18	41	238	533	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	853	533	533	0	-	0
Stage 1	533	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.43	6.27	4.14	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.363	2.236	-	-	-
Pot Cap-1 Maneuver	328	537	1025	-	-	-
Stage 1	586	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	313	537	1025	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	1.3	0
HCM LOS	B		

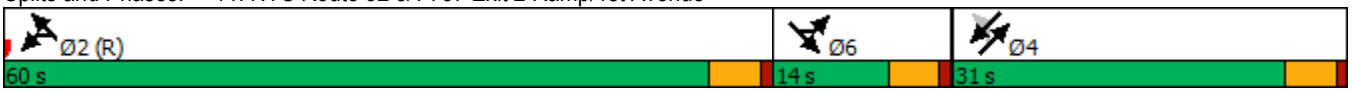
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1025	-	482	-	-
HCM Lane V/C Ratio	0.04	-	0.045	-	-
HCM Control Delay (s)	8.7	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	0	30	423	53	90	8	65	0	0	105	4
Future Volume (vph)	3	0	30	423	53	90	8	65	0	0	105	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88										
Frt		0.878			0.906						0.995	
Flt Protected		0.995		0.950				0.994				
Satd. Flow (prot)	0	1380	0	1444	1426	0	0	1644	0	0	1599	0
Flt Permitted		0.995		0.950				0.959				
Satd. Flow (perm)	0	1368	0	1444	1426	0	0	1586	0	0	1599	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			101						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.91	0.91	0.91	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	7%	25%	0%	33%	14%	15%	0%	0%	18%	25%
Adj. Flow (vph)	4	0	37	475	60	101	9	71	0	0	135	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	475	161	0	0	80	0	0	140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		5.7		74.1	74.1			14.4			14.4	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.05		0.71	0.71			0.14			0.14	
v/c Ratio		0.28		0.47	0.16			0.37			0.64	
Control Delay		8.4		10.5	3.5			44.7			54.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		8.4		10.5	3.5			44.7			54.6	
LOS		A		B	A			D			D	
Approach Delay		8.4			8.7			44.7			54.6	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)		0		142	13			50			89	
Queue Length 95th (ft)		7		262	42			90			123	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		185		1019	1036			392			397	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.22		0.47	0.16			0.20			0.35	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 48.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



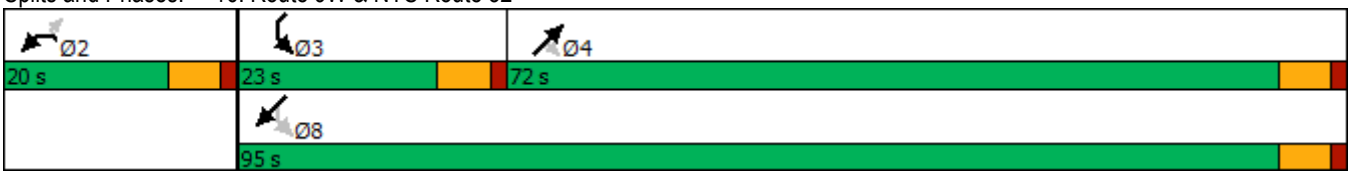
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	95	153	2035	168	114	821
Future Volume (vph)	95	153	2035	168	114	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1442	3505	1482	1388	3406
Flt Permitted	0.950				0.055	
Satd. Flow (perm)	1530	1442	3505	1482	80	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		176		104		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.87	0.87	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	12%	3%	9%	30%	6%
Adj. Flow (vph)	109	176	2188	181	134	966
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	176	2188	181	134	966
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	20.0	20.0	72.0	72.0	23.0	95.0
Total Split (%)	17.4%	17.4%	62.6%	62.6%	20.0%	82.6%
Maximum Green (s)	14.0	14.0	66.0	66.0	17.0	89.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	14.0	14.0	66.1	66.1	83.5	83.5
Actuated g/C Ratio	0.13	0.13	0.60	0.60	0.76	0.76
v/c Ratio	0.56	0.52	1.03	0.19	0.68	0.37
Control Delay	57.7	12.8	52.1	5.2	40.6	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	12.8	52.1	5.2	40.6	4.7
LOS	E	B	D	A	D	A
Approach Delay	30.0		48.5			9.1
Approach LOS	C		D			A
Queue Length 50th (ft)	73	0	~870	21	51	98
Queue Length 95th (ft)	133	58	#1096	58	107	113
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	195	338	2115	935	264	2771
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.52	1.03	0.19	0.51	0.35

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 109.5
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 35.6 Intersection LOS: D
Intersection Capacity Utilization 82.8% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	24	50	717	51	71	258
Future Volume (vph)	24	50	717	51	71	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.909		0.991			
Flt Protected	0.984					0.990
Satd. Flow (prot)	1032	0	1763	0	0	1501
Flt Permitted	0.984					0.752
Satd. Flow (perm)	1032	0	1763	0	0	1140
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	67		9			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.75	0.75	0.87	0.87	0.90	0.84
Heavy Vehicles (%)	60%	67%	6%	18%	42%	21%
Adj. Flow (vph)	32	67	824	59	79	307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	99	0	883	0	0	386
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	8.4		51.0			51.0
Actuated g/C Ratio	0.13		0.77			0.77
v/c Ratio	0.52		0.65			0.44
Control Delay	21.5		8.9			6.4
Queue Delay	0.0		0.0			0.0
Total Delay	21.5		8.9			6.4
LOS	C		A			A
Approach Delay	21.5		8.9			6.4
Approach LOS	C		A			A
Queue Length 50th (ft)	13		142			48
Queue Length 95th (ft)	34		337			118
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	360		1363			880
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.28		0.65			0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 66			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 75.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	60	229	325	340	78	129
Future Vol, veh/h	60	229	325	340	78	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	88	88
Heavy Vehicles, %	9	20	10	10	18	17
Mvmt Flow	67	254	357	374	89	147

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1251	163	89	0	-	0
Stage 1	163	-	-	-	-	-
Stage 2	1088	-	-	-	-	-
Critical Hdwy	6.49	6.4	4.2	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.48	2.29	-	-	-
Pot Cap-1 Maneuver	184	837	1457	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	127	837	1457	-	-	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	313	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	17.2	4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1457	-	612	-	-
HCM Lane V/C Ratio	0.245	-	0.525	-	-
HCM Control Delay (s)	8.3	0	17.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	1	-	3.1	-	-

Intersection	
Int Delay, s/veh	11.3

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	21	543	197	62	170	20
Future Vol, veh/h	21	543	197	62	170	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	83	83
Heavy Vehicles, %	3	0	22	10	12	11
Mvmt Flow	25	646	243	77	205	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	320	0	-	0	978	282
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	696	-
Critical Hdwy	4.13	-	-	-	6.52	6.31
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.227	-	-	-	3.608	3.399
Pot Cap-1 Maneuver	1234	-	-	-	266	736
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1234	-	-	-	257	736
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	477	-

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	59.3
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	276	1234	-	-	-
HCM Lane V/C Ratio	0.829	0.02	-	-	-
HCM Control Delay (s)	59.3	8	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	6.8	0.1	-	-	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	115	51	57	654	224	59
Future Vol, veh/h	115	51	57	654	224	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	86	86	90	90
Heavy Vehicles, %	13	28	20	9	23	28
Mvmt Flow	132	59	66	760	249	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1174	282	315	0	-	0
Stage 1	282	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Critical Hdwy	6.53	6.48	4.3	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.552	2.38	-	-	-
Pot Cap-1 Maneuver	202	699	1150	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	182	699	1150	-	-	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	47.9	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1150	-	182	699	-	-
HCM Lane V/C Ratio	0.058	-	0.726	0.084	-	-
HCM Control Delay (s)	8.3	0	64.5	10.6	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	4.6	0.3	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	123	7	45	47	43	56
Future Vol, veh/h	123	7	45	47	43	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	84	84	62	62
Heavy Vehicles, %	25	17	42	42	0	25
Mvmt Flow	189	11	54	56	69	90

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	310	82	0	0	110	0
Stage 1	82	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.1	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	637	938	-	-	1493	-
Stage 1	886	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	608	938	-	-	1493	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	3.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	608	938	1493	-
HCM Lane V/C Ratio	-	-	0.311	0.011	0.046	-
HCM Control Delay (s)	-	-	13.6	8.9	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0	0.1	-

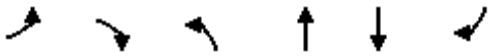
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	14	3	481	182	2
Future Vol, veh/h	7	14	3	481	182	2
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	81	75	72	93	25
Heavy Vehicles, %	0	8	0	8	20	0
Mvmt Flow	17	17	4	668	196	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	876	200	204	0	-	0
Stage 1	200	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	322	826	1380	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	320	826	1380	-	-	-
Mov Cap-2 Maneuver	320	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1380	-	465	-	-
HCM Lane V/C Ratio	0.003	-	0.073	-	-
HCM Control Delay (s)	7.6	0	13.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

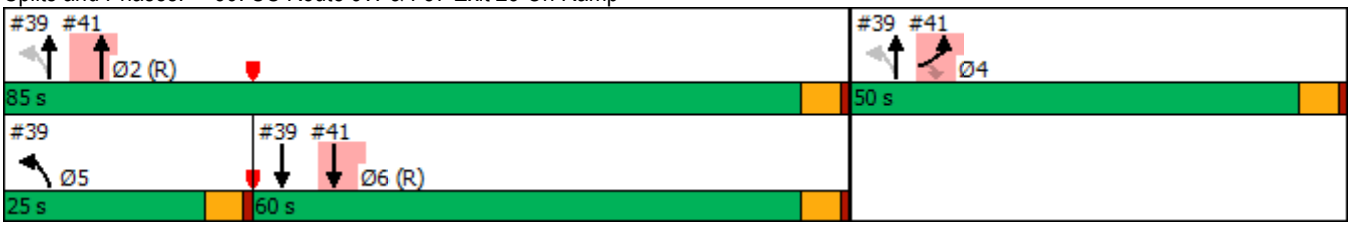


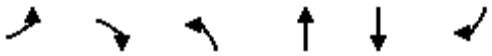
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	346	805	650	214		
Future Volume (vph)	0	0	346	805	650	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1656	1863	3318	0		
Flt Permitted			0.242					
Satd. Flow (perm)	0	0	422	1863	3318	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					40			
Link Speed (mph)	30			30	30			
Link Distance (ft)	346			240	257			
Travel Time (s)	7.9			5.5	5.8			
Peak Hour Factor	0.92	0.92	0.89	0.89	0.93	0.93		
Heavy Vehicles (%)	2%	2%	9%	2%	6%	1%		
Adj. Flow (vph)	0	0	389	904	699	230		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	389	904	929	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	65.7			
Actuated g/C Ratio			0.96	1.00	0.49			
v/c Ratio			0.79	0.49	0.57			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			15.5	1.3	25.9			
Queue Delay			0.4	0.0	0.0			
Total Delay			15.9	1.3	25.9			
LOS			B	A	C			
Approach Delay				5.7	25.9			
Approach LOS				A	C			
Queue Length 50th (ft)			58	42	267			
Queue Length 95th (ft)			m68	m20	404			
Internal Link Dist (ft)	266			160	177			
Turn Bay Length (ft)								
Base Capacity (vph)			589	1863	1635			
Starvation Cap Reductn			28	0	0			
Spillback Cap Reductn			0	0	0			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			0.69	0.49	0.57			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 83.0%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 39: US Route 9W & I-87 Exit 23 On Ramp



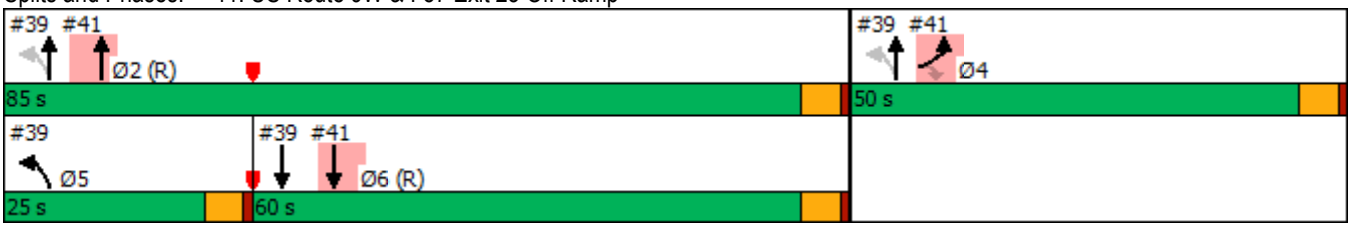


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	307	0	651	650	0	
Future Volume (vph)	500	307	0	651	650	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1805	1568	0	3539	3610	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	1568	0	3539	3610	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		270					
Link Speed (mph)	30			30	30		
Link Distance (ft)	284			365	240		
Travel Time (s)	6.5			8.3	5.5		
Peak Hour Factor	0.83	0.83	0.86	0.86	0.98	0.98	
Heavy Vehicles (%)	0%	3%	0%	2%	0%	0%	
Adj. Flow (vph)	602	370	0	757	663	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	602	370	0	757	663	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	45.0	45.0		80.0	65.7		
Actuated g/C Ratio	0.33	0.33		0.59	0.49		
v/c Ratio	1.00	0.53		0.36	0.38		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Control Delay	82.0	12.6		14.9	4.0		
Queue Delay	0.0	0.0		0.0	0.3		
Total Delay	82.0	12.6		14.9	4.2		
LOS	F	B		B	A		
Approach Delay	55.6			14.9	4.2		
Approach LOS	E			B	A		
Queue Length 50th (ft)	~528	62		172	19		
Queue Length 95th (ft)	#676	124		201	23		
Internal Link Dist (ft)	204			285	160		
Turn Bay Length (ft)							
Base Capacity (vph)	601	702		2097	1757		
Starvation Cap Reductn	0	0		0	479		
Spillback Cap Reductn	0	0		4	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	1.00	0.53		0.36	0.52		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 83.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 41: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	1	1	492	140	19
Future Vol, veh/h	40	1	1	492	140	19
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	83	83	77	77
Heavy Vehicles, %	3	0	0	5	12	6
Mvmt Flow	62	2	1	593	182	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	790	195	207	0	-	0
Stage 1	195	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	358	851	1376	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	851	1376	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	549	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1376	-	363	-	-
HCM Lane V/C Ratio	0.001	-	0.174	-	-
HCM Control Delay (s)	7.6	0	17	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	46	24	487	141	0
Future Vol, veh/h	6	46	24	487	141	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	83	83	83	83
Heavy Vehicles, %	4	5	12	0	0	0
Mvmt Flow	8	58	29	587	170	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	815	170	170	0	-	0
Stage 1	170	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Critical Hdwy	6.44	6.25	4.22	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.345	2.308	-	-	-
Pot Cap-1 Maneuver	344	866	1349	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	866	1349	-	-	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1349	-	731	-	-
HCM Lane V/C Ratio	0.021	-	0.089	-	-
HCM Control Delay (s)	7.7	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	4	479	9	6	210
Future Vol, veh/h	6	4	479	9	6	210
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	5	521	10	7	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	787	526	0	0	531	0
Stage 1	526	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	360	552	-	-	1036	-
Stage 1	593	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	357	552	-	-	1036	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0.2
HCM LOS	B		

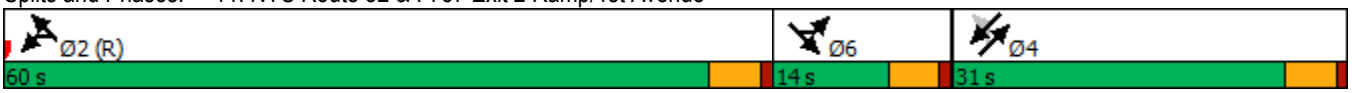
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	1036	-
HCM Lane V/C Ratio	-	-	0.03	0.007	-
HCM Control Delay (s)	-	-	13.9	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	0	47	894	101	60	6	69	0	0	206	9
Future Volume (vph)	2	0	47	894	101	60	6	69	0	0	206	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.87										
Frt		0.871			0.944						0.994	
Flt Protected		0.998		0.950				0.996				
Satd. Flow (prot)	0	1358	0	1719	1754	0	0	1690	0	0	1715	0
Flt Permitted		0.998		0.950				0.970				
Satd. Flow (perm)	0	1353	0	1719	1754	0	0	1646	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			43						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.73	0.73	0.73	0.90	0.90	0.90	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	5%	0%	6%	0%	13%	0%	0%	10%	13%
Adj. Flow (vph)	3	0	64	993	112	67	7	83	0	0	224	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	993	179	0	0	90	0	0	234	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		6.5		66.3	66.3			19.3			19.3	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.06		0.63	0.63			0.18			0.18	
v/c Ratio		0.44		0.92	0.16			0.30			0.74	
Control Delay		19.1		34.2	8.1			37.9			53.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.1		34.2	8.1			37.9			53.6	
LOS		B		C	A			D			D	
Approach Delay		19.1			30.2			37.9			53.6	
Approach LOS		B			C			D			D	
Queue Length 50th (ft)		0		554	35			53			149	
Queue Length 95th (ft)		22		#1006	83			84			216	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		183		1084	1122			407			426	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.37		0.92	0.16			0.22			0.55	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 75.9%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



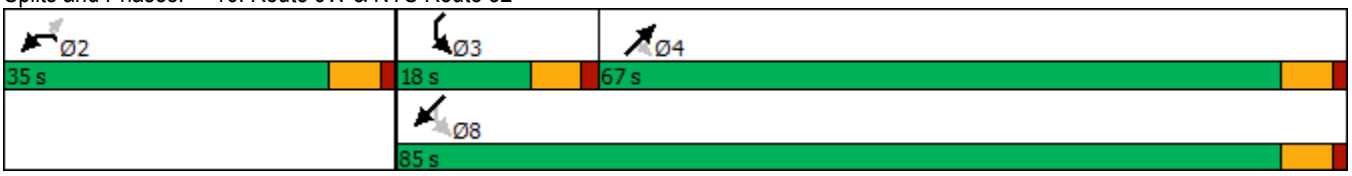
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	295	115	1081	94	95	1439
Future Volume (vph)	295	115	1081	94	95	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1455	3471	1509	1583	3539
Flt Permitted	0.950				0.096	
Satd. Flow (perm)	1719	1455	3471	1509	160	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		62		91		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	5%	11%	4%	7%	14%	2%
Adj. Flow (vph)	324	126	1188	103	101	1531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	126	1188	103	101	1531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	35.0	35.0	67.0	67.0	18.0	85.0
Total Split (%)	29.2%	29.2%	55.8%	55.8%	15.0%	70.8%
Maximum Green (s)	29.0	29.0	61.0	61.0	12.0	79.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	29.6	29.6	42.6	42.6	53.8	53.8
Actuated g/C Ratio	0.31	0.31	0.45	0.45	0.56	0.56
v/c Ratio	0.61	0.26	0.77	0.14	0.48	0.77
Control Delay	37.2	17.8	26.6	4.8	17.6	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	17.8	26.6	4.8	17.6	18.5
LOS	D	B	C	A	B	B
Approach Delay	31.7		24.9			18.4
Approach LOS	C		C			B
Queue Length 50th (ft)	168	28	325	4	26	345
Queue Length 95th (ft)	#330	90	418	33	55	420
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	531	492	2258	1013	271	2947
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.26	0.53	0.10	0.37	0.52

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 95.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	86	54	253	21	26	930
Future Volume (vph)	86	54	253	21	26	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.948		0.990			
Flt Protected	0.970					0.999
Satd. Flow (prot)	1612	0	1691	0	0	1791
Flt Permitted	0.970					0.985
Satd. Flow (perm)	1612	0	1691	0	0	1766
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	46		10			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	8%	9%	8%	50%	40%	5%
Adj. Flow (vph)	101	64	351	29	28	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	380	0	0	1017
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	10.2		45.1			45.1
Actuated g/C Ratio	0.16		0.69			0.69
v/c Ratio	0.57		0.32			0.83
Control Delay	24.9		5.5			17.4
Queue Delay	0.0		0.0			0.0
Total Delay	24.9		5.5			17.4
LOS	C		A			B
Approach Delay	24.9		5.5			17.4
Approach LOS	C		A			B
Queue Length 50th (ft)	42		46			234
Queue Length 95th (ft)	82		77			#610
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	526		1170			1218
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.31		0.32			0.83

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 65.3			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 85.5%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	67	283	204	132	229	85
Future Vol, veh/h	67	283	204	132	229	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	74	74	85	85
Heavy Vehicles, %	12	3	9	8	4	8
Mvmt Flow	82	345	276	178	269	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1049	319	269	0	-	0
Stage 1	319	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Critical Hdwy	6.52	6.23	4.19	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.327	2.281	-	-	-
Pot Cap-1 Maneuver	241	719	1255	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	182	719	1255	-	-	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	459	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	12.7	5.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1255	-	889	-	-
HCM Lane V/C Ratio	0.22	-	0.48	-	-
HCM Control Delay (s)	8.7	0	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	2.6	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	26	206	406	285	59	35
Future Vol, veh/h	26	206	406	285	59	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	84	84	81	81
Heavy Vehicles, %	4	0	0	5	5	1
Mvmt Flow	34	268	483	339	73	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	822	0	-	0	989	653
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	4.14	-	-	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.236	-	-	-	3.545	3.309
Pot Cap-1 Maneuver	799	-	-	-	270	469
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	799	-	-	-	257	469
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	717	-

Approach	NB	SB	NE
HCM Control Delay, s	1.1	0	23.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	309	799	-	-	-
HCM Lane V/C Ratio	0.376	0.042	-	-	-
HCM Control Delay (s)	23.5	9.7	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	1.7	0.1	-	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	70	48	235	673	344
Future Vol, veh/h	37	70	48	235	673	344
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	91	91
Heavy Vehicles, %	29	14	10	7	7	2
Mvmt Flow	40	76	55	267	740	378

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1306	929	1118	0	-	0
Stage 1	929	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.69	6.34	4.2	-	-	-
Critical Hdwy Stg 1	5.69	-	-	-	-	-
Critical Hdwy Stg 2	5.69	-	-	-	-	-
Follow-up Hdwy	3.761	3.426	2.29	-	-	-
Pot Cap-1 Maneuver	155	308	596	-	-	-
Stage 1	344	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	138	308	596	-	-	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.8	2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	596	-	138	308	-	-
HCM Lane V/C Ratio	0.092	-	0.291	0.247	-	-
HCM Control Delay (s)	11.6	0	41.5	20.5	-	-
HCM Lane LOS	B	A	E	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.1	1	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	67	32	92	110	16	63
Future Vol, veh/h	67	32	92	110	16	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	84	84	78	78
Heavy Vehicles, %	26	10	25	13	0	37
Mvmt Flow	81	39	110	131	21	81

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	299	176	0	0	241	0
Stage 1	176	-	-	-	-	-
Stage 2	123	-	-	-	-	-
Critical Hdwy	6.66	6.3	-	-	4.1	-
Critical Hdwy Stg 1	5.66	-	-	-	-	-
Critical Hdwy Stg 2	5.66	-	-	-	-	-
Follow-up Hdwy	3.734	3.39	-	-	2.2	-
Pot Cap-1 Maneuver	645	847	-	-	1337	-
Stage 1	800	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	635	847	-	-	1337	-
Mov Cap-2 Maneuver	635	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	635	847	1337	-
HCM Lane V/C Ratio	-	-	0.127	0.046	0.015	-
HCM Control Delay (s)	-	-	11.5	9.5	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0	-

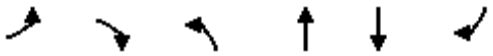
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	2	6	196	417	7
Future Vol, veh/h	5	2	6	196	417	7
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	31	80	88	63
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	10	4	19	245	474	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	763	480	485	0	-	0
Stage 1	480	-	-	-	-	-
Stage 2	283	-	-	-	-	-
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	375	590	1088	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	368	590	1088	-	-	-
Mov Cap-2 Maneuver	368	-	-	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1088	-	412	-	-
HCM Lane V/C Ratio	0.018	-	0.034	-	-
HCM Control Delay (s)	8.4	0	14	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	390	470	1239	559		
Future Volume (vph)	0	0	390	470	1239	559		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.953			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1770	1863	3373	0		
Flt Permitted			0.044					
Satd. Flow (perm)	0	0	82	1863	3373	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					65			
Link Speed (mph)	30			30	30			
Link Distance (ft)	314			227	306			
Travel Time (s)	7.1			5.2	7.0			
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.97		
Adj. Flow (vph)	0	0	419	505	1277	576		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	419	505	1853	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	55.4			
Actuated g/C Ratio			0.96	1.00	0.41			
v/c Ratio			0.74	0.27	1.30			
Control Delay			37.5	0.4	174.9			

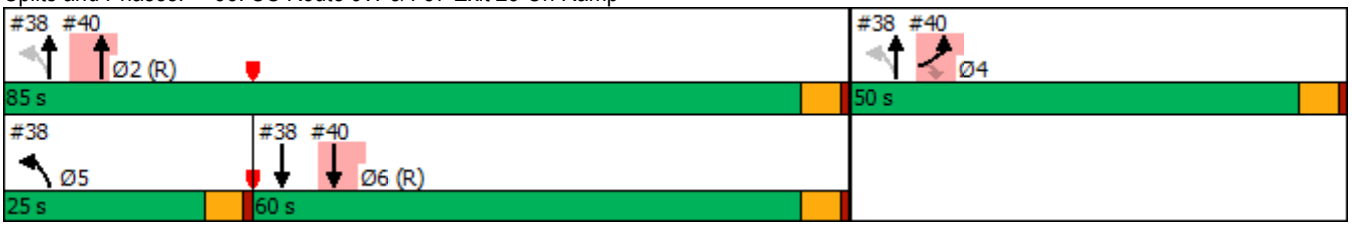
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			31.2	0.0	0.1			
Total Delay			68.6	0.4	175.0			
LOS			E	A	F			
Approach Delay				31.3	175.0			
Approach LOS				C	F			
Queue Length 50th (ft)			293	1	~1077			
Queue Length 95th (ft)			#530	2	#1225			
Internal Link Dist (ft)	234			147	226			
Turn Bay Length (ft)								
Base Capacity (vph)			563	1863	1421			
Starvation Cap Reductn			158	0	0			
Spillback Cap Reductn			0	0	30			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			1.03	0.27	1.33			

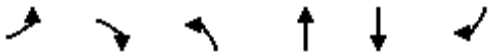
Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 127.2		Intersection LOS: F	
Intersection Capacity Utilization 104.8%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 38: US Route 9W & I-87 Exit 23 On Ramp





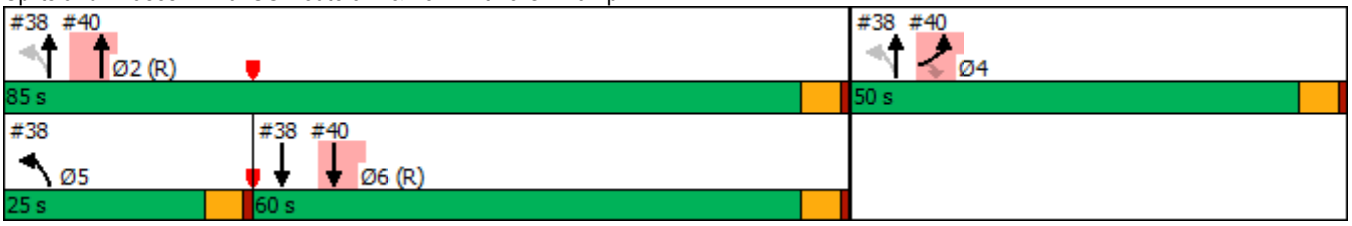
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	353	0	664	1239	0	
Future Volume (vph)	196	353	0	664	1239	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1770	1583	0	3539	3539	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1770	1583	0	3539	3539	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		301					
Link Speed (mph)	30			30	30		
Link Distance (ft)	298			384	227		
Travel Time (s)	6.8			8.7	5.2		
Peak Hour Factor	0.97	0.97	0.89	0.89	0.95	0.95	
Adj. Flow (vph)	202	364	0	746	1304	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	202	364	0	746	1304	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	25.8	25.8		99.2	55.4		
Actuated g/C Ratio	0.19	0.19		0.73	0.41		
v/c Ratio	0.60	0.67		0.29	0.90		
Control Delay	55.9	15.4		7.1	10.8		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.7	0.0		0.0	46.9		
Total Delay	56.6	15.4		7.1	57.7		
LOS	E	B		A	E		
Approach Delay	30.1			7.1	57.7		
Approach LOS	C			A	E		
Queue Length 50th (ft)	164	47		101	81		
Queue Length 95th (ft)	222	139		173	m63		
Internal Link Dist (ft)	218			304	147		
Turn Bay Length (ft)							
Base Capacity (vph)	590	728		2599	1451		
Starvation Cap Reductn	0	0		0	391		
Spillback Cap Reductn	165	0		116	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.48	0.50		0.30	1.23		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 37.3		Intersection LOS: D	
Intersection Capacity Utilization 104.8%		ICU Level of Service G	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	0	1	220	411	60
Future Vol, veh/h	11	0	1	220	411	60
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	46	46	89	89	91	91
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	24	0	1	247	452	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	734	485	518	0	-	0
Stage 1	485	-	-	-	-	-
Stage 2	249	-	-	-	-	-
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	390	586	1058	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	390	586	1058	-	-	-
Mov Cap-2 Maneuver	390	-	-	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1058	-	390	-	-
HCM Lane V/C Ratio	0.001	-	0.061	-	-
HCM Control Delay (s)	8.4	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	36	218	411	0
Future Vol, veh/h	3	16	36	218	411	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	75	75
Heavy Vehicles, %	3	7	4	0	0	7
Mvmt Flow	3	18	41	248	548	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	878	548	548	0	-	0
Stage 1	548	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.43	6.27	4.14	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.363	2.236	-	-	-
Pot Cap-1 Maneuver	317	527	1011	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	302	527	1011	-	-	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1011	-	472	-	-
HCM Lane V/C Ratio	0.04	-	0.046	-	-
HCM Control Delay (s)	8.7	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	8	195	6	4	438
Future Vol, veh/h	11	8	195	6	4	438
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	85	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	14	10	229	7	4	476

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	717	233	0	0	236	0
Stage 1	233	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	399	811	-	-	1331	-
Stage 1	810	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	397	811	-	-	1331	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	622	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.1
HCM LOS	B		

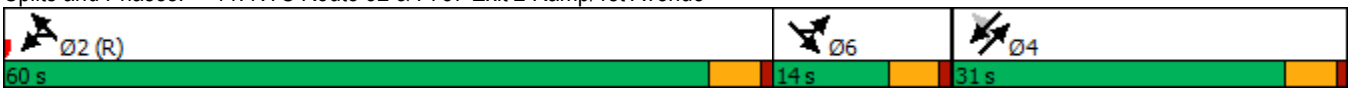
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	506	1331	-
HCM Lane V/C Ratio	-	-	0.047	0.003	-
HCM Control Delay (s)	-	-	12.5	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	0	30	450	53	90	8	69	0	0	111	4
Future Volume (vph)	3	0	30	450	53	90	8	69	0	0	111	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88										
Frt		0.878			0.906						0.995	
Flt Protected		0.995		0.950				0.995				
Satd. Flow (prot)	0	1380	0	1444	1426	0	0	1645	0	0	1599	0
Flt Permitted		0.995		0.950				0.961				
Satd. Flow (perm)	0	1368	0	1444	1426	0	0	1589	0	0	1599	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			101						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.91	0.91	0.91	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	7%	25%	0%	33%	14%	15%	0%	0%	18%	25%
Adj. Flow (vph)	4	0	37	506	60	101	9	76	0	0	142	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	506	161	0	0	85	0	0	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		5.7		73.7	73.7			14.8			14.8	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.05		0.70	0.70			0.14			0.14	
v/c Ratio		0.28		0.50	0.16			0.38			0.65	
Control Delay		8.4		11.3	3.6			44.5			54.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		8.4		11.3	3.6			44.5			54.7	
LOS		A		B	A			D			D	
Approach Delay		8.4			9.5			44.5			54.7	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)		0		159	13			53			93	
Queue Length 95th (ft)		7		294	43			95			127	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		185		1012	1030			393			397	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.22		0.50	0.16			0.22			0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



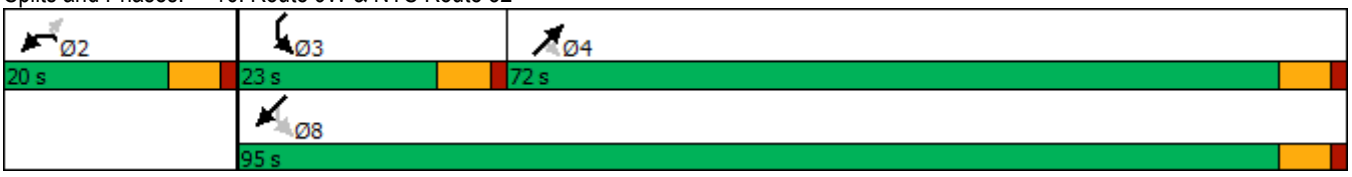
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	97	168	2035	171	126	821
Future Volume (vph)	97	168	2035	171	126	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1442	3505	1482	1388	3406
Flt Permitted	0.950				0.055	
Satd. Flow (perm)	1530	1442	3505	1482	80	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		193		106		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.87	0.87	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	12%	3%	9%	30%	6%
Adj. Flow (vph)	111	193	2188	184	148	966
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	193	2188	184	148	966
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	20.0	20.0	72.0	72.0	23.0	95.0
Total Split (%)	17.4%	17.4%	62.6%	62.6%	20.0%	82.6%
Maximum Green (s)	14.0	14.0	66.0	66.0	17.0	89.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	14.0	14.0	66.1	66.1	84.3	84.3
Actuated g/C Ratio	0.13	0.13	0.60	0.60	0.76	0.76
v/c Ratio	0.57	0.55	1.04	0.20	0.72	0.37
Control Delay	58.9	13.0	54.9	5.3	44.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	13.0	54.9	5.3	44.8	4.7
LOS	E	B	D	A	D	A
Approach Delay	29.8		51.0			10.0
Approach LOS	C		D			B
Queue Length 50th (ft)	75	0	~888	22	61	98
Queue Length 95th (ft)	135	60	#1096	58	121	113
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	194	351	2100	930	263	2752
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.55	1.04	0.20	0.56	0.35

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 110.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 37.3 Intersection LOS: D
Intersection Capacity Utilization 83.6% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	71	717	64	104	258
Future Volume (vph)	32	71	717	64	104	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907		0.989			
Flt Protected	0.985					0.986
Satd. Flow (prot)	927	0	1581	0	0	1351
Flt Permitted	0.985					0.579
Satd. Flow (perm)	927	0	1581	0	0	793
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	95		11			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.75	0.75	0.87	0.87	0.90	0.84
Heavy Vehicles (%)	60%	67%	6%	18%	35%	21%
Adj. Flow (vph)	43	95	824	74	116	307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	0	898	0	0	423
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	9.7		48.4			48.4
Actuated g/C Ratio	0.15		0.75			0.75
v/c Ratio	0.63		0.76			0.71
Control Delay	22.8		14.7			18.5
Queue Delay	0.0		0.0			0.0
Total Delay	22.8		14.7			18.5
LOS	C		B			B
Approach Delay	22.8		14.7			18.5
Approach LOS	C		B			B
Queue Length 50th (ft)	16		179			79
Queue Length 95th (ft)	40		#547			#287
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	352		1184			592
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.39		0.76			0.71

Intersection Summary			
Area Type:	CBD		
Cycle Length: 70			
Actuated Cycle Length: 64.7			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 87.0%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	62	229	325	346	82	130
Future Vol, veh/h	62	229	325	346	82	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	88	88
Heavy Vehicles, %	9	20	10	10	18	17
Mvmt Flow	69	254	357	380	93	148

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1261	167	93	0	-	0
Stage 1	167	-	-	-	-	-
Stage 2	1094	-	-	-	-	-
Critical Hdwy	6.49	6.4	4.2	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.48	2.29	-	-	-
Pot Cap-1 Maneuver	182	832	1453	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	311	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	832	1453	-	-	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	583	-	-	-	-	-
Stage 2	311	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	18.4	4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1453	-	587	-	-
HCM Lane V/C Ratio	0.246	-	0.551	-	-
HCM Control Delay (s)	8.3	0	18.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	1	-	3.3	-	-

Intersection	
Int Delay, s/veh	12

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	23	545	200	62	170	23
Future Vol, veh/h	23	545	200	62	170	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	83	83
Heavy Vehicles, %	3	0	22	10	12	11
Mvmt Flow	27	649	247	77	205	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	324	0	-	0	989	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	703	-
Critical Hdwy	4.13	-	-	-	6.52	6.31
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.227	-	-	-	3.608	3.399
Pot Cap-1 Maneuver	1230	-	-	-	262	732
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	473	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1230	-	-	-	253	732
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	473	-

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	62.7
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	274	1230	-	-	-
HCM Lane V/C Ratio	0.849	0.022	-	-	-
HCM Control Delay (s)	62.7	8	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	7.1	0.1	-	-	-

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	127	54	59	652	205	66
Future Vol, veh/h	127	54	59	652	205	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	86	86	90	90
Heavy Vehicles, %	13	28	20	9	23	28
Mvmt Flow	146	62	69	758	228	73

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1161	265	301	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Critical Hdwy	6.53	6.48	4.3	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.552	2.38	-	-	-
Pot Cap-1 Maneuver	205	715	1164	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	184	715	1164	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	54.8	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1164	-	184	715	-	-
HCM Lane V/C Ratio	0.059	-	0.793	0.087	-	-
HCM Control Delay (s)	8.3	0	73.7	10.5	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	5.4	0.3	-	-

Intersection	
Int Delay, s/veh	7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	134	7	47	54	43	60
Future Vol, veh/h	134	7	47	54	43	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	84	84	62	62
Heavy Vehicles, %	25	17	42	42	0	25
Mvmt Flow	206	11	56	64	69	97

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	323	88	0	0	120	0
Stage 1	88	-	-	-	-	-
Stage 2	235	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.1	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	626	930	-	-	1480	-
Stage 1	881	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	597	930	-	-	1480	-
Mov Cap-2 Maneuver	597	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	718	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	3.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	597	930	1480	-
HCM Lane V/C Ratio	-	-	0.345	0.012	0.047	-
HCM Control Delay (s)	-	-	14.2	8.9	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	1.5	0	0.1	-

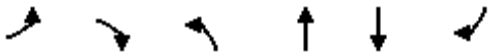
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	14	3	489	186	3
Future Vol, veh/h	9	14	3	489	186	3
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	81	75	72	93	25
Heavy Vehicles, %	0	8	0	8	20	0
Mvmt Flow	21	17	4	679	200	12

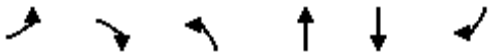
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	893	206	212	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	315	820	1370	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	313	820	1370	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1370	-	432	-	-
HCM Lane V/C Ratio	0.003	-	0.09	-	-
HCM Control Delay (s)	7.6	0	14.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-



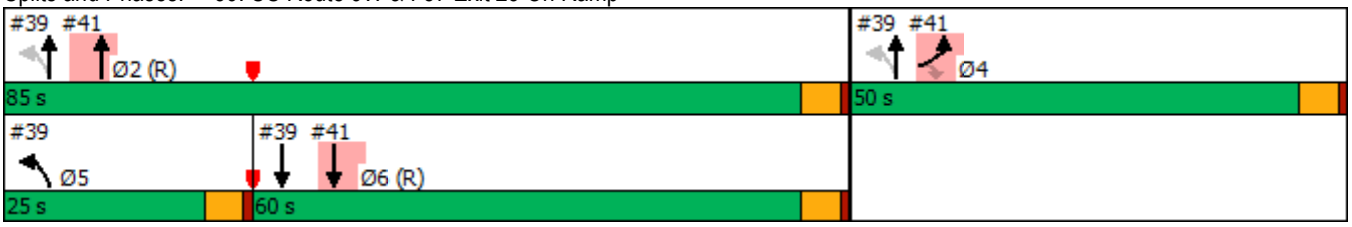
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	351	808	653	214		
Future Volume (vph)	0	0	351	808	653	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1656	1863	3318	0		
Flt Permitted			0.240					
Satd. Flow (perm)	0	0	418	1863	3318	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					40			
Link Speed (mph)	30			30	30			
Link Distance (ft)	346			240	257			
Travel Time (s)	7.9			5.5	5.8			
Peak Hour Factor	0.92	0.92	0.89	0.89	0.93	0.93		
Heavy Vehicles (%)	2%	2%	9%	2%	6%	1%		
Adj. Flow (vph)	0	0	394	908	702	230		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	394	908	932	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	65.4			
Actuated g/C Ratio			0.96	1.00	0.48			
v/c Ratio			0.80	0.49	0.57			

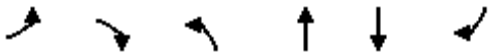


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			16.2	1.3	26.3			
Queue Delay			0.4	0.0	0.0			
Total Delay			16.7	1.3	26.3			
LOS			B	A	C			
Approach Delay				6.0	26.3			
Approach LOS				A	C			
Queue Length 50th (ft)			57	42	271			
Queue Length 95th (ft)			m73	m21	408			
Internal Link Dist (ft)	266			160	177			
Turn Bay Length (ft)								
Base Capacity (vph)			585	1863	1627			
Starvation Cap Reductn			29	0	0			
Spillback Cap Reductn			0	0	0			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			0.71	0.49	0.57			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 39: US Route 9W & I-87 Exit 23 On Ramp



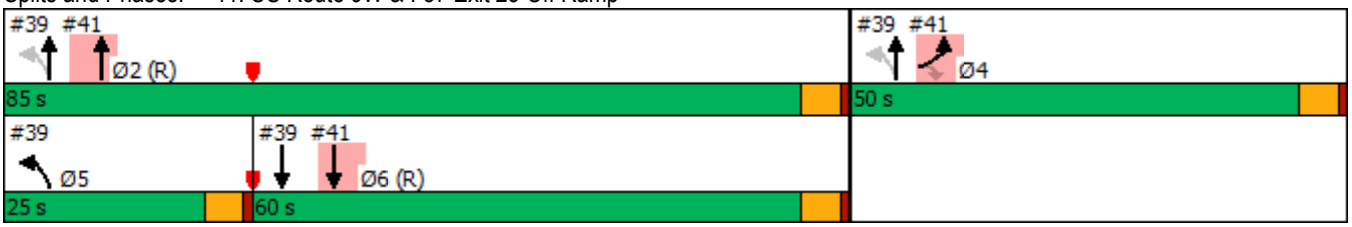


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	316	0	659	653	0	
Future Volume (vph)	500	316	0	659	653	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1805	1568	0	3539	3610	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	1568	0	3539	3610	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		278					
Link Speed (mph)	30			30	30		
Link Distance (ft)	284			365	240		
Travel Time (s)	6.5			8.3	5.5		
Peak Hour Factor	0.83	0.83	0.86	0.86	0.98	0.98	
Heavy Vehicles (%)	0%	3%	0%	2%	0%	0%	
Adj. Flow (vph)	602	381	0	766	666	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	602	381	0	766	666	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	45.0	45.0		80.0	65.4		
Actuated g/C Ratio	0.33	0.33		0.59	0.48		
v/c Ratio	1.00	0.54		0.37	0.38		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Control Delay	82.0	12.8		14.9	4.0		
Queue Delay	0.0	0.0		0.0	0.3		
Total Delay	82.0	12.8		14.9	4.3		
LOS	F	B		B	A		
Approach Delay	55.1			14.9	4.3		
Approach LOS	E			B	A		
Queue Length 50th (ft)	~528	64		175	19		
Queue Length 95th (ft)	#676	128		203	23		
Internal Link Dist (ft)	204			285	160		
Turn Bay Length (ft)							
Base Capacity (vph)	601	708		2097	1747		
Starvation Cap Reductn	0	0		0	473		
Spillback Cap Reductn	0	0		5	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	1.00	0.54		0.37	0.52		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 28.4		Intersection LOS: C	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 41: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	1	1	502	146	19
Future Vol, veh/h	40	1	1	502	146	19
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	83	83	77	77
Heavy Vehicles, %	3	0	0	5	12	6
Mvmt Flow	62	2	1	605	190	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	810	203	215	0	-	0
Stage 1	203	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	348	843	1367	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	348	843	1367	-	-	-
Mov Cap-2 Maneuver	348	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1367	-	353	-	-
HCM Lane V/C Ratio	0.001	-	0.179	-	-
HCM Control Delay (s)	7.6	0	17.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	1

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	24	497	147	0	6	46
Future Vol, veh/h	24	497	147	0	6	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	83	83	83	83
Heavy Vehicles, %	4	5	12	0	0	0
Mvmt Flow	30	621	177	0	7	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	177	0	-	0	858	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1387	-	-	-	330	871
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1387	-	-	-	319	871
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	506	-

Approach	NB	SB	SE
HCM Control Delay, s	0.4	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1387	-	726	-	-
HCM Lane V/C Ratio	0.022	-	0.086	-	-
HCM Control Delay (s)	7.7	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	7	479	18	12	210
Future Vol, veh/h	11	7	479	18	12	210
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	9	521	20	14	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	806	531	0	0	541	0
Stage 1	531	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	351	548	-	-	1028	-
Stage 1	590	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	345	548	-	-	1028	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.5
HCM LOS	B		

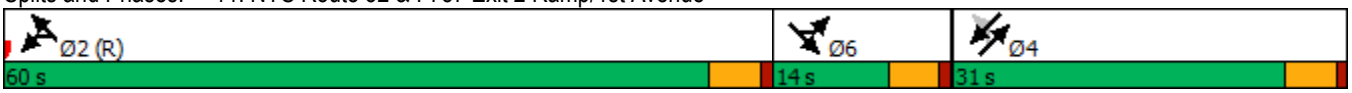
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	1028	-
HCM Lane V/C Ratio	-	-	0.056	0.014	-
HCM Control Delay (s)	-	-	14.5	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	0	47	910	101	60	6	76	0	0	210	9
Future Volume (vph)	2	0	47	910	101	60	6	76	0	0	210	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.87										
Frt		0.871			0.944						0.994	
Flt Protected		0.998		0.950				0.996				
Satd. Flow (prot)	0	1358	0	1719	1754	0	0	1688	0	0	1715	0
Flt Permitted		0.998		0.950				0.973				
Satd. Flow (perm)	0	1353	0	1719	1754	0	0	1649	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			43						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.73	0.73	0.73	0.90	0.90	0.90	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	5%	0%	6%	0%	13%	0%	0%	10%	13%
Adj. Flow (vph)	3	0	64	1011	112	67	7	92	0	0	228	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	1011	179	0	0	99	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		6.5		66.1	66.1			19.5			19.5	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.06		0.63	0.63			0.19			0.19	
v/c Ratio		0.44		0.94	0.16			0.32			0.74	
Control Delay		19.1		36.9	8.1			38.4			53.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.1		36.9	8.1			38.4			53.8	
LOS		B		D	A			D			D	
Approach Delay		19.1			32.6			38.4			53.8	
Approach LOS		B			C			D			D	
Queue Length 50th (ft)		0		584	35			58			151	
Queue Length 95th (ft)		22		#1031	83			91			220	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		183		1081	1119			408			426	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.37		0.94	0.16			0.24			0.56	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 35.5		Intersection LOS: D	
Intersection Capacity Utilization 77.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



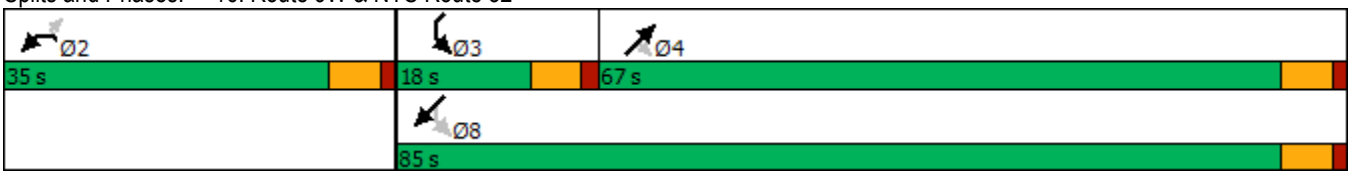
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	299	130	1081	96	103	1439
Future Volume (vph)	299	130	1081	96	103	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1455	3471	1509	1583	3539
Flt Permitted	0.950				0.088	
Satd. Flow (perm)	1719	1455	3471	1509	147	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		69		92		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	5%	11%	4%	7%	14%	2%
Adj. Flow (vph)	329	143	1188	105	110	1531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	329	143	1188	105	110	1531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	35.0	35.0	67.0	67.0	18.0	85.0
Total Split (%)	29.2%	29.2%	55.8%	55.8%	15.0%	70.8%
Maximum Green (s)	29.0	29.0	61.0	61.0	12.0	79.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	29.4	29.4	41.4	41.4	55.9	55.9
Actuated g/C Ratio	0.30	0.30	0.43	0.43	0.57	0.57
v/c Ratio	0.64	0.29	0.81	0.15	0.53	0.75
Control Delay	38.6	18.1	29.1	4.9	21.2	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	18.1	29.1	4.9	21.2	17.9
LOS	D	B	C	A	C	B
Approach Delay	32.4		27.1			18.1
Approach LOS	C		C			B
Queue Length 50th (ft)	173	33	326	5	29	345
Queue Length 95th (ft)	#351	101	421	34	71	420
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	518	486	2200	990	263	2905
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.29	0.54	0.11	0.42	0.53

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 97.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	101	95	253	28	46	930
Future Volume (vph)	101	95	253	28	46	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.935		0.986			
Flt Protected	0.975					0.998
Satd. Flow (prot)	1597	0	1670	0	0	1778
Flt Permitted	0.975					0.968
Satd. Flow (perm)	1597	0	1670	0	0	1724
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	68		13			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	8%	9%	8%	50%	40%	5%
Adj. Flow (vph)	119	112	351	39	49	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	231	0	390	0	0	1038
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	12.1		43.2			43.2
Actuated g/C Ratio	0.19		0.66			0.66
v/c Ratio	0.66		0.35			0.91
Control Delay	25.6		6.7			26.1
Queue Delay	0.0		0.0			0.0
Total Delay	25.6		6.7			26.1
LOS	C		A			C
Approach Delay	25.6		6.7			26.1
Approach LOS	C		A			C
Queue Length 50th (ft)	56		53			285
Queue Length 95th (ft)	107		93			#695
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	537		1108			1139
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.43		0.35			0.91

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 65.4			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 90.4%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	68	283	204	136	236	87
Future Vol, veh/h	68	283	204	136	236	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	74	74	85	85
Heavy Vehicles, %	12	3	9	8	4	8
Mvmt Flow	83	345	276	184	278	102

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1065	329	278	0	-	0
Stage 1	329	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Critical Hdwy	6.52	6.23	4.19	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.327	2.281	-	-	-
Pot Cap-1 Maneuver	236	710	1246	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	178	710	1246	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	456	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	12.9	5.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1246	-	881	-	-
HCM Lane V/C Ratio	0.221	-	0.486	-	-
HCM Control Delay (s)	8.7	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	2.7	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	30	209	408	285	59	37
Future Vol, veh/h	30	209	408	285	59	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	84	84	81	81
Heavy Vehicles, %	4	0	0	5	5	1
Mvmt Flow	39	271	486	339	73	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	825	0	-	0	1005	656
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	4.14	-	-	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.236	-	-	-	3.545	3.309
Pot Cap-1 Maneuver	797	-	-	-	264	467
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	797	-	-	-	249	467
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	707	-

Approach	NB	SB	NE
HCM Control Delay, s	1.2	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	304	797	-	-	-
HCM Lane V/C Ratio	0.39	0.049	-	-	-
HCM Control Delay (s)	24.2	9.7	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	1.8	0.2	-	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	72	52	235	673	359
Future Vol, veh/h	45	72	52	235	673	359
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	91	91
Heavy Vehicles, %	29	14	10	7	7	2
Mvmt Flow	49	78	59	267	740	395

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1323	938	1135	0	-	0
Stage 1	938	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Critical Hdwy	6.69	6.34	4.2	-	-	-
Critical Hdwy Stg 1	5.69	-	-	-	-	-
Critical Hdwy Stg 2	5.69	-	-	-	-	-
Follow-up Hdwy	3.761	3.426	2.29	-	-	-
Pot Cap-1 Maneuver	151	305	587	-	-	-
Stage 1	341	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	133	305	587	-	-	-
Mov Cap-2 Maneuver	133	-	-	-	-	-
Stage 1	301	-	-	-	-	-
Stage 2	633	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30.9	2.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	587	-	133	305	-	-
HCM Lane V/C Ratio	0.101	-	0.368	0.257	-	-
HCM Control Delay (s)	11.8	0	47	20.8	-	-
HCM Lane LOS	B	A	E	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.5	1	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	74	32	96	124	16	66
Future Vol, veh/h	74	32	96	124	16	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	84	84	78	78
Heavy Vehicles, %	26	10	25	13	0	37
Mvmt Flow	89	39	114	148	21	85

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	315	188	0	0	262	0
Stage 1	188	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.66	6.3	-	-	4.1	-
Critical Hdwy Stg 1	5.66	-	-	-	-	-
Critical Hdwy Stg 2	5.66	-	-	-	-	-
Follow-up Hdwy	3.734	3.39	-	-	2.2	-
Pot Cap-1 Maneuver	631	834	-	-	1314	-
Stage 1	790	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	621	834	-	-	1314	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	830	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	621	834	1314	-
HCM Lane V/C Ratio	-	-	0.144	0.046	0.016	-
HCM Control Delay (s)	-	-	11.8	9.5	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0	-

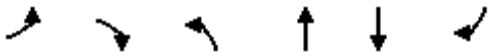
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2	6	201	427	9
Future Vol, veh/h	6	2	6	201	427	9
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	31	80	88	63
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	12	4	19	251	485	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	781	492	499	0	-	0
Stage 1	492	-	-	-	-	-
Stage 2	289	-	-	-	-	-
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	366	581	1075	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	581	1075	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	606	-	-	-	-	-
Stage 2	765	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1075	-	396	-	-
HCM Lane V/C Ratio	0.018	-	0.04	-	-
HCM Control Delay (s)	8.4	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	402	473	1242	559		
Future Volume (vph)	0	0	402	473	1242	559		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.953			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1770	1863	3373	0		
Flt Permitted			0.044					
Satd. Flow (perm)	0	0	82	1863	3373	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					65			
Link Speed (mph)	30			30	30			
Link Distance (ft)	314			227	306			
Travel Time (s)	7.1			5.2	7.0			
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.97		
Adj. Flow (vph)	0	0	432	509	1280	576		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	432	509	1856	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	55.0			
Actuated g/C Ratio			0.96	1.00	0.41			
v/c Ratio			0.76	0.27	1.31			
Control Delay			38.5	0.4	179.6			

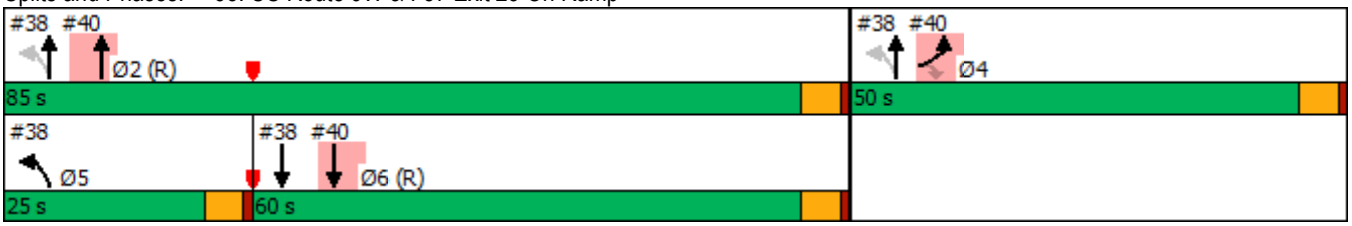
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			34.3	0.0	0.1			
Total Delay			72.8	0.4	179.7			
LOS			E	A	F			
Approach Delay				33.6	179.7			
Approach LOS				C	F			
Queue Length 50th (ft)			305	0	~1088			
Queue Length 95th (ft)			#556	1	#1228			
Internal Link Dist (ft)	234			147	226			
Turn Bay Length (ft)								
Base Capacity (vph)			568	1863	1412			
Starvation Cap Reductn			155	0	0			
Spillback Cap Reductn			0	0	34			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			1.05	0.27	1.35			

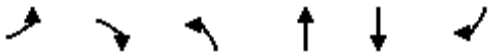
Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay: 130.6		Intersection LOS: F	
Intersection Capacity Utilization 105.7%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 38: US Route 9W & I-87 Exit 23 On Ramp





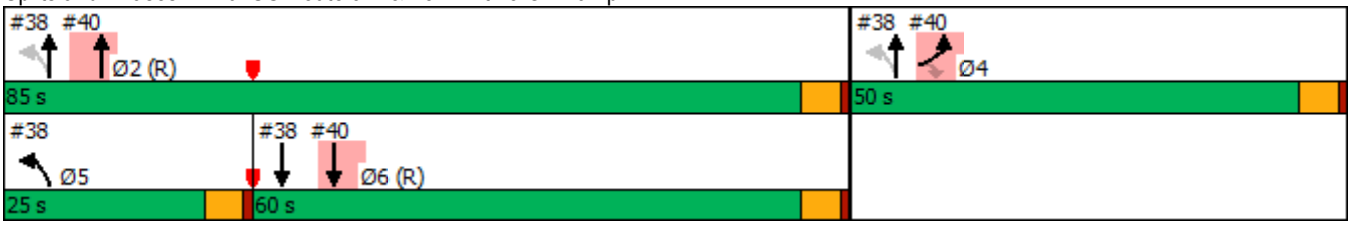
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	358	0	679	1242	0	
Future Volume (vph)	196	358	0	679	1242	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1770	1583	0	3539	3539	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1770	1583	0	3539	3539	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		301					
Link Speed (mph)	30			30	30		
Link Distance (ft)	298			384	227		
Travel Time (s)	6.8			8.7	5.2		
Peak Hour Factor	0.97	0.97	0.89	0.89	0.95	0.95	
Adj. Flow (vph)	202	369	0	763	1307	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	202	369	0	763	1307	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	25.8	25.8		99.2	55.0		
Actuated g/C Ratio	0.19	0.19		0.73	0.41		
v/c Ratio	0.60	0.68		0.29	0.91		
Control Delay	55.9	16.1		7.2	11.0		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.7	0.0		0.0	46.7		
Total Delay	56.6	16.1		7.2	57.7		
LOS	E	B		A	E		
Approach Delay	30.4			7.2	57.7		
Approach LOS	C			A	E		
Queue Length 50th (ft)	164	51		104	82		
Queue Length 95th (ft)	222	145		177	m62		
Internal Link Dist (ft)	218			304	147		
Turn Bay Length (ft)							
Base Capacity (vph)	590	728		2599	1441		
Starvation Cap Reductn	0	0		0	386		
Spillback Cap Reductn	171	0		123	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.48	0.51		0.31	1.24		

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 37.2 Intersection LOS: D
Intersection Capacity Utilization 105.7% ICU Level of Service G
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	0.4

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1	222	423	60	11	0
Future Vol, veh/h	1	222	423	60	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	91	91	46	46
Heavy Vehicles, %	0	7	4	0	0	0
Mvmt Flow	1	249	465	66	24	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	531	0	-	0	749	498
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	251	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1047	-	-	-	382	576
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	795	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1047	-	-	-	382	576
Mov Cap-2 Maneuver	-	-	-	-	382	-
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	795	-

Approach	NB	SB	NE
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	382	1047	-	-	-
HCM Lane V/C Ratio	0.063	0.001	-	-	-
HCM Control Delay (s)	15.1	8.4	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	36	220	423	0	3	16
Future Vol, veh/h	36	220	423	0	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	75	75	87	87
Heavy Vehicles, %	4	0	0	7	3	7
Mvmt Flow	41	250	564	0	3	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	564	0	-	0	896	564
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	332	-
Critical Hdwy	4.14	-	-	-	6.43	6.27
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.236	-	-	-	3.527	3.363
Pot Cap-1 Maneuver	998	-	-	-	309	516
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	725	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	998	-	-	-	294	516
Mov Cap-2 Maneuver	-	-	-	-	294	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	725	-

Approach	NB	SB	SE
HCM Control Delay, s	1.2	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	998	-	461	-	-
HCM Lane V/C Ratio	0.041	-	0.047	-	-
HCM Control Delay (s)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	15	195	11	7	437
Future Vol, veh/h	23	15	195	11	7	437
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	85	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	29	19	229	13	8	475

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	727	236	0	0	242	0
Stage 1	236	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	394	808	-	-	1324	-
Stage 1	808	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	391	808	-	-	1324	-
Mov Cap-2 Maneuver	391	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	614	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.1
HCM LOS	B		

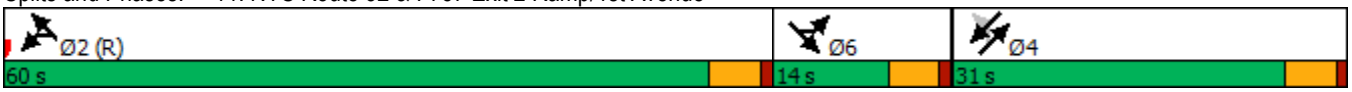
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	491	1324	-
HCM Lane V/C Ratio	-	-	0.097	0.006	-
HCM Control Delay (s)	-	-	13.1	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	0	30	500	53	90	8	75	0	0	122	4
Future Volume (vph)	3	0	30	500	53	90	8	75	0	0	122	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88										
Frt		0.878			0.906						0.996	
Flt Protected		0.995		0.950				0.995				
Satd. Flow (prot)	0	1380	0	1444	1426	0	0	1645	0	0	1601	0
Flt Permitted		0.995		0.950				0.963				
Satd. Flow (perm)	0	1368	0	1444	1426	0	0	1592	0	0	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			101						1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.91	0.91	0.91	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	7%	25%	0%	33%	14%	15%	0%	0%	18%	25%
Adj. Flow (vph)	4	0	37	562	60	101	9	82	0	0	156	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	562	161	0	0	91	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		5.7		72.7	72.7			15.8			15.8	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.05		0.69	0.69			0.15			0.15	
v/c Ratio		0.28		0.56	0.16			0.38			0.67	
Control Delay		8.4		13.1	3.8			43.4			54.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		8.4		13.1	3.8			43.4			54.8	
LOS		A		B	A			D			D	
Approach Delay		8.4			11.1			43.4			54.8	
Approach LOS		A			B			D			D	
Queue Length 50th (ft)		0		194	13			56			103	
Queue Length 95th (ft)		7		358	44			99			137	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		185		999	1017			394			397	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.22		0.56	0.16			0.23			0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



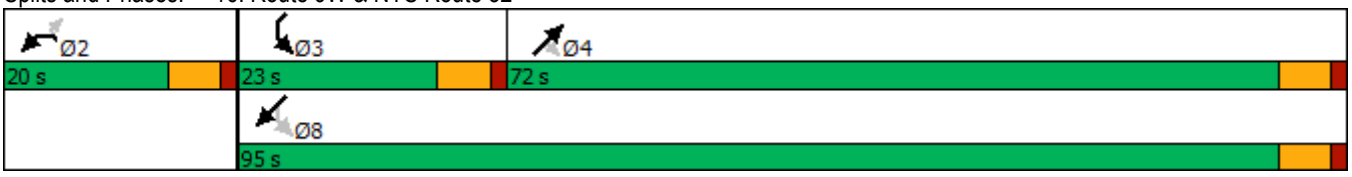
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	100	181	2035	176	148	821
Future Volume (vph)	100	181	2035	176	148	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1442	3505	1482	1388	3406
Flt Permitted	0.950				0.055	
Satd. Flow (perm)	1530	1442	3505	1482	80	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		208		108		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.87	0.87	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	12%	3%	9%	30%	6%
Adj. Flow (vph)	115	208	2188	189	174	966
Shared Lane Traffic (%)						
Lane Group Flow (vph)	115	208	2188	189	174	966
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	20.0	20.0	72.0	72.0	23.0	95.0
Total Split (%)	17.4%	17.4%	62.6%	62.6%	20.0%	82.6%
Maximum Green (s)	14.0	14.0	66.0	66.0	17.0	89.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	14.0	14.0	66.1	66.1	85.6	85.6
Actuated g/C Ratio	0.13	0.13	0.59	0.59	0.77	0.77
v/c Ratio	0.60	0.57	1.05	0.21	0.79	0.37
Control Delay	61.0	13.1	60.0	5.6	52.9	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	13.1	60.0	5.6	52.9	4.7
LOS	E	B	E	A	D	A
Approach Delay	30.2		55.7			12.0
Approach LOS	C		E			B
Queue Length 50th (ft)	80	0	~930	24	81	98
Queue Length 95th (ft)	140	63	#1096	60	147	113
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	192	363	2074	921	260	2718
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.57	1.05	0.21	0.67	0.36

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 111.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 40.6 Intersection LOS: D
Intersection Capacity Utilization 85.0% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	107	717	85	165	258
Future Volume (vph)	45	107	717	85	165	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.905		0.986			
Flt Protected	0.985					0.982
Satd. Flow (prot)	1027	0	1746	0	0	1514
Flt Permitted	0.985					0.370
Satd. Flow (perm)	1027	0	1746	0	0	570
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	143		14			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.75	0.75	0.87	0.87	0.90	0.84
Heavy Vehicles (%)	60%	67%	6%	18%	27%	21%
Adj. Flow (vph)	60	143	824	98	183	307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	922	0	0	490
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	10.7		43.9			43.9
Actuated g/C Ratio	0.17		0.68			0.68
v/c Ratio	0.70		0.77			1.27
Control Delay	21.8		15.4			158.1
Queue Delay	0.0		0.0			0.0
Total Delay	21.8		15.4			158.1
LOS	C		B			F
Approach Delay	21.8		15.4			158.1
Approach LOS	C		B			F
Queue Length 50th (ft)	20		177			~229
Queue Length 95th (ft)	49		#560			#294
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	418		1190			387
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.49		0.77			1.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 64.6			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 59.5		Intersection LOS: E	
Intersection Capacity Utilization 87.2%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	65	229	325	357	89	131
Future Vol, veh/h	65	229	325	357	89	131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	88	88
Heavy Vehicles, %	9	20	10	10	18	17
Mvmt Flow	72	254	357	392	101	149

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1282	176	101	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	1106	-	-	-	-	-
Critical Hdwy	6.49	6.4	4.2	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.48	2.29	-	-	-
Pot Cap-1 Maneuver	176	823	1443	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	120	823	1443	-	-	-
Mov Cap-2 Maneuver	120	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	307	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	21.1	4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1443	-	543	-	-
HCM Lane V/C Ratio	0.248	-	0.602	-	-
HCM Control Delay (s)	8.3	0	21.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	1	-	4	-	-

Intersection	
Int Delay, s/veh	13.3

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	26	548	205	62	170	28
Future Vol, veh/h	26	548	205	62	170	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	83	83
Heavy Vehicles, %	3	0	22	10	12	11
Mvmt Flow	31	652	253	77	205	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	330	0	-	0	1006	292
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	714	-
Critical Hdwy	4.13	-	-	-	6.52	6.31
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.227	-	-	-	3.608	3.399
Pot Cap-1 Maneuver	1224	-	-	-	256	726
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	467	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1224	-	-	-	246	726
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	467	-

Approach	NB	SB	NE
HCM Control Delay, s	0.4	0	68.7
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	271	1224	-	-	-
HCM Lane V/C Ratio	0.88	0.025	-	-	-
HCM Control Delay (s)	68.7	8	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	7.6	0.1	-	-	-

Intersection	
Int Delay, s/veh	15.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	149	59	63	654	224	79
Future Vol, veh/h	149	59	63	654	224	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	86	86	90	90
Heavy Vehicles, %	13	28	20	9	23	28
Mvmt Flow	171	68	73	760	249	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1199	293	337	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Critical Hdwy	6.53	6.48	4.3	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.552	2.38	-	-	-
Pot Cap-1 Maneuver	195	689	1128	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	689	1128	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	377	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	89	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1128	-	173	689	-	-
HCM Lane V/C Ratio	0.065	-	0.99	0.098	-	-
HCM Control Delay (s)	8.4	0	119.9	10.8	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	7.9	0.3	-	-

Intersection	
Int Delay, s/veh	7.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	155	7	51	66	43	67
Future Vol, veh/h	155	7	51	66	43	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	84	84	62	62
Heavy Vehicles, %	25	17	42	42	0	25
Mvmt Flow	238	11	61	79	69	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	347	101	0	0	140	0
Stage 1	101	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.1	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	606	915	-	-	1456	-
Stage 1	869	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	578	915	-	-	1456	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	709	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	578	915	1456	-
HCM Lane V/C Ratio	-	-	0.413	0.012	0.048	-
HCM Control Delay (s)	-	-	15.5	9	7.6	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	2	0	0.1	-

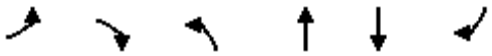
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	14	3	503	194	5
Future Vol, veh/h	11	14	3	503	194	5
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	81	75	72	93	25
Heavy Vehicles, %	0	8	0	8	20	0
Mvmt Flow	26	17	4	699	209	20

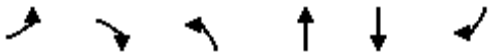
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	926	219	229	0	-	0
Stage 1	219	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	301	806	1351	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	299	806	1351	-	-	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	493	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1351	-	399	-	-
HCM Lane V/C Ratio	0.003	-	0.109	-	-
HCM Control Delay (s)	7.7	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



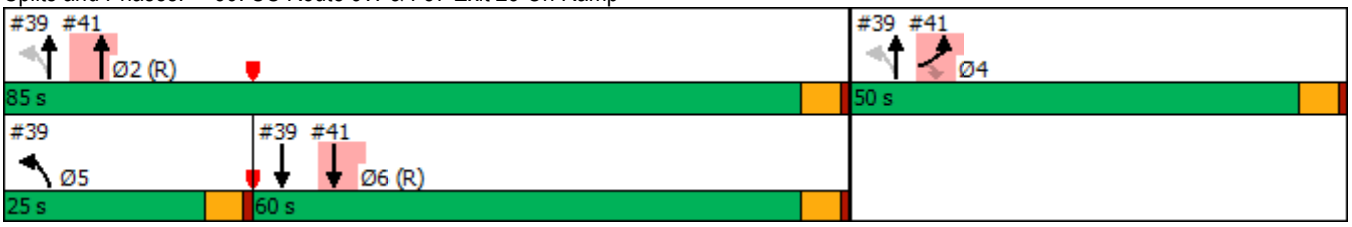
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	361	811	659	214		
Future Volume (vph)	0	0	361	811	659	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1656	1863	3318	0		
Flt Permitted			0.237					
Satd. Flow (perm)	0	0	413	1863	3318	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					39			
Link Speed (mph)	30			30	30			
Link Distance (ft)	346			240	257			
Travel Time (s)	7.9			5.5	5.8			
Peak Hour Factor	0.92	0.92	0.89	0.89	0.93	0.93		
Heavy Vehicles (%)	2%	2%	9%	2%	6%	1%		
Adj. Flow (vph)	0	0	406	911	709	230		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	406	911	939	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	64.6			
Actuated g/C Ratio			0.96	1.00	0.48			
v/c Ratio			0.82	0.49	0.58			

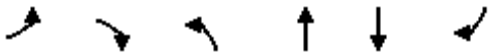


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			17.6	1.4	27.1			
Queue Delay			0.5	0.0	0.0			
Total Delay			18.1	1.4	27.1			
LOS			B	A	C			
Approach Delay				6.5	27.1			
Approach LOS				A	C			
Queue Length 50th (ft)			52	42	281			
Queue Length 95th (ft)			m78	m19	415			
Internal Link Dist (ft)	266			160	177			
Turn Bay Length (ft)								
Base Capacity (vph)			581	1863	1608			
Starvation Cap Reductn			29	0	0			
Spillback Cap Reductn			0	0	0			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			0.74	0.49	0.58			

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 83.8%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 39: US Route 9W & I-87 Exit 23 On Ramp



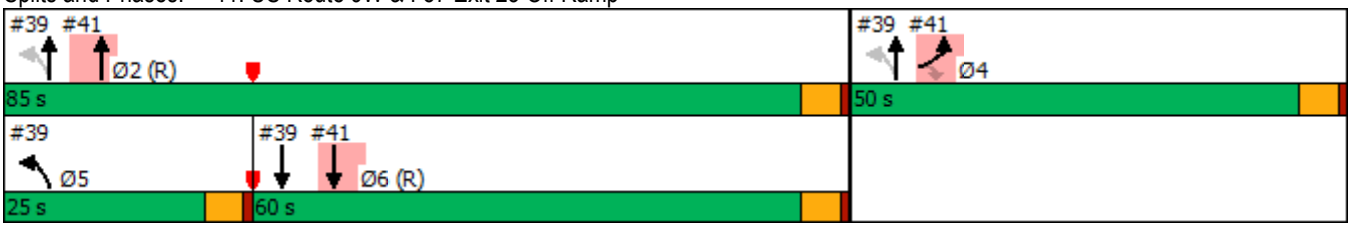


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	333	0	672	659	0	
Future Volume (vph)	500	333	0	672	659	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1805	1568	0	3539	3610	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	1568	0	3539	3610	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		293					
Link Speed (mph)	30			30	30		
Link Distance (ft)	284			365	240		
Travel Time (s)	6.5			8.3	5.5		
Peak Hour Factor	0.83	0.83	0.86	0.86	0.98	0.98	
Heavy Vehicles (%)	0%	3%	0%	2%	0%	0%	
Adj. Flow (vph)	602	401	0	781	672	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	602	401	0	781	672	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	45.0	45.0		80.0	64.6		
Actuated g/C Ratio	0.33	0.33		0.59	0.48		
v/c Ratio	1.00	0.56		0.37	0.39		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Control Delay	82.0	12.9		15.0	4.0		
Queue Delay	0.0	0.0		0.0	0.3		
Total Delay	82.0	12.9		15.0	4.3		
LOS	F	B		B	A		
Approach Delay	54.4			15.0	4.3		
Approach LOS	D			B	A		
Queue Length 50th (ft)	~528	69		179	19		
Queue Length 95th (ft)	#676	134		208	23		
Internal Link Dist (ft)	204			285	160		
Turn Bay Length (ft)							
Base Capacity (vph)	601	718		2097	1727		
Starvation Cap Reductn	0	0		0	460		
Spillback Cap Reductn	0	0		8	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	1.00	0.56		0.37	0.53		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 83.8%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 41: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	1	1	519	156	19
Future Vol, veh/h	40	1	1	519	156	19
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	83	83	77	77
Heavy Vehicles, %	3	0	0	5	12	6
Mvmt Flow	62	2	1	625	203	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	843	216	228	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	333	829	1352	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	829	1352	-	-	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	531	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1352	-	338	-	-
HCM Lane V/C Ratio	0.001	-	0.187	-	-
HCM Control Delay (s)	7.7	0	18.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	46	24	514	157	0
Future Vol, veh/h	6	46	24	514	157	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	83	83	83	83
Heavy Vehicles, %	4	5	12	0	0	0
Mvmt Flow	8	58	29	619	189	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	866	189	189	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Critical Hdwy	6.44	6.25	4.22	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.345	2.308	-	-	-
Pot Cap-1 Maneuver	321	845	1327	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	310	845	1327	-	-	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1327	-	705	-	-
HCM Lane V/C Ratio	0.022	-	0.092	-	-
HCM Control Delay (s)	7.8	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	14	479	35	23	210
Future Vol, veh/h	21	14	479	35	23	210
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	18	521	38	27	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	841	540	0	0	559	0
Stage 1	540	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	335	542	-	-	1012	-
Stage 1	584	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	325	542	-	-	1012	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0	0.9
HCM LOS	C		

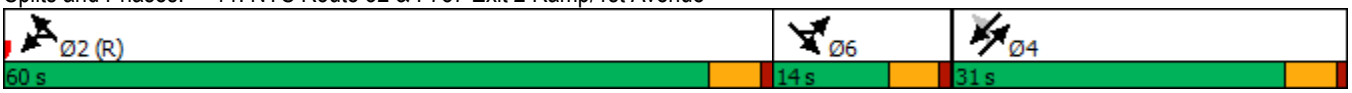
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	387	1012	-
HCM Lane V/C Ratio	-	-	0.113	0.027	-
HCM Control Delay (s)	-	-	15.5	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	0	47	940	101	60	6	90	0	0	216	9
Future Volume (vph)	2	0	47	940	101	60	6	90	0	0	216	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.87										
Frt		0.871			0.944						0.994	
Flt Protected		0.998		0.950				0.997				
Satd. Flow (prot)	0	1358	0	1719	1754	0	0	1688	0	0	1715	0
Flt Permitted		0.998		0.950				0.976				
Satd. Flow (perm)	0	1353	0	1719	1754	0	0	1653	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73			43						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.73	0.73	0.73	0.90	0.90	0.90	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	5%	0%	6%	0%	13%	0%	0%	10%	13%
Adj. Flow (vph)	3	0	64	1044	112	67	7	108	0	0	235	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	1044	179	0	0	115	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		60.0	60.0		31.0	31.0			31.0	
Total Split (%)	13.3%	13.3%		57.1%	57.1%		29.5%	29.5%			29.5%	
Maximum Green (s)	9.0	9.0		55.0	55.0		26.0	26.0			26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		6.5		65.6	65.6			20.0			20.0	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.06		0.62	0.62			0.19			0.19	
v/c Ratio		0.44		0.97	0.16			0.37			0.75	
Control Delay		19.1		44.0	8.3			38.9			53.5	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.1		44.0	8.3			38.9			53.5	
LOS		B		D	A			D			D	
Approach Delay		19.1			38.8			38.9			53.5	
Approach LOS		B			D			D			D	
Queue Length 50th (ft)		0		639	35			68			155	
Queue Length 95th (ft)		22		#1080	83			103			226	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		183		1073	1112			409			426	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.37		0.97	0.16			0.28			0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 40.2		Intersection LOS: D	
Intersection Capacity Utilization 79.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



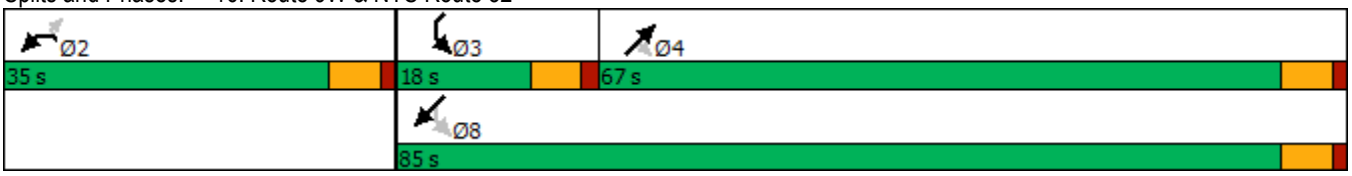
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	306	157	1081	99	116	1439
Future Volume (vph)	306	157	1081	99	116	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1455	3471	1509	1583	3539
Flt Permitted	0.950				0.088	
Satd. Flow (perm)	1719	1455	3471	1509	147	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		81		96		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	5%	11%	4%	7%	14%	2%
Adj. Flow (vph)	336	173	1188	109	123	1531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	336	173	1188	109	123	1531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	35.0	35.0	67.0	67.0	18.0	85.0
Total Split (%)	29.2%	29.2%	55.8%	55.8%	15.0%	70.8%
Maximum Green (s)	29.0	29.0	61.0	61.0	12.0	79.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	29.4	29.4	41.6	41.6	56.6	56.6
Actuated g/C Ratio	0.30	0.30	0.42	0.42	0.58	0.58
v/c Ratio	0.65	0.35	0.81	0.16	0.57	0.75
Control Delay	39.6	18.9	29.3	4.9	24.4	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	18.9	29.3	4.9	24.4	17.8
LOS	D	B	C	A	C	B
Approach Delay	32.6		27.3			18.2
Approach LOS	C		C			B
Queue Length 50th (ft)	179	42	329	5	32	345
Queue Length 95th (ft)	#369	122	425	34	85	419
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	514	492	2186	986	262	2887
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.35	0.54	0.11	0.47	0.53

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.1			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 68.3%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 9W & NYS Route 32



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	128	168	253	41	82	930
Future Volume (vph)	128	168	253	41	82	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.923		0.981			
Flt Protected	0.979					0.996
Satd. Flow (prot)	1581	0	1637	0	0	1755
Flt Permitted	0.979					0.934
Satd. Flow (perm)	1581	0	1637	0	0	1646
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	94		19			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			362
Travel Time (s)	9.6		8.5			8.2
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	8%	9%	8%	50%	40%	5%
Adj. Flow (vph)	151	198	351	57	87	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	349	0	408	0	0	1076
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	8				2	
Detector Phase	8		2		2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	20.0		40.0		40.0	40.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.0		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	15.4		40.5			40.5
Actuated g/C Ratio	0.23		0.61			0.61
v/c Ratio	0.79		0.40			1.07
Control Delay	30.7		8.5			65.2
Queue Delay	0.0		0.0			0.0
Total Delay	30.7		8.5			65.2
LOS	C		A			E
Approach Delay	30.7		8.5			65.2
Approach LOS	C		A			E
Queue Length 50th (ft)	95		72			~503
Queue Length 95th (ft)	166		103			#777
Internal Link Dist (ft)	341		295			282
Turn Bay Length (ft)						
Base Capacity (vph)	546		1012			1010
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.64		0.40			1.07

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 46.0 Intersection LOS: D
Intersection Capacity Utilization 99.2% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	69	283	204	142	250	91
Future Vol, veh/h	69	283	204	142	250	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	74	74	85	85
Heavy Vehicles, %	12	3	9	8	4	8
Mvmt Flow	84	345	276	192	294	107

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1092	348	294	0	-	0
Stage 1	348	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Critical Hdwy	6.52	6.23	4.19	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.327	2.281	-	-	-
Pot Cap-1 Maneuver	227	693	1229	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	170	693	1229	-	-	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	452	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	13.2	5.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1229	-	862	-	-
HCM Lane V/C Ratio	0.224	-	0.498	-	-
HCM Control Delay (s)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.9	-	2.8	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	36	216	412	285	59	40
Future Vol, veh/h	36	216	412	285	59	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	84	84	81	81
Heavy Vehicles, %	4	0	0	5	5	1
Mvmt Flow	47	281	490	339	73	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	829	0	-	0	1035	660
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	4.14	-	-	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.236	-	-	-	3.545	3.309
Pot Cap-1 Maneuver	794	-	-	-	254	465
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	794	-	-	-	236	465
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	688	-

Approach	NB	SB	NE
HCM Control Delay, s	1.4	0	25.6
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	295	794	-	-	-
HCM Lane V/C Ratio	0.414	0.059	-	-	-
HCM Control Delay (s)	25.6	9.8	0	-	-
HCM Lane LOS	D	A	A	-	-
HCM 95th %tile Q(veh)	1.9	0.2	-	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	75	59	235	673	386
Future Vol, veh/h	58	75	59	235	673	386
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	125	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	91	91
Heavy Vehicles, %	29	14	10	7	7	2
Mvmt Flow	63	82	67	267	740	424

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1353	952	1164	0	-	0
Stage 1	952	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.69	6.34	4.2	-	-	-
Critical Hdwy Stg 1	5.69	-	-	-	-	-
Critical Hdwy Stg 2	5.69	-	-	-	-	-
Follow-up Hdwy	3.761	3.426	2.29	-	-	-
Pot Cap-1 Maneuver	145	299	572	-	-	-
Stage 1	336	-	-	-	-	-
Stage 2	622	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	299	572	-	-	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	290	-	-	-	-	-
Stage 2	622	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	38.3	2.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	572	-	125	299	-	-
HCM Lane V/C Ratio	0.117	-	0.504	0.273	-	-
HCM Control Delay (s)	12.1	0	60	21.5	-	-
HCM Lane LOS	B	A	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	2.3	1.1	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	86	32	105	149	16	70
Future Vol, veh/h	86	32	105	149	16	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	84	84	78	78
Heavy Vehicles, %	26	10	25	13	0	37
Mvmt Flow	104	39	125	177	21	90

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	346	214	0	0	302	0
Stage 1	214	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.66	6.3	-	-	4.1	-
Critical Hdwy Stg 1	5.66	-	-	-	-	-
Critical Hdwy Stg 2	5.66	-	-	-	-	-
Follow-up Hdwy	3.734	3.39	-	-	2.2	-
Pot Cap-1 Maneuver	605	806	-	-	1270	-
Stage 1	768	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	595	806	-	-	1270	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	595	806	1270	-
HCM Lane V/C Ratio	-	-	0.174	0.048	0.016	-
HCM Control Delay (s)	-	-	12.3	9.7	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	0	-

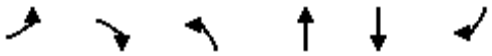
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	2	6	209	443	13
Future Vol, veh/h	7	2	6	209	443	13
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	30	80	88	63
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	14	4	20	261	503	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	815	514	524	0	-	0
Stage 1	514	-	-	-	-	-
Stage 2	301	-	-	-	-	-
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	350	564	1053	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	564	1053	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	755	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1053	-	375	-	-
HCM Lane V/C Ratio	0.019	-	0.048	-	-
HCM Control Delay (s)	8.5	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	422	480	1245	559		
Future Volume (vph)	0	0	422	480	1245	559		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.954			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1770	1863	3376	0		
Flt Permitted			0.044					
Satd. Flow (perm)	0	0	82	1863	3376	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					64			
Link Speed (mph)	30			30	30			
Link Distance (ft)	314			227	306			
Travel Time (s)	7.1			5.2	7.0			
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.97		
Adj. Flow (vph)	0	0	454	516	1284	576		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	454	516	1860	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			25.0		60.0		85.0	50.0
Total Split (%)			18.5%		44.4%		63%	37%
Maximum Green (s)			20.0		55.0		80.0	45.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			130.0	135.0	55.0			
Actuated g/C Ratio			0.96	1.00	0.41			
v/c Ratio			0.80	0.28	1.32			
Control Delay			41.8	0.4	180.5			

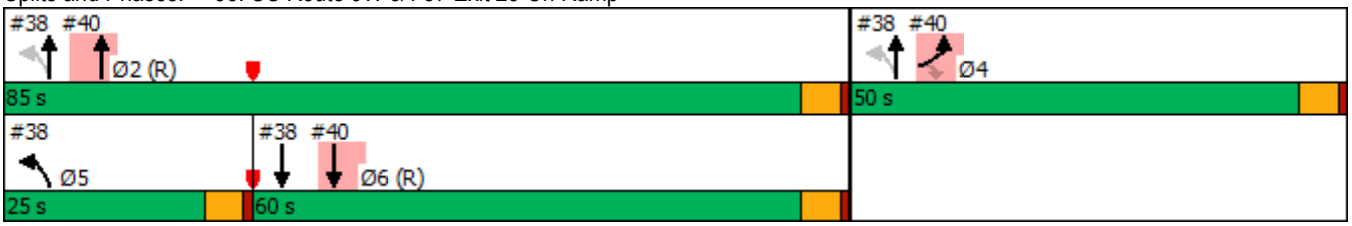
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			40.7	0.0	0.1			
Total Delay			82.5	0.4	180.5			
LOS			F	A	F			
Approach Delay				38.8	180.5			
Approach LOS				D	F			
Queue Length 50th (ft)			329	0	~1092			
Queue Length 95th (ft)			#601	0	#1231			
Internal Link Dist (ft)	234			147	226			
Turn Bay Length (ft)								
Base Capacity (vph)			564	1863	1413			
Starvation Cap Reductn			139	0	0			
Spillback Cap Reductn			0	0	32			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			1.07	0.28	1.35			

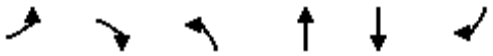
Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay: 132.0		Intersection LOS: F	
Intersection Capacity Utilization 107.1%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

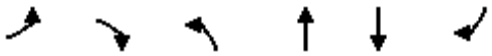
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 38: US Route 9W & I-87 Exit 23 On Ramp





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	368	0	706	1245	0	
Future Volume (vph)	196	368	0	706	1245	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1770	1583	0	3539	3539	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1770	1583	0	3539	3539	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		301					
Link Speed (mph)	30			30	30		
Link Distance (ft)	298			384	227		
Travel Time (s)	6.8			8.7	5.2		
Peak Hour Factor	0.97	0.97	0.89	0.89	0.95	0.95	
Adj. Flow (vph)	202	379	0	793	1311	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	202	379	0	793	1311	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	50.0	50.0		85.0	60.0		25.0
Total Split (%)	37.0%	37.0%		63.0%	44.4%		19%
Maximum Green (s)	45.0	45.0		80.0	55.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	26.2	26.2		98.8	55.0		
Actuated g/C Ratio	0.19	0.19		0.73	0.41		
v/c Ratio	0.59	0.69		0.31	0.91		
Control Delay	55.3	17.3		7.4	11.0		

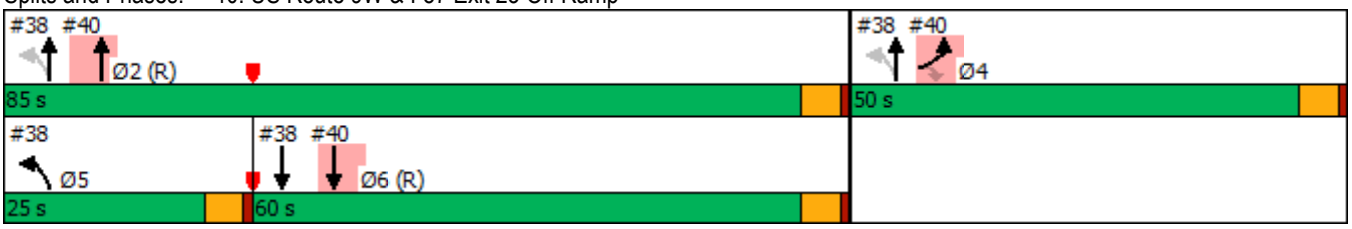


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.8	0.0		0.0	46.6		
Total Delay	56.1	17.3		7.4	57.6		
LOS	E	B		A	E		
Approach Delay	30.8			7.4	57.6		
Approach LOS	C			A	E		
Queue Length 50th (ft)	163	59		112	81		
Queue Length 95th (ft)	222	157		185	m62		
Internal Link Dist (ft)	218			304	147		
Turn Bay Length (ft)							
Base Capacity (vph)	590	728		2591	1441		
Starvation Cap Reductn	0	0		0	385		
Spillback Cap Reductn	180	0		141	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.49	0.52		0.32	1.24		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay: 37.0		Intersection LOS: D	
Intersection Capacity Utilization 107.1%		ICU Level of Service G	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	0	1	232	443	60
Future Vol, veh/h	11	0	1	232	443	60
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	46	46	89	89	91	91
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	24	0	1	261	487	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	783	520	553	0	-	0
Stage 1	520	-	-	-	-	-
Stage 2	263	-	-	-	-	-
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	365	560	1027	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	365	560	1027	-	-	-
Mov Cap-2 Maneuver	365	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1027	-	365	-	-
HCM Lane V/C Ratio	0.001	-	0.066	-	-
HCM Control Delay (s)	8.5	0	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	36	230	443	0
Future Vol, veh/h	3	16	36	230	443	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	75	75
Heavy Vehicles, %	3	7	4	0	0	7
Mvmt Flow	3	18	41	261	591	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	934	591	591	0	-	0
Stage 1	591	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.43	6.27	4.14	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.363	2.236	-	-	-
Pot Cap-1 Maneuver	294	498	975	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	280	498	975	-	-	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	716	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	975	-	443	-	-
HCM Lane V/C Ratio	0.042	-	0.049	-	-
HCM Control Delay (s)	8.9	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	28	195	21	14	437
Future Vol, veh/h	43	28	195	21	14	437
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	85	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	54	35	229	25	15	475

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	747	242	0	0	254	0
Stage 1	242	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	383	802	-	-	1311	-
Stage 1	803	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	377	802	-	-	1311	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0.2
HCM LOS	B		

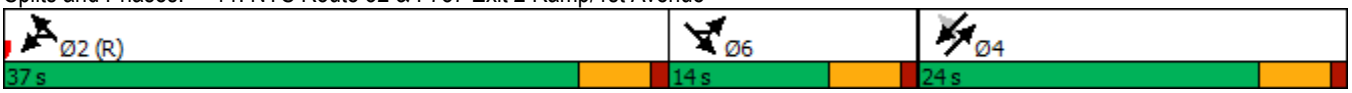
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	477	1311	-
HCM Lane V/C Ratio	-	-	0.186	0.012	-
HCM Control Delay (s)	-	-	14.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	0	30	500	53	90	8	75	0	0	122	4
Future Volume (vph)	3	0	30	500	53	90	8	75	0	0	122	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91										
Frt		0.878			0.906						0.996	
Flt Protected		0.995		0.950				0.995				
Satd. Flow (prot)	0	1424	0	1444	1426	0	0	1645	0	0	1601	0
Flt Permitted		0.995		0.950				0.962				
Satd. Flow (perm)	0	1415	0	1444	1426	0	0	1591	0	0	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		102			101						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.91	0.91	0.91	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	7%	25%	0%	33%	14%	15%	0%	0%	18%	25%
Adj. Flow (vph)	4	0	37	562	60	101	9	82	0	0	156	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	562	161	0	0	91	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	14.0	14.0		24.0	24.0		24.0	24.0			24.0	
Total Split (s)	14.0	14.0		37.0	37.0		24.0	24.0			24.0	
Total Split (%)	18.7%	18.7%		49.3%	49.3%		32.0%	32.0%			32.0%	
Maximum Green (s)	9.0	9.0		32.0	32.0		19.0	19.0			19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		5.5		45.9	45.9			12.8			12.8	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.07		0.61	0.61			0.17			0.17	
v/c Ratio		0.21		0.64	0.18			0.33			0.59	
Control Delay		2.4		17.0	4.7			29.2			36.1	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		2.4		17.0	4.7			29.2			36.1	
LOS		A		B	A			C			D	
Approach Delay		2.4			14.3			29.2			36.1	
Approach LOS		A			B			C			D	
Queue Length 50th (ft)		0		174	12			38			69	
Queue Length 95th (ft)		0		#389	45			71			98	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		260		883	911			403			407	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.16		0.64	0.18			0.23			0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	100	181	2035	176	148	821
Future Volume (vph)	100	181	2035	176	148	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1442	3505	1482	1388	3406
Flt Permitted	0.950				0.054	
Satd. Flow (perm)	1530	1442	3505	1482	79	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		208		113		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.87	0.87	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	12%	3%	9%	30%	6%
Adj. Flow (vph)	115	208	2188	189	174	966
Shared Lane Traffic (%)						
Lane Group Flow (vph)	115	208	2188	189	174	966
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	18.0	18.0	74.0	74.0	23.0	97.0
Total Split (%)	15.7%	15.7%	64.3%	64.3%	20.0%	84.3%
Maximum Green (s)	12.0	12.0	68.0	68.0	17.0	91.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	12.0	12.0	68.1	68.1	87.6	87.6
Actuated g/C Ratio	0.11	0.11	0.61	0.61	0.78	0.78
v/c Ratio	0.70	0.61	1.02	0.20	0.79	0.36
Control Delay	72.0	14.9	48.8	4.9	52.2	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.0	14.9	48.8	4.9	52.2	4.0
LOS	E	B	D	A	D	A
Approach Delay	35.2		45.3			11.4
Approach LOS	D		D			B
Queue Length 50th (ft)	82	0	~906	22	81	88
Queue Length 95th (ft)	#164	65	#1072	55	146	102
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	164	340	2137	947	261	2779
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.61	1.02	0.20	0.67	0.35

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 111.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 85.0% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

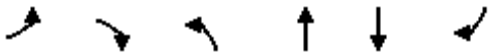
Splits and Phases: 16: Route 9W & NYS Route 32

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	107	717	85	165	258
Future Volume (vph)	45	107	717	85	165	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.986			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1128	967	1746	0	1421	1570
Flt Permitted	0.950				0.143	
Satd. Flow (perm)	1128	967	1746	0	214	1570
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		143	14			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			1046
Travel Time (s)	9.6		8.5			23.8
Peak Hour Factor	0.75	0.75	0.87	0.87	0.90	0.84
Heavy Vehicles (%)	60%	67%	6%	18%	27%	21%
Adj. Flow (vph)	60	143	824	98	183	307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	143	922	0	183	307
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm	Over	NA		pm+pt	NA
Protected Phases		1	2		1	6
Permitted Phases	8				6	6
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	3.5	5.0		3.5	5.0
Minimum Split (s)	10.0	8.0	25.0		8.0	25.0
Total Split (s)	12.0	13.0	45.0		13.0	58.0
Total Split (%)	17.1%	18.6%	64.3%		18.6%	82.9%
Maximum Green (s)	7.5	8.5	40.0		8.5	53.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	5.0		4.5	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	7.1	7.7	45.6		58.3	59.8
Actuated g/C Ratio	0.10	0.11	0.65		0.83	0.85
v/c Ratio	0.53	0.61	0.81		0.59	0.23
Control Delay	47.7	18.4	19.2		13.5	2.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	47.7	18.4	19.2		13.5	2.5
LOS	D	B	B		B	A
Approach Delay	27.1		19.2			6.6
Approach LOS	C		B			A
Queue Length 50th (ft)	25	0	320		15	29
Queue Length 95th (ft)	49	29	#562		67	46
Internal Link Dist (ft)	341		295			966
Turn Bay Length (ft)		200				
Base Capacity (vph)	120	243	1142		324	1341
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.50	0.59	0.81		0.56	0.23

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 13 (19%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 20: NYS Route 32 & South Port Road



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	149	59	63	654	224	79
Future Volume (vph)	149	59	63	654	224	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.965	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1597	1262	0	1721	1475	0
Flt Permitted	0.950			0.943		
Satd. Flow (perm)	1597	1262	0	1629	1475	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68			47	
Link Speed (mph)	45			55	55	
Link Distance (ft)	2072			957	365	
Travel Time (s)	31.4			11.9	4.5	
Peak Hour Factor	0.87	0.87	0.86	0.86	0.90	0.90
Heavy Vehicles (%)	13%	28%	20%	9%	23%	28%
Adj. Flow (vph)	171	68	73	760	249	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	68	0	833	337	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	42.5	42.5	42.5	
Total Split (%)	34.6%	34.6%	65.4%	65.4%	65.4%	
Maximum Green (s)	18.0	18.0	38.0	38.0	38.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	12.2	12.2		43.8	43.8	
Actuated g/C Ratio	0.19	0.19		0.67	0.67	
v/c Ratio	0.57	0.23		0.76	0.33	
Control Delay	31.1	8.0		14.8	5.5	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	31.1	8.0		14.8	5.5	
LOS	C	A		B	A	
Approach Delay	24.5			14.8	5.5	
Approach LOS	C			B	A	
Queue Length 50th (ft)	62	0		180	38	
Queue Length 95th (ft)	103	25		#451	94	
Internal Link Dist (ft)	1992			877	285	
Turn Bay Length (ft)	125					
Base Capacity (vph)	442	398		1098	1010	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.39	0.17		0.76	0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 14.2		Intersection LOS: B	
Intersection Capacity Utilization 74.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

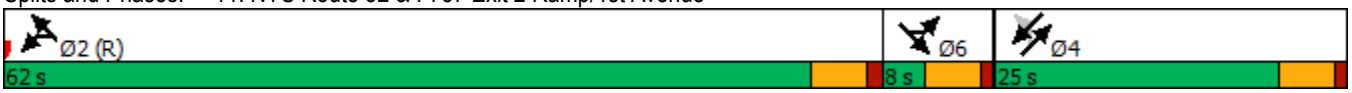
Splits and Phases: 21: NYS Route 144 & NYS Route 32

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	0	47	940	101	60	6	90	0	0	216	9
Future Volume (vph)	2	0	47	940	101	60	6	90	0	0	216	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.69										
Frt		0.871			0.944						0.994	
Flt Protected		0.998		0.950				0.997				
Satd. Flow (prot)	0	1083	0	1719	1754	0	0	1688	0	0	1715	0
Flt Permitted		0.998		0.950				0.975				
Satd. Flow (perm)	0	1071	0	1719	1754	0	0	1651	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			57						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			194			438			445	
Travel Time (s)		4.9			5.3			11.9			12.1	
Confl. Peds. (#/hr)	19		19									
Peak Hour Factor	0.73	0.73	0.73	0.90	0.90	0.90	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	5%	0%	6%	0%	13%	0%	0%	10%	13%
Adj. Flow (vph)	3	0	64	1044	112	67	7	108	0	0	235	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	1044	179	0	0	115	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	6	6		2	2			4			4	
Permitted Phases							4					
Detector Phase	6	6		2	2		4	4			4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	8.0	8.0		24.0	24.0		23.0	23.0			23.0	
Total Split (s)	8.0	8.0		62.0	62.0		25.0	25.0			25.0	
Total Split (%)	8.4%	8.4%		65.3%	65.3%		26.3%	26.3%			26.3%	
Maximum Green (s)	3.0	3.0		57.0	57.0		20.0	20.0			20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		C-Max	C-Max		None	None			None	
Act Effct Green (s)		3.0		61.3	61.3			17.3			17.3	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.03		0.65	0.65			0.18			0.18	
v/c Ratio		0.60		0.94	0.16			0.38			0.78	
Control Delay		31.8		34.8	5.7			37.2			54.1	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		31.8		34.8	5.7			37.2			54.1	
LOS		C		C	A			D			D	
Approach Delay		31.8			30.6			37.2			54.1	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)		0		566	28			60			139	
Queue Length 95th (ft)		18		#908	58			100			#221	
Internal Link Dist (ft)		101			114			358			365	
Turn Bay Length (ft)												
Base Capacity (vph)		111		1109	1152			347			362	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.60		0.94	0.16			0.33			0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 34.6		Intersection LOS: C	
Intersection Capacity Utilization 79.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue

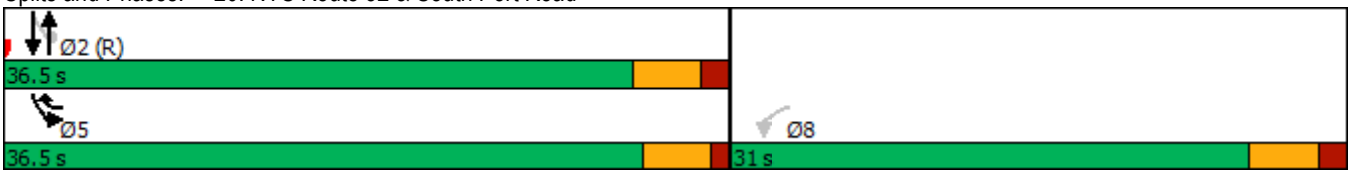


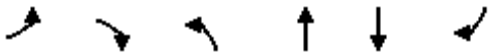
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	128	168	253	41	82	930
Future Volume (vph)	128	168	253	41	82	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.981			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1671	1482	1637	0	1289	1810
Flt Permitted	0.950				0.000	
Satd. Flow (perm)	1671	1482	1637	0	0	1810
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		198	16			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			1049
Travel Time (s)	9.6		8.5			23.8
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	8%	9%	8%	50%	40%	5%
Adj. Flow (vph)	151	198	351	57	87	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	198	408	0	87	989
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm	Over	NA		pm+pt	NA
Protected Phases		5!	2!		5!	2
Permitted Phases	8				2	
Detector Phase	8	5	2		5	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	9.5	23.0		9.5	23.0
Total Split (s)	31.0	36.5	36.5		36.5	36.5
Total Split (%)	45.9%	54.1%	54.1%		54.1%	54.1%
Maximum Green (s)	26.0	32.0	31.5		32.0	31.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.5	1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	4.5	5.0		4.5	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0
Act Effct Green (s)	11.4	49.8	49.4		49.8	49.4
Actuated g/C Ratio	0.17	0.74	0.73		0.74	0.73
v/c Ratio	0.53	0.17	0.34		0.09	0.75
Control Delay	31.8	1.3	5.7		4.6	13.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.8	1.3	5.7		4.6	13.7
LOS	C	A	A		A	B
Approach Delay	14.5		5.7			12.9
Approach LOS	B		A			B
Queue Length 50th (ft)	58	0	55		10	233
Queue Length 95th (ft)	94	17	88		28	#596
Internal Link Dist (ft)	341		295			969
Turn Bay Length (ft)		200				
Base Capacity (vph)	643	1146	1203		951	1326
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.23	0.17	0.34		0.09	0.75

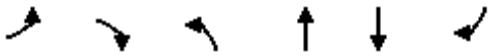
Intersection Summary			
Area Type:	Other		
Cycle Length: 67.5			
Actuated Cycle Length: 67.5			
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
! Phase conflict between lane groups.			

Splits and Phases: 20: NYS Route 32 & South Port Road





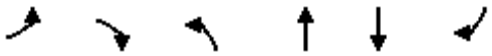
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	58	75	59	235	673	386
Future Volume (vph)	58	75	59	235	673	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.951	
Flt Protected	0.950			0.990		
Satd. Flow (prot)	1399	1417	0	1748	1718	0
Flt Permitted	0.950			0.573		
Satd. Flow (perm)	1399	1417	0	1012	1718	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		82			76	
Link Speed (mph)	45			55	55	
Link Distance (ft)	2072			957	365	
Travel Time (s)	31.4			11.9	4.5	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.91	0.91
Heavy Vehicles (%)	29%	14%	10%	7%	7%	2%
Adj. Flow (vph)	63	82	67	267	740	424
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	82	0	334	1164	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	42.5	42.5	42.5	
Total Split (%)	34.6%	34.6%	65.4%	65.4%	65.4%	
Maximum Green (s)	18.0	18.0	38.0	38.0	38.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	8.4	8.4		50.5	50.5	
Actuated g/C Ratio	0.13	0.13		0.78	0.78	
v/c Ratio	0.35	0.32		0.43	0.86	
Control Delay	30.3	10.2		5.9	16.9	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	30.3	10.2		5.9	16.9	
LOS	C	B		A	B	
Approach Delay	18.9			5.9	16.9	
Approach LOS	B			A	B	
Queue Length 50th (ft)	23	0		39	256	
Queue Length 95th (ft)	53	32		98	#696	
Internal Link Dist (ft)	1992			877	285	
Turn Bay Length (ft)	125					
Base Capacity (vph)	387	451		785	1351	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.16	0.18		0.43	0.86	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 14.8		Intersection LOS: B	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 21: NYS Route 144 & NYS Route 32



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	422	480	1246	559		
Future Volume (vph)	0	0	422	480	1246	559		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.954			
Flt Protected			0.950					
Satd. Flow (prot)	0	0	1770	1863	3376	0		
Flt Permitted			0.042					
Satd. Flow (perm)	0	0	78	1863	3376	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)					77			
Link Speed (mph)	30			30	30			
Link Distance (ft)	314			227	306			
Travel Time (s)	7.1			5.2	7.0			
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.97		
Adj. Flow (vph)	0	0	454	516	1285	576		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	454	516	1861	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			12	12			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Turn Type			pm+pt	NA	NA			
Protected Phases			5	2 4	6		2	4
Permitted Phases			2 4	2				
Detector Phase			5	2 4	6			
Switch Phase								
Minimum Initial (s)			5.0		5.0		5.0	5.0
Minimum Split (s)			10.0		23.0		23.0	23.0
Total Split (s)			31.0		68.0		99.0	31.0
Total Split (%)			23.8%		52.3%		76%	24%
Maximum Green (s)			26.0		63.0		94.0	26.0
Yellow Time (s)			4.0		4.0		4.0	4.0
All-Red Time (s)			1.0		1.0		1.0	1.0
Lost Time Adjust (s)			0.0		0.0			
Total Lost Time (s)			5.0		5.0			
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Vehicle Extension (s)			3.0		3.0		3.0	3.0
Recall Mode			None		C-Max		C-Max	None
Act Effct Green (s)			125.0	130.0	63.0			
Actuated g/C Ratio			0.96	1.00	0.48			
v/c Ratio			0.99	0.28	1.11			
Control Delay			74.0	0.4	90.3			

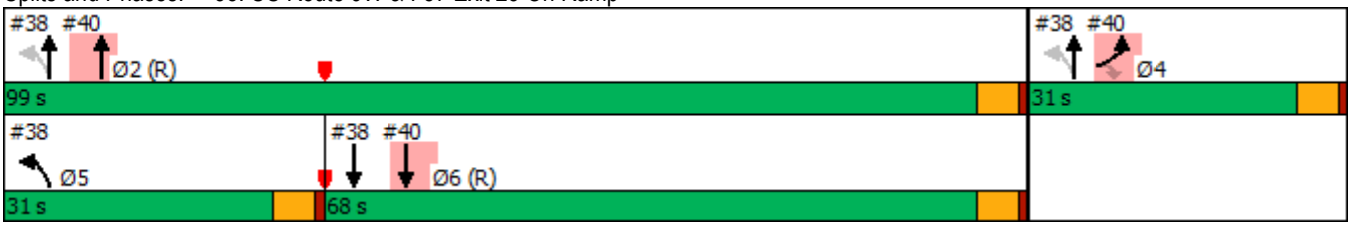
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			36.3	0.0	0.0			
Total Delay			110.3	0.4	90.3			
LOS			F	A	F			
Approach Delay				51.8	90.3			
Approach LOS				D	F			
Queue Length 50th (ft)			~376	0	~926			
Queue Length 95th (ft)			#597	0	#1066			
Internal Link Dist (ft)	234			147	226			
Turn Bay Length (ft)								
Base Capacity (vph)			457	1851	1675			
Starvation Cap Reductn			97	0	0			
Spillback Cap Reductn			0	0	6			
Storage Cap Reductn			0	0	0			
Reduced v/c Ratio			1.26	0.28	1.12			

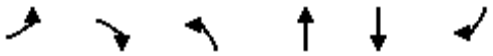
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 77.1		Intersection LOS: E	
Intersection Capacity Utilization 107.1%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 38: US Route 9W & I-87 Exit 23 On Ramp





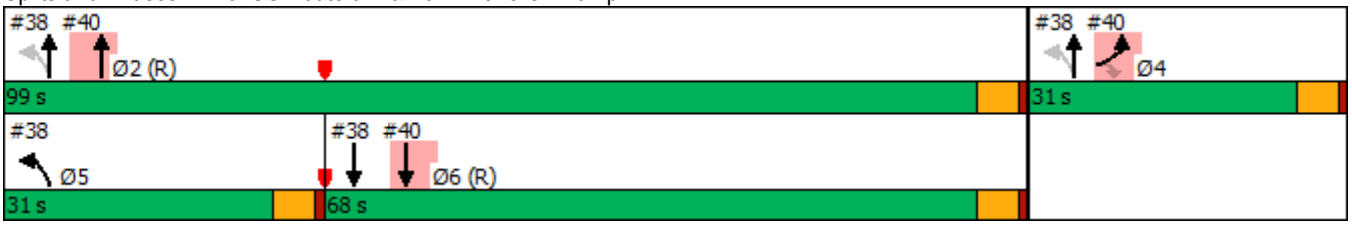
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	368	0	706	1246	0	
Future Volume (vph)	196	368	0	706	1246	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	1770	1583	0	3539	3539	0	
Flt Permitted	0.950						
Satd. Flow (perm)	1770	1583	0	3539	3539	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		338					
Link Speed (mph)	30			30	30		
Link Distance (ft)	298			384	227		
Travel Time (s)	6.8			8.7	5.2		
Peak Hour Factor	0.97	0.97	0.89	0.89	0.95	0.95	
Adj. Flow (vph)	202	379	0	793	1312	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	202	379	0	793	1312	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Turn Type	Prot	Perm		NA	NA		
Protected Phases	4			2	6		5
Permitted Phases		4					
Detector Phase	4	4		2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0
Minimum Split (s)	23.0	23.0		23.0	23.0		10.0
Total Split (s)	31.0	31.0		99.0	68.0		31.0
Total Split (%)	23.8%	23.8%		76.2%	52.3%		24%
Maximum Green (s)	26.0	26.0		94.0	63.0		26.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.0	5.0		5.0	5.0		
Lead/Lag					Lag		Lead
Lead-Lag Optimize?					Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None		C-Max	C-Max		None
Act Effct Green (s)	22.6	22.6		97.4	63.0		
Actuated g/C Ratio	0.17	0.17		0.75	0.48		
v/c Ratio	0.66	0.68		0.30	0.77		
Control Delay	60.0	14.3		5.9	6.3		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	12.0	0.0		0.0	30.2		
Total Delay	72.0	14.3		6.0	36.5		
LOS	E	B		A	D		
Approach Delay	34.3			6.0	36.5		
Approach LOS	C			A	D		
Queue Length 50th (ft)	156	29		109	68		
Queue Length 95th (ft)	239	133		137	m62		
Internal Link Dist (ft)	218			304	147		
Turn Bay Length (ft)							
Base Capacity (vph)	354	587		2650	1715		
Starvation Cap Reductn	0	0		0	471		
Spillback Cap Reductn	125	0		245	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.88	0.65		0.33	1.05		

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: US Route 9W & I-87 Exit 23 Off Ramp



Intersection	
Int Delay, s/veh	10.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	200	7	47	109	43	64
Future Vol, veh/h	200	7	47	109	43	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	84	84	62	62
Heavy Vehicles, %	42	17	36	65	0	22
Mvmt Flow	308	11	56	130	69	103

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	362	121	0	0	186	0
Stage 1	121	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.82	6.37	-	-	4.1	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.878	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	565	891	-	-	1401	-
Stage 1	814	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	537	891	-	-	1401	-
Mov Cap-2 Maneuver	537	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	679	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.9	0	3.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	537	891	1401	-
HCM Lane V/C Ratio	-	-	0.573	0.012	0.05	-
HCM Control Delay (s)	-	-	20.3	9.1	7.7	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	3.6	0	0.2	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	82	717	148	139	258
Future Volume (vph)	102	82	717	148	139	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.977			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	992	1029	1628	0	1262	1570
Flt Permitted	0.950				0.083	
Satd. Flow (perm)	992	1029	1628	0	110	1570
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		91	21			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			1046
Travel Time (s)	9.6		8.5			23.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	82%	57%	6%	53%	43%	21%
Adj. Flow (vph)	113	91	797	164	154	287
Shared Lane Traffic (%)						
Lane Group Flow (vph)	113	91	961	0	154	287
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm	pm+ov	NA		pm+pt	NA
Protected Phases		1	2		1	6
Permitted Phases	8	8			6	6
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	3.5	5.0		3.5	5.0
Minimum Split (s)	10.0	8.0	25.0		8.0	25.0
Total Split (s)	20.0	10.0	50.0		10.0	60.0
Total Split (%)	25.0%	12.5%	62.5%		12.5%	75.0%
Maximum Green (s)	15.5	5.5	45.0		5.5	55.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	5.0		4.5	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max

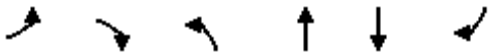
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	12.9	22.9	47.6		60.5	61.0
Actuated g/C Ratio	0.16	0.29	0.60		0.76	0.76
v/c Ratio	0.71	0.25	0.98		0.78	0.24
Control Delay	55.3	6.8	44.8		46.4	4.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.3	6.8	44.8		46.4	4.7
LOS	E	A	D		D	A
Approach Delay	33.7		44.8			19.2
Approach LOS	C		D			B
Queue Length 50th (ft)	53	0	~522		39	44
Queue Length 95th (ft)	#117	31	#752		#159	78
Internal Link Dist (ft)	341		295			966
Turn Bay Length (ft)		200			200	
Base Capacity (vph)	192	359	976		197	1196
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.59	0.25	0.98		0.78	0.24

Intersection Summary

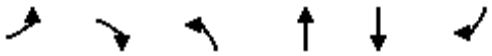
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 36.4 Intersection LOS: D
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 32 & South Port Road



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	137	59	63	729	296	64
Future Volume (vph)	137	59	63	729	296	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.976	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1719	1262	0	1602	1350	0
Flt Permitted	0.950			0.942		
Satd. Flow (perm)	1719	1262	0	1515	1350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68			29	
Link Speed (mph)	45			55	55	
Link Distance (ft)	2072			957	365	
Travel Time (s)	31.4			11.9	4.5	
Peak Hour Factor	0.87	0.87	0.86	0.86	0.90	0.90
Heavy Vehicles (%)	5%	28%	20%	18%	43%	11%
Adj. Flow (vph)	157	68	73	848	329	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	68	0	921	400	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	42.5	42.5	42.5	
Total Split (%)	34.6%	34.6%	65.4%	65.4%	65.4%	
Maximum Green (s)	18.0	18.0	38.0	38.0	38.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	11.2	11.2		48.0	48.0	
Actuated g/C Ratio	0.17	0.17		0.74	0.74	
v/c Ratio	0.53	0.25		0.82	0.40	
Control Delay	30.5	8.7		18.4	6.0	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	30.5	8.7		18.4	6.0	
LOS	C	A		B	A	
Approach Delay	23.9			18.4	6.0	
Approach LOS	C			B	A	
Queue Length 50th (ft)	57	0		233	50	
Queue Length 95th (ft)	97	26		#543	122	
Internal Link Dist (ft)	1992			877	285	
Turn Bay Length (ft)	125					
Base Capacity (vph)	476	398		1118	1004	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.33	0.17		0.82	0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: NYS Route 144 & NYS Route 32

Intersection	
Int Delay, s/veh	25

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	26	623	277	62	170	28
Future Vol, veh/h	26	623	277	62	170	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	83	83
Heavy Vehicles, %	3	5	44	10	12	11
Mvmt Flow	31	742	342	77	205	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	419	0	-	0	1185	381
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	804	-
Critical Hdwy	4.13	-	-	-	6.52	6.31
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.227	-	-	-	3.608	3.399
Pot Cap-1 Maneuver	1135	-	-	-	~ 199	647
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	424	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1135	-	-	-	~ 190	647
Mov Cap-2 Maneuver	-	-	-	-	~ 190	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	424	-

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	149.1
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	211	1135	-	-	-
HCM Lane V/C Ratio	1.131	0.027	-	-	-
HCM Control Delay (s)	149.1	8.3	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	11.3	0.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	14	3	578	266	5
Future Vol, veh/h	11	14	3	578	266	5
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	81	75	72	94	25
Heavy Vehicles, %	0	8	0	20	42	0
Mvmt Flow	26	17	4	803	283	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1104	293	303	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	236	732	1269	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	235	732	1269	-	-	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	440	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1269	-	322	-	-
HCM Lane V/C Ratio	0.003	-	0.135	-	-
HCM Control Delay (s)	7.8	0	17.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	63.7

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	140	185	355	357	89	203
Future Vol, veh/h	140	185	355	357	89	203
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	90	90
Heavy Vehicles, %	58	20	10	10	18	46
Mvmt Flow	156	206	390	392	99	226

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1384	212	99	0	-	0
Stage 1	212	-	-	-	-	-
Stage 2	1172	-	-	-	-	-
Critical Hdwy	6.98	6.4	4.2	-	-	-
Critical Hdwy Stg 1	5.98	-	-	-	-	-
Critical Hdwy Stg 2	5.98	-	-	-	-	-
Follow-up Hdwy	4.022	3.48	2.29	-	-	-
Pot Cap-1 Maneuver	~ 120	785	1445	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	229	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 79	785	1445	-	-	-
Mov Cap-2 Maneuver	~ 79	-	-	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	229	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	249.8	4.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	EBLn2	SWT	SWR
Capacity (veh/h)	1445	-	79	785	-	-
HCM Lane V/C Ratio	0.27	-	1.969	0.262	-	-
HCM Control Delay (s)	8.4	0$	565.1	11.2	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	1.1	-	13.8	1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

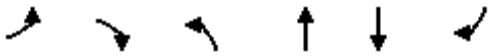
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	82	717	148	139	258
Future Volume (vph)	102	82	717	148	139	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.977			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	992	1029	1628	0	1262	1570
Flt Permitted	0.950				0.083	
Satd. Flow (perm)	992	1029	1628	0	110	1570
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		91	21			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			1046
Travel Time (s)	9.6		8.5			23.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	82%	57%	6%	53%	43%	21%
Adj. Flow (vph)	113	91	797	164	154	287
Shared Lane Traffic (%)						
Lane Group Flow (vph)	113	91	961	0	154	287
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm	pm+ov	NA		pm+pt	NA
Protected Phases		1	2		1	6
Permitted Phases	8	8			6	6
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	3.5	5.0		3.5	5.0
Minimum Split (s)	10.0	8.0	25.0		8.0	25.0
Total Split (s)	20.0	10.0	50.0		10.0	60.0
Total Split (%)	25.0%	12.5%	62.5%		12.5%	75.0%
Maximum Green (s)	15.5	5.5	45.0		5.5	55.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	5.0		4.5	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	12.9	22.9	47.6		60.5	61.0
Actuated g/C Ratio	0.16	0.29	0.60		0.76	0.76
v/c Ratio	0.71	0.25	0.98		0.78	0.24
Control Delay	55.3	6.8	44.8		46.4	4.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.3	6.8	44.8		46.4	4.7
LOS	E	A	D		D	A
Approach Delay	33.7		44.8			19.2
Approach LOS	C		D			B
Queue Length 50th (ft)	53	0	~522		39	44
Queue Length 95th (ft)	#117	31	#752		#159	78
Internal Link Dist (ft)	341		295			966
Turn Bay Length (ft)		200			200	
Base Capacity (vph)	192	359	976		197	1196
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.59	0.25	0.98		0.78	0.24

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 36.4 Intersection LOS: D
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: NYS Route 32 & South Port Road



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	209	59	63	654	224	136
Future Volume (vph)	209	59	63	654	224	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.949	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1245	1262	0	1721	1285	0
Flt Permitted	0.950			0.935		
Satd. Flow (perm)	1245	1262	0	1616	1285	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68			81	
Link Speed (mph)	45			55	55	
Link Distance (ft)	2072			957	365	
Travel Time (s)	31.4			11.9	4.5	
Peak Hour Factor	0.87	0.87	0.86	0.86	0.90	0.90
Heavy Vehicles (%)	45%	28%	20%	9%	23%	69%
Adj. Flow (vph)	240	68	73	760	249	151
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	68	0	833	400	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	42.5	42.5	42.5	
Total Split (%)	34.6%	34.6%	65.4%	65.4%	65.4%	
Maximum Green (s)	18.0	18.0	38.0	38.0	38.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	15.9	15.9		40.1	40.1	
Actuated g/C Ratio	0.24	0.24		0.62	0.62	
v/c Ratio	0.79	0.19		0.84	0.49	
Control Delay	42.4	6.8		21.1	8.3	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	42.4	6.8		21.1	8.3	
LOS	D	A		C	A	
Approach Delay	34.5			21.1	8.3	
Approach LOS	C			C	A	
Queue Length 50th (ft)	85	0		251	63	
Queue Length 95th (ft)	#171	24		#464	127	
Internal Link Dist (ft)	1992			877	285	
Turn Bay Length (ft)	125					
Base Capacity (vph)	344	398		995	822	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.70	0.17		0.84	0.49	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 21: NYS Route 144 & NYS Route 32

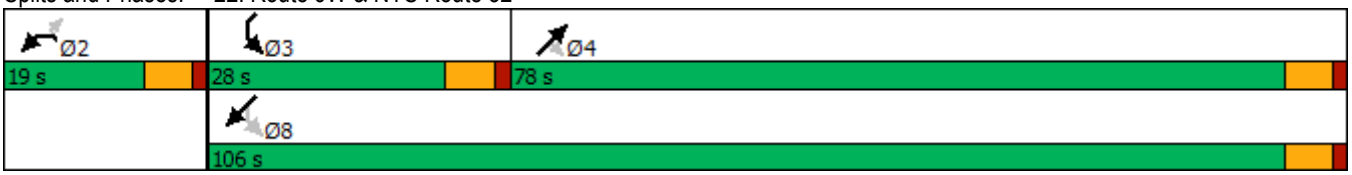
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	100	238	2035	176	208	821
Future Volume (vph)	100	238	2035	176	208	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1530	1162	3505	1482	1150	3406
Flt Permitted	0.950				0.051	
Satd. Flow (perm)	1530	1162	3505	1482	62	3406
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		260		100		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.90	0.90	0.93	0.93	0.85	0.85
Heavy Vehicles (%)	18%	39%	3%	9%	57%	6%
Adj. Flow (vph)	111	264	2188	189	245	966
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	264	2188	189	245	966
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	19.0	19.0	78.0	78.0	28.0	106.0
Total Split (%)	15.2%	15.2%	62.4%	62.4%	22.4%	84.8%
Maximum Green (s)	13.0	13.0	72.0	72.0	22.0	100.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	13.0	13.0	72.0	72.0	100.0	100.0
Actuated g/C Ratio	0.10	0.10	0.58	0.58	0.80	0.80
v/c Ratio	0.70	0.75	1.08	0.21	1.02	0.35
Control Delay	77.3	20.7	74.0	6.5	101.8	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.3	20.7	74.0	6.5	101.8	3.9
LOS	E	C	E	A	F	A
Approach Delay	37.4		68.6			23.7
Approach LOS	D		E			C
Queue Length 50th (ft)	88	3	~1042	31	~172	93
Queue Length 95th (ft)	#176	#116	#1178	67	#314	106
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	159	353	2018	896	241	2724
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.75	1.08	0.21	1.02	0.35

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 51.9 Intersection LOS: D
Intersection Capacity Utilization 88.3% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Route 9W & NYS Route 32



Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	32	104	169	16	68
Future Vol, veh/h	111	32	104	169	16	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	50	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	84	84	78	78
Heavy Vehicles, %	43	10	24	23	0	35
Mvmt Flow	134	39	124	201	21	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	354	225	0	0	325	0
Stage 1	225	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.83	6.3	-	-	4.1	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.887	3.39	-	-	2.2	-
Pot Cap-1 Maneuver	569	795	-	-	1246	-
Stage 1	725	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	559	795	-	-	1246	-
Mov Cap-2 Maneuver	559	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	1.5
HCM LOS	B		

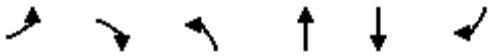
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	559	795	1246	-
HCM Lane V/C Ratio	-	-	0.239	0.048	0.016	-
HCM Control Delay (s)	-	-	13.5	9.8	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.2	0.1	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	156	156	252	76	67	930
Future Volume (vph)	156	156	252	76	67	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.969			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1444	1583	1495	0	1456	1810
Flt Permitted	0.950				0.362	
Satd. Flow (perm)	1444	1583	1495	0	555	1810
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		184	28			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			1049
Travel Time (s)	9.6		8.5			23.8
Peak Hour Factor	0.90	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	25%	2%	8%	73%	24%	5%
Adj. Flow (vph)	173	184	350	106	71	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	173	184	456	0	71	989
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm	pm+ov	NA		pm+pt	NA
Protected Phases		5	6		5	2
Permitted Phases	8	8			2	
Detector Phase	8	5	6		5	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	9.5	23.0		9.5	23.0
Total Split (s)	23.0	11.0	36.0		11.0	47.0
Total Split (%)	32.9%	15.7%	51.4%		15.7%	67.1%
Maximum Green (s)	18.0	6.5	31.0		6.5	42.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.5	1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	4.5	5.0		4.5	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0
Act Effct Green (s)	13.3	24.7	35.8		47.2	46.7
Actuated g/C Ratio	0.19	0.35	0.51		0.67	0.67
v/c Ratio	0.63	0.27	0.59		0.16	0.82
Control Delay	35.9	3.4	16.3		5.7	17.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.9	3.4	16.3		5.7	17.8
LOS	D	A	B		A	B
Approach Delay	19.2		16.3			17.0
Approach LOS	B		B			B
Queue Length 50th (ft)	69	0	121		9	267
Queue Length 95th (ft)	119	28	166		26	#625
Internal Link Dist (ft)	341		295			969
Turn Bay Length (ft)		200			200	
Base Capacity (vph)	371	683	777		460	1207
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.47	0.27	0.59		0.15	0.82

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 11 (16%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 65.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: NYS Route 32 & South Port Road



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	51	75	59	277	705	381
Future Volume (vph)	51	75	59	277	705	381
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.953	
Flt Protected	0.950			0.991		
Satd. Flow (prot)	1504	1417	0	1570	1685	0
Flt Permitted	0.950			0.572		
Satd. Flow (perm)	1504	1417	0	906	1685	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		82			72	
Link Speed (mph)	45			55	55	
Link Distance (ft)	2072			957	365	
Travel Time (s)	31.4			11.9	4.5	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.91	0.91
Heavy Vehicles (%)	20%	14%	10%	22%	11%	1%
Adj. Flow (vph)	55	82	67	315	775	419
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	82	0	382	1194	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	42.5	42.5	42.5	
Total Split (%)	34.6%	34.6%	65.4%	65.4%	65.4%	
Maximum Green (s)	18.0	18.0	38.0	38.0	38.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	7.9	7.9		51.0	51.0	
Actuated g/C Ratio	0.12	0.12		0.78	0.78	
v/c Ratio	0.30	0.34		0.54	0.89	
Control Delay	29.7	10.9		7.7	19.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	29.7	10.9		7.7	19.2	
LOS	C	B		A	B	
Approach Delay	18.4			7.7	19.2	
Approach LOS	B			A	B	
Queue Length 50th (ft)	20	0		49	277	
Queue Length 95th (ft)	48	33		131	#724	
Internal Link Dist (ft)	1992			877	285	
Turn Bay Length (ft)	125					
Base Capacity (vph)	416	451		711	1338	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.13	0.18		0.54	0.89	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: NYS Route 144 & NYS Route 32

Intersection	
Int Delay, s/veh	3

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	36	258	445	285	59	40
Future Vol, veh/h	36	258	445	285	59	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	84	84	81	81
Heavy Vehicles, %	4	17	8	5	5	1
Mvmt Flow	47	335	530	339	73	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	869	0	-	0	1129	700
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	4.14	-	-	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.236	-	-	-	3.545	3.309
Pot Cap-1 Maneuver	767	-	-	-	223	441
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	767	-	-	-	206	441
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	650	-

Approach	NB	SB	NE
HCM Control Delay, s	1.2	0	30
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	263	767	-	-	-
HCM Lane V/C Ratio	0.465	0.061	-	-	-
HCM Control Delay (s)	30	10	0	-	-
HCM Lane LOS	D	A	A	-	-
HCM 95th %tile Q(veh)	2.3	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	2	6	251	443	13
Future Vol, veh/h	7	2	6	251	443	13
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	30	80	88	63
Heavy Vehicles, %	0	0	0	23	11	0
Mvmt Flow	14	4	20	314	503	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	868	514	524	0	-	0
Stage 1	514	-	-	-	-	-
Stage 2	354	-	-	-	-	-
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	325	564	1053	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	318	564	1053	-	-	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1053	-	352	-	-
HCM Lane V/C Ratio	0.019	-	0.051	-	-
HCM Control Delay (s)	8.5	0	15.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	111	283	204	142	250	124
Future Vol, veh/h	111	283	204	142	250	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	45	3	9	8	4	32
Mvmt Flow	123	314	227	158	278	138

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	959	347	278	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Critical Hdwy	6.85	6.23	4.19	-	-	-
Critical Hdwy Stg 1	5.85	-	-	-	-	-
Critical Hdwy Stg 2	5.85	-	-	-	-	-
Follow-up Hdwy	3.905	3.327	2.281	-	-	-
Pot Cap-1 Maneuver	239	694	1246	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	694	1246	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	467	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	25.2	5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	EBLn2	SWT	SWR
Capacity (veh/h)	1246	-	191	694	-	-
HCM Lane V/C Ratio	0.182	-	0.646	0.453	-	-
HCM Control Delay (s)	8.5	0	52.9	14.4	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	3.8	2.4	-	-

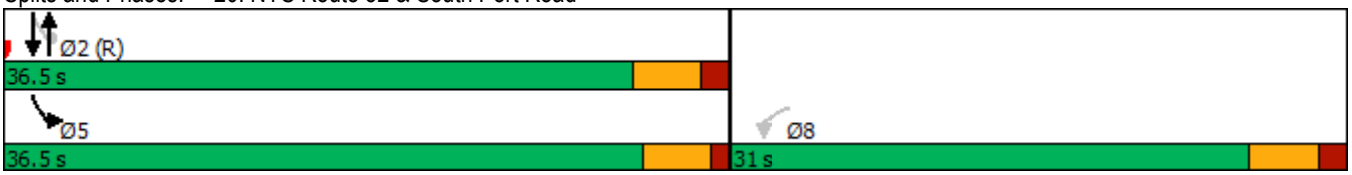
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	156	156	253	76	67	930
Future Volume (vph)	156	156	253	76	67	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.969			
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1523	0	1496	0	1456	1810
Flt Permitted	0.976				0.000	
Satd. Flow (perm)	1523	0	1496	0	0	1810
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	87		30			
Link Speed (mph)	30		30			30
Link Distance (ft)	421		375			1049
Travel Time (s)	9.6		8.5			23.8
Peak Hour Factor	0.85	0.85	0.72	0.72	0.94	0.94
Heavy Vehicles (%)	25%	2%	8%	73%	24%	5%
Adj. Flow (vph)	184	184	351	106	71	989
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	0	457	0	71	989
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		pm+pt	NA
Protected Phases			2!		5!	2
Permitted Phases	8				2	
Detector Phase	8		2		5	2
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		9.5	23.0
Total Split (s)	31.0		36.5		36.5	36.5
Total Split (%)	45.9%		54.1%		54.1%	54.1%
Maximum Green (s)	26.0		31.5		32.0	31.5
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.0	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		4.5	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		None	C-Max
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0

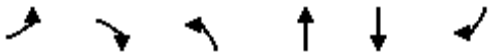
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	18.3		39.2		39.7	39.2
Actuated g/C Ratio	0.27		0.58		0.59	0.58
v/c Ratio	0.77		0.52		0.08	0.94
Control Delay	27.7		12.2		8.4	35.2
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	27.7		12.2		8.4	35.2
LOS	C		B		A	D
Approach Delay	27.7		12.2			33.4
Approach LOS	C		B			C
Queue Length 50th (ft)	106		95		11	341
Queue Length 95th (ft)	150		152		36	#713
Internal Link Dist (ft)	341		295			969
Turn Bay Length (ft)						
Base Capacity (vph)	640		881		856	1050
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.57		0.52		0.08	0.94

Intersection Summary			
Area Type:	Other		
Cycle Length: 67.5			
Actuated Cycle Length: 67.5			
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
! Phase conflict between lane groups.

Splits and Phases: 20: NYS Route 32 & South Port Road





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	58	75	59	235	672	413
Future Volume (vph)	58	75	59	235	672	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.949	
Flt Protected	0.950			0.990		
Satd. Flow (prot)	1399	1417	0	1748	1679	0
Flt Permitted	0.950			0.544		
Satd. Flow (perm)	1399	1417	0	961	1679	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		82			82	
Link Speed (mph)	45			55	55	
Link Distance (ft)	2072			957	365	
Travel Time (s)	31.4			11.9	4.5	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.91	0.91
Heavy Vehicles (%)	29%	14%	10%	7%	7%	8%
Adj. Flow (vph)	63	82	67	267	738	454
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	82	0	334	1192	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	42.5	42.5	42.5	
Total Split (%)	34.6%	34.6%	65.4%	65.4%	65.4%	
Maximum Green (s)	18.0	18.0	38.0	38.0	38.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	8.4	8.4		50.5	50.5	
Actuated g/C Ratio	0.13	0.13		0.78	0.78	
v/c Ratio	0.35	0.32		0.45	0.90	
Control Delay	30.3	10.2		6.3	20.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	30.3	10.2		6.3	20.7	
LOS	C	B		A	C	
Approach Delay	18.9			6.3	20.7	
Approach LOS	B			A	C	
Queue Length 50th (ft)	23	0		40	290	
Queue Length 95th (ft)	53	32		103	#733	
Internal Link Dist (ft)	1992			877	285	
Turn Bay Length (ft)	125					
Base Capacity (vph)	387	451		746	1322	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.16	0.18		0.45	0.90	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 21: NYS Route 144 & NYS Route 32

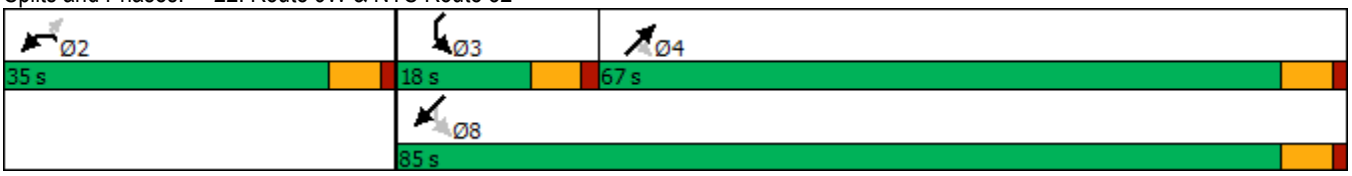
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	306	184	1081	99	150	1439
Future Volume (vph)	306	184	1081	99	150	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1272	3471	1509	1299	3539
Flt Permitted	0.950				0.086	
Satd. Flow (perm)	1719	1272	3471	1509	118	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		95		96		
Link Speed (mph)	45		45			45
Link Distance (ft)	1257		583			1004
Travel Time (s)	19.0		8.8			15.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	5%	27%	4%	7%	39%	2%
Adj. Flow (vph)	336	202	1188	109	160	1531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	336	202	1188	109	160	1531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases		2		4	8	8
Detector Phase	2	2	4	4	3	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	17.0	17.0	24.0	24.0	11.0	11.0
Total Split (s)	35.0	35.0	67.0	67.0	18.0	85.0
Total Split (%)	29.2%	29.2%	55.8%	55.8%	15.0%	70.8%
Maximum Green (s)	29.0	29.0	61.0	61.0	12.0	79.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Act Effct Green (s)	29.3	29.3	42.6	42.6	59.5	59.5
Actuated g/C Ratio	0.29	0.29	0.42	0.42	0.59	0.59
v/c Ratio	0.67	0.46	0.81	0.16	0.81	0.73
Control Delay	41.9	21.4	30.4	4.9	52.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	21.4	30.4	4.9	52.7	17.1
LOS	D	C	C	A	D	B
Approach Delay	34.2		28.3			20.4
Approach LOS	C		C			C
Queue Length 50th (ft)	192	54	348	5	60	345
Queue Length 95th (ft)	#375	146	429	34	#182	418
Internal Link Dist (ft)	1177		503			924
Turn Bay Length (ft)		75		200	100	
Base Capacity (vph)	499	436	2120	959	211	2799
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.46	0.56	0.11	0.76	0.55

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 101			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 70.1%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Route 9W & NYS Route 32



APPENDIX D

SIGNAL WARRANT ANALYSIS

- NYS Route 144/NYS Route 32 Signal Warrant Worksheet - Existing
- NYS Route 144/Glenmont Road Signal Warrant Worksheet – Existing
- NYS Route 144/NYS Route 32 Signal Warrant Worksheet – Phase III
- NYS Route 144/Glenmont Road Signal Warrant Worksheet – Phase III
- NYS Route 144/Proposed Site Driveway Signal Warrant Worksheet – Phase III

SIGNAL WARRANT WORKSHEET

(Based on MUTCD 2009 Edition Signal Warrant Guidelines)

Project Name		Port of Albany	
Date:	4/1/2019	Analyst:	TCH
Major Street		River Road - NYS Route 144 (Existing)	
# of Lanes per Direction		1	
Minor Street		Corning Hill Road - NYS Route 32 (Existing)	
# of Lanes per Direction		1	

Warrants Met:

Warrant:		**Met?**
Warrant 1 – Eight Hour Vehicular Volume	1A	N
	1B	Y
	1C	N
Warrant 2 – Four Hour Vehicular Volume		Y
Warrant 3 – Peak Hour	3A	N
	3B	Y
Warrant 4 – Pedestrian Volume	4A	N
	4B	N
Warrant 5 – School Crossings		N
Warrant 6 – Coordinated Signal System		N
Warrant 7 – Crash Experience		N
Warrant 8 – Roadway Network		N
Warrant 9 – Intersection Near a Grade Crossing		N
Signal Should be Considered?		**Y**

Traffic Volume Data:

Hour	Both Approach Volumes		Higher Volume Approach		Crossing Ped. Volume	
	Major	Minor	Major	Minor	Major	Minor
7:00-8:00	875	126	596	126	0	0
8:00-9:00	763	122	521	122	0	0
9:00-10:00	721	125	454	125	0	0
Noon-1:00	571	100	321	100	0	0
2:00-3:00	599	90	344	90	0	0
3:00-4:00	662	82	410	82	0	0
4:00-5:00	1108	85	840	85	0	0
5:00-6:00	1053	87	829	87	0	0
AM Peak	918	143	674	143	0	0
PM Peak	1205	94	953	94	0	0

Accident Data:

Time Frame (Mo.)	Total Number of Accidents	Property Damage/Injury Acc.	Acc. Correctable with a Traffic Signal
36	4	3	3

Applicable Signal Warrant Details:

Warrant 1, Eight-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:
A. The vehicles per hour given in both of the 70 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or

No hours meet warrant 1A

B. The vehicles per hour given in both of the 70 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

Yes, all 8 hours meet warrant 1B

In applying each condition, the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.
C. The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

A. The vehicles per hour given in both of the 56 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and

B. The vehicles per hour given in both of the 56 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, only three hours meet both the Warrant 1A & 1B 56% columns

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

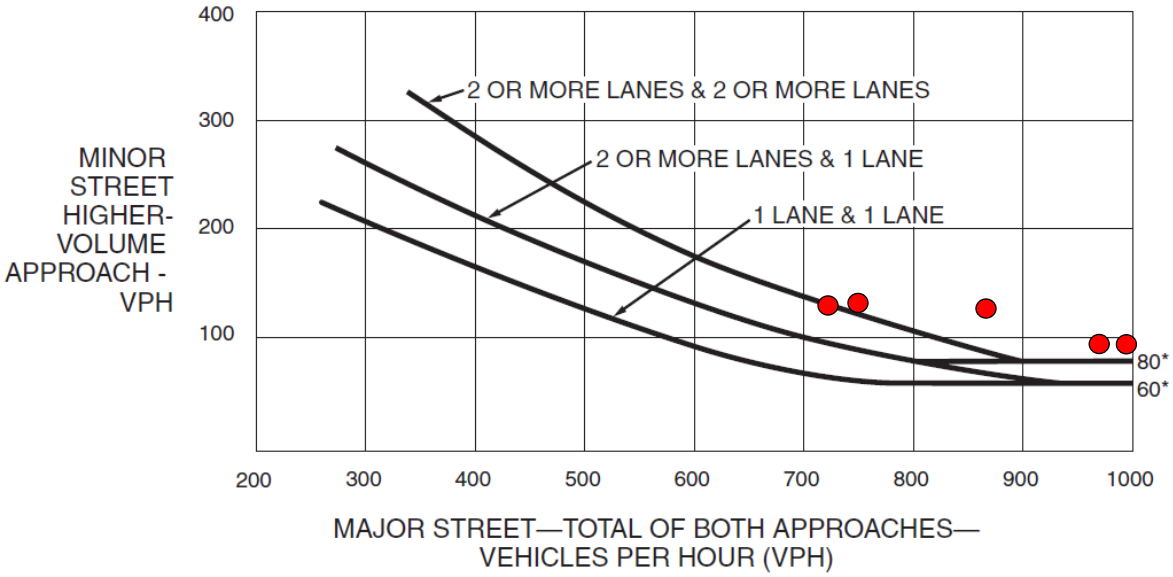
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Warrant 2, Four-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Yes, at least 4 hours meet Warrant 2 based on a 2-lane approach for Route 32

Warrant 3, Peak Hour

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

No, the minor approach has 2.00 hours of delay during the morning peak hour.

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

Yes, the Minor-street approach does exceed 100 vehicles per hour (208 vehicles per hour during the AM peak hour & 133 vehicles per hour during the PM).

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for Intersections with three approaches.

Yes, the total entering volume does exceed 650 vehicles per hour (1207 vehicles per hour during the AM peak hour and 1469 vehicles per hour during the PM peak hour.

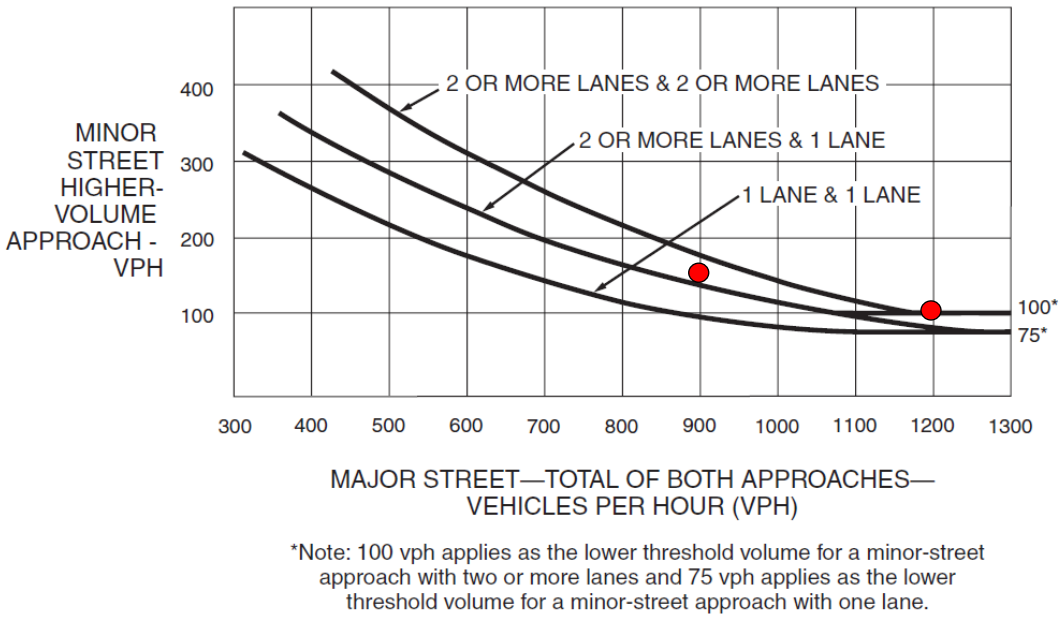
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Yes, both peak hours meet warrant 3B.

If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 4, Pedestrian Volume

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:

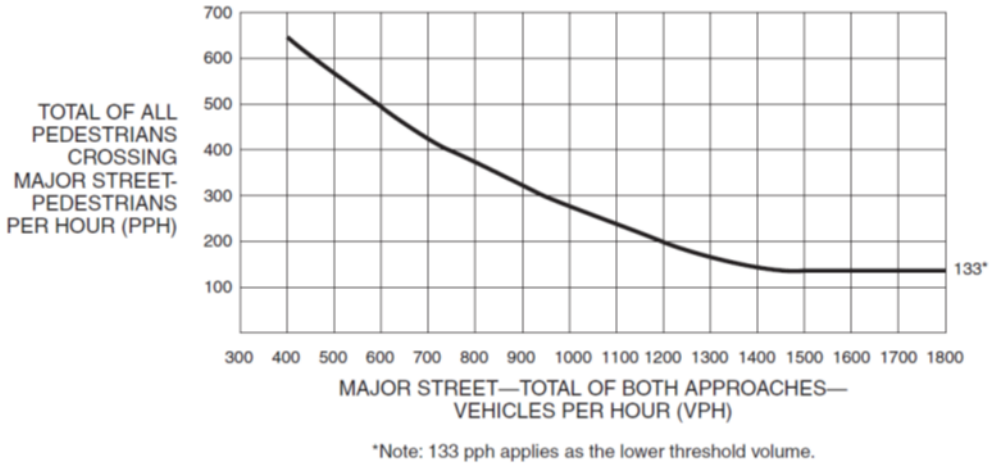
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-7.

The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

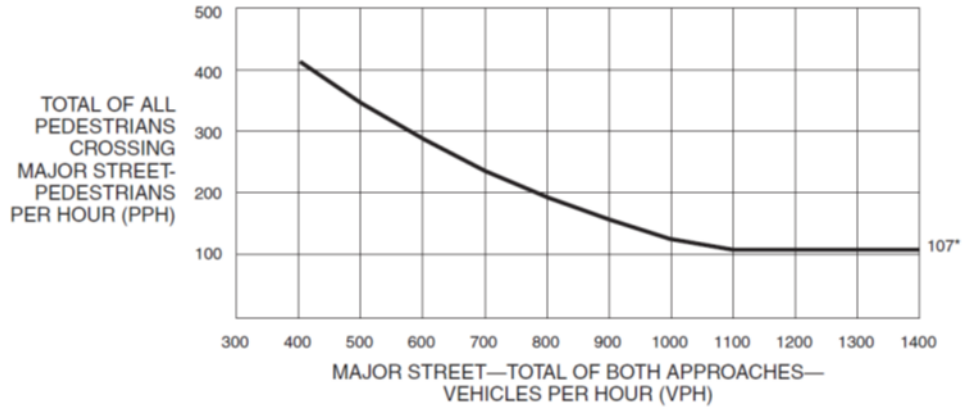
Warrant Not Met, no pedestrians were observed during the traffic counts.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



*Note: 107 pph applies as the lower threshold volume.

Warrant 5, School Crossing

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period (see Section 7A.03) and there are a minimum of 20 schoolchildren during the highest crossing hour.

Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant Not Met, No school in the vicinity of the intersection.

Warrant 6, Coordinated Signal System

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **(Not Applicable)**

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. **(Not Applicable)**

Warrant 7, Crash Experience

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

No, Currently in process for this corridor according to Town Police)

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

No, over the last three years 4 crashed total, 3 with multiple vehicles, 2 included injuries and 1 included property damage.

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 56 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 56 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 70 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours**.**

Yes, Condition B is met.

Warrant 7 not met.

Warrant 8, Roadway Network

The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or **(Proposed entering volume is 1299 vehicles during the PM peak hour)**

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday). **(NOT REVIEWED)**

A major route as used in this signal warrant shall have at least one of the following characteristics:

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
B. It includes rural or suburban highways outside, entering, or traversing a city.
C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Warrant not met based on condition A

Warrant 9, Intersection Near a Grade Crossing

The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and **(NOT MET)**
B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13. **(NOT MET)**

Warrant not met no railroad crossing in close proximity to the intersection.

SIGNAL WARRANT WORKSHEET

(Based on MUTCD 2009 Edition Signal Warrant Guidelines)

Project Name		Port of Albany	
Date:	4/1/2019	Analyst:	TCH
Major Street		NYS Route 144 (Existing)	
# of Lanes per Direction		1	
Minor Street		Glenmont Road (Existing)	
# of Lanes per Direction		1	

Warrants Met:

Warrant:		Met?
Warrant 1 – Eight Hour Vehicular Volume	1A	N
	1B	Y
	1C	N
Warrant 2 – Four Hour Vehicular Volume		N
Warrant 3 – Peak Hour	3A	N
	3B	N
Warrant 4 – Pedestrian Volume	4A	N
	4B	N
Warrant 5 – School Crossings		N
Warrant 6 – Coordinated Signal System		N
Warrant 7 – Crash Experience		N
Warrant 8 – Roadway Network		N
Warrant 9 – Intersection Near a Grade Crossing		N
Signal Should be Considered?		**Y**

Traffic Volume Data:

Hour	Both Approach Volumes		Higher Volume Approach		Crossing Ped. Volume	
	Major	Minor	Major	Minor	Major	Minor
7:00-8:00	725	158	497	158	0	0
8:00-9:00	534	181	347	181	0	0
9:00-10:00*	365	78	172	78	0	0
1:00-2:00*	350	75	180	75	0	0
2:00-3:00*	381	82	202	82	0	0
3:00-4:00*	467	100	284	100	0	0
4:00-5:00	797	90	599	90	0	0
5:00-6:00	783	60	613	60	0	0
AM Peak	757	178	532	178	0	0
PM Peak	853	88	654	88	0	0

* =Volumes projected from adjacent tube count data.

Accident Data:

Time Frame (Mo.)	Total Number of Accidents	Property Damage/Injury Acc.	Acc. Correctable with a Traffic Signal
36	10	0	0

Applicable Signal Warrant Details:

Warrant 1, Eight-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:
A. The vehicles per hour given in both of the 70 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or

No, only 2 hours meet warrant 1A.

B. The vehicles per hour given in both of the 70 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, only 4 hours meet warrant 1B.

In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.
C. The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

A. The vehicles per hour given in both of the 56 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and

B. The vehicles per hour given in both of the 56 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, only 4 hours meet warrant 1C.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

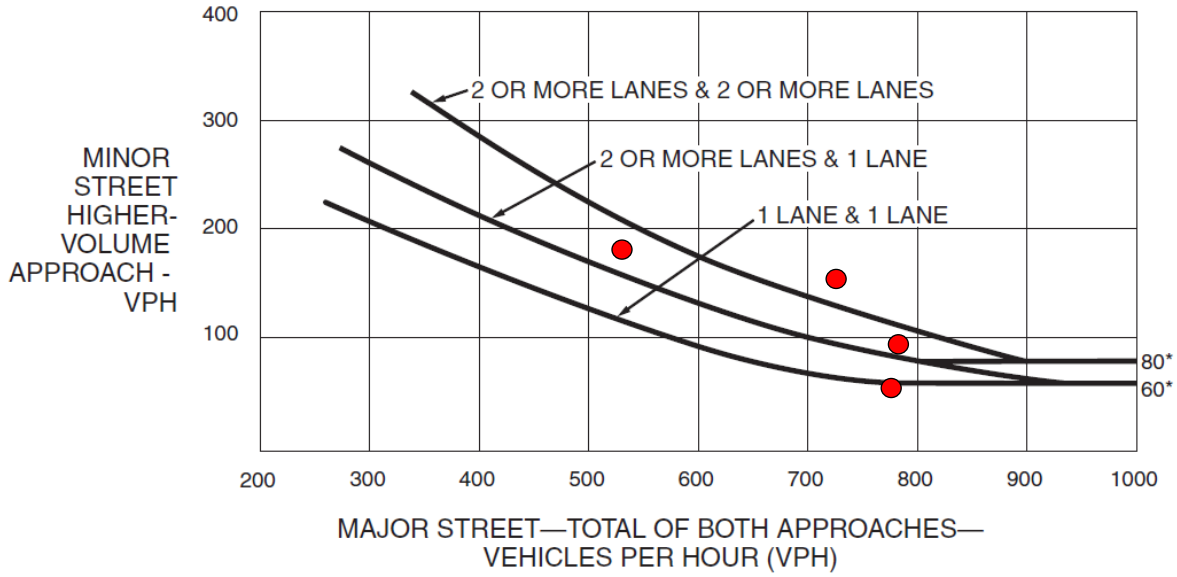
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Warrant 2, Four-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-2 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

No, only three hours meet Warrant 2.

Warrant 3, Peak Hour

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

No, Glenmont Road has 1.96 hours of delay during the evening peak hour

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

Yes, the Minor-street approach does exceed 100 vehicles per hour (178 vehicles per hour during the AM peak hour).

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for Intersections with three approaches.

Yes, the total entering volume does exceed 650 vehicles per hour (935 vehicles per hour during the AM peak hour and 941 vehicles per hour during the PM peak hour).

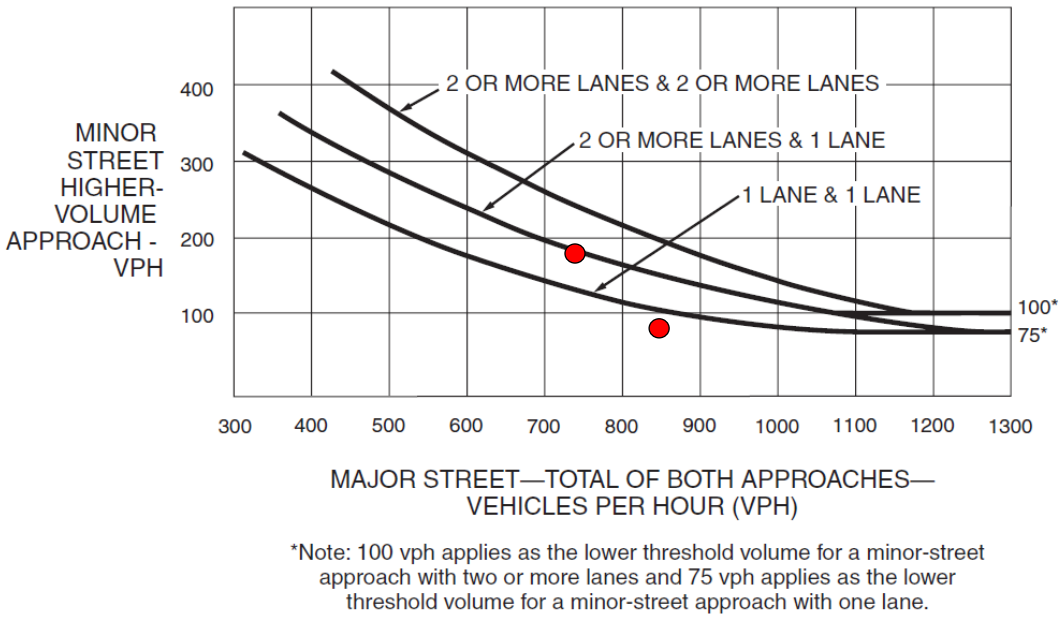
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-4 for the existing combination of approach lanes.

Yes, the AM peak hour meets warrant 3B.

If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 4, Pedestrian Volume

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:

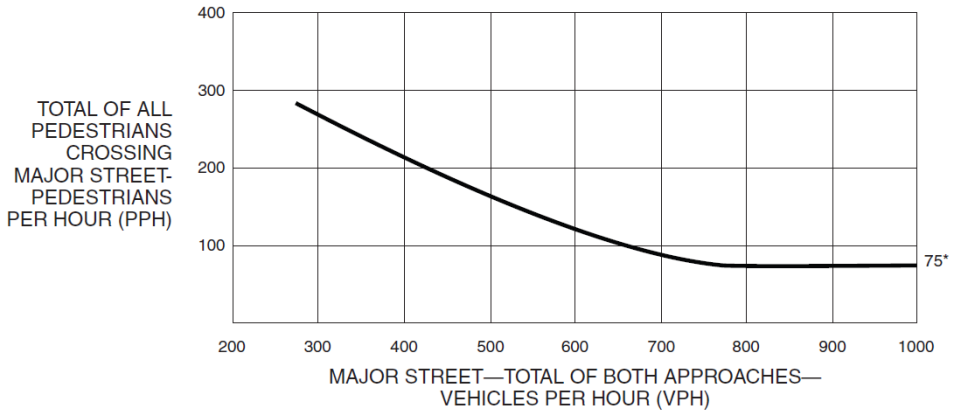
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-8.

The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

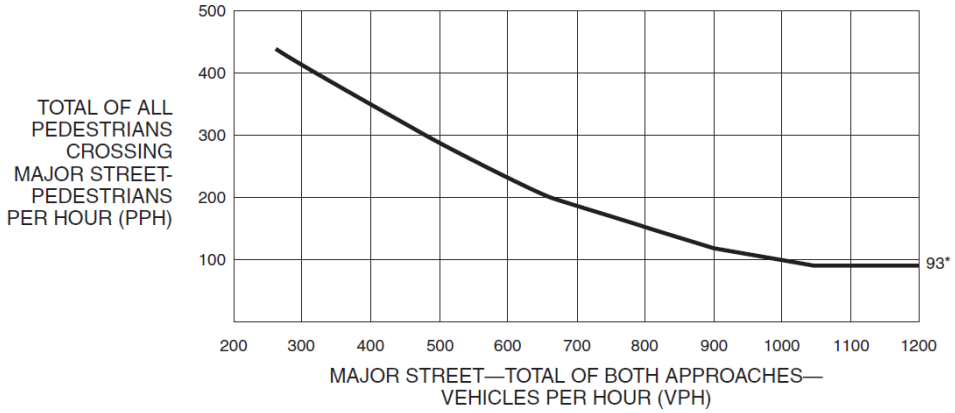
Warrant Not Met, no pedestrians were observed during the traffic counts.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Warrant 5, School Crossing

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period (see Section 7A.03) and there are a minimum of 20 schoolchildren during the highest crossing hour.

Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant Not Met, No school in the vicinity of the intersection.

Warrant 6, Coordinated Signal System

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **(Not Applicable)**

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. **(Not Applicable)**

Warrant 7, Crash Experience

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

No, Currently in process for this corridor according to Town Police)

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

No, over the last three years 10 crashed total, 8 with multiple vehicles, 0 includes injuries or property damage.

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 56 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 56 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 70 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Not met

Warrant 7 not met.

Warrant 8, Roadway Network

The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or **(No, proposed entering volume is 935 vehicles during the am peak hour and 941 vehicles during the PM peak hour).**

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday). **(NOT REVIEWED)**

A major route as used in this signal warrant shall have at least one of the following characteristics:

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
B. It includes rural or suburban highways outside, entering, or traversing a city.
C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Warrant not met based on condition A

Warrant 9, Intersection Near a Grade Crossing

The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and **(NOT MET)**
B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13. **(NOT MET)**

Warrant not met no railroad crossing in close proximity to the intersection.

SIGNAL WARRANT WORKSHEET

(Based on MUTCD 2009 Edition Signal Warrant Guidelines)

Project Name		Port of Albany	
Date:	4/1/2019	Analyst:	TCH
Major Street		River Road - NYS Route 144 (Full Build)	
# of Lanes per Direction		1	
Minor Street		Corning Hill Road - NYS Route 32 (Full Build)	
# of Lanes per Direction		1	

Warrants Met:

Warrant:		**Met?**
Warrant 1 – Eight Hour Vehicular Volume	1A	N
	1B	Y
	1C	N
Warrant 2 – Four Hour Vehicular Volume		Y
Warrant 3 – Peak Hour	3A	Y
	3B	Y
Warrant 4 – Pedestrian Volume	4A	N
	4B	N
Warrant 5 – School Crossings		N
Warrant 6 – Coordinated Signal System		N
Warrant 7 – Crash Experience		N
Warrant 8 – Roadway Network		N
Warrant 9 – Intersection Near a Grade Crossing		N
Signal Should be Considered?		**Y**

Traffic Volume Data:

Hour	Both Approach Volumes		Higher Volume Approach		Crossing Ped. Volume	
	Major	Minor	Major	Minor	Major	Minor
7:00-8:00	936	162	667	162	0	0
8:00-9:00	836	145	554	145	0	0
9:00-10:00	779	135	490	135	0	0
Noon-1:00	617	108	347	108	0	0
2:00-3:00	647	98	372	98	0	0
3:00-4:00	715	89	443	89	0	0
4:00-5:00	1199	108	910	108	0	0
5:00-6:00	1140	109	899	109	0	0
AM Peak	999	208	715	208	0	0
PM Peak	1336	133	1057	133	0	0

Accident Data:

Time Frame (Mo.)	Total Number of Accidents	Property Damage/Injury Acc.	Acc. Correctable with a Traffic Signal
36	4	3	3

Applicable Signal Warrant Details:

Warrant 1, Eight-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:
A. The vehicles per hour given in both of the 70 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or

No, only 2 hours meet warrant 1A

B. The vehicles per hour given in both of the 70 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

Yes, all 8 hours meet warrant 1B

In applying each condition, the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.
C. The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

A. The vehicles per hour given in both of the 56 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and

B. The vehicles per hour given in both of the 56 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, only three hours meet both the Warrant 1A & 1B 56% columns

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

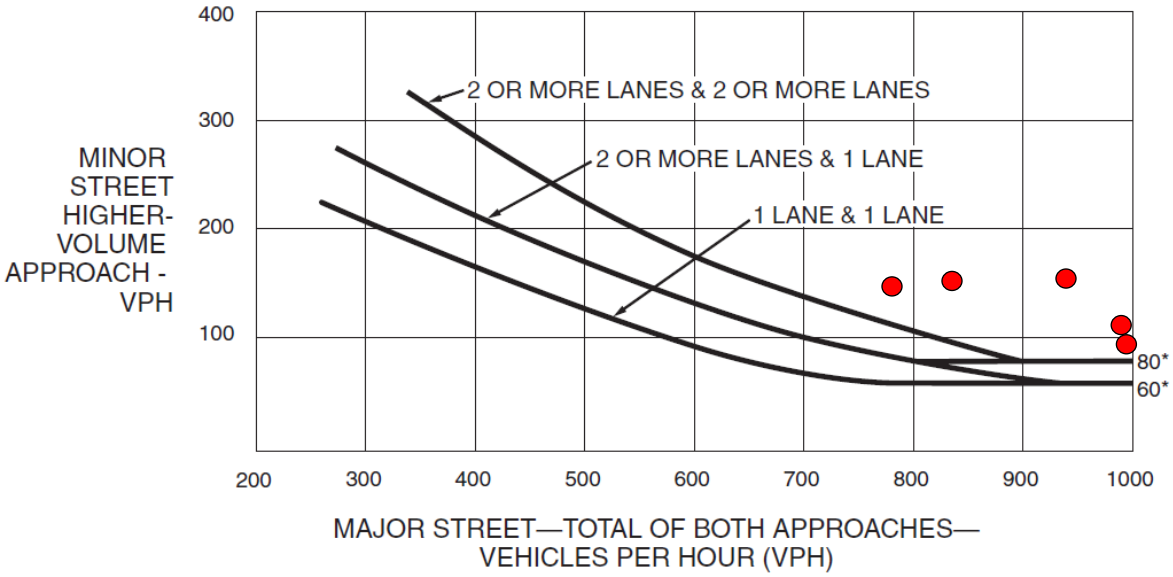
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Warrant 2, Four-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Yes, at least 4 hours meet Warrant 2 based on a 2-lane approach for Route 32

Warrant 3, Peak Hour

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

Yes, the minor approach has 6.29 hours of delay during the morning peak hour.

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

Yes, the Minor-street approach does exceed 100 vehicles per hour (208 vehicles per hour during the AM peak hour & 133 vehicles per hour during the PM).

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for Intersections with three approaches.

Yes, the total entering volume does exceed 650 vehicles per hour (1207 vehicles per hour during the AM peak hour and 1469 vehicles per hour during the PM peak hour.

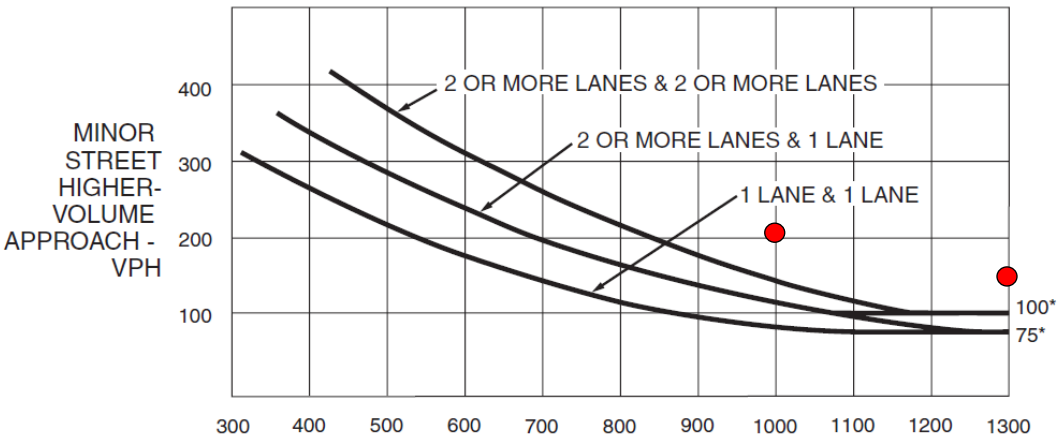
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Yes, both peak hours meet warrant 3B.

If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 4, Pedestrian Volume

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:

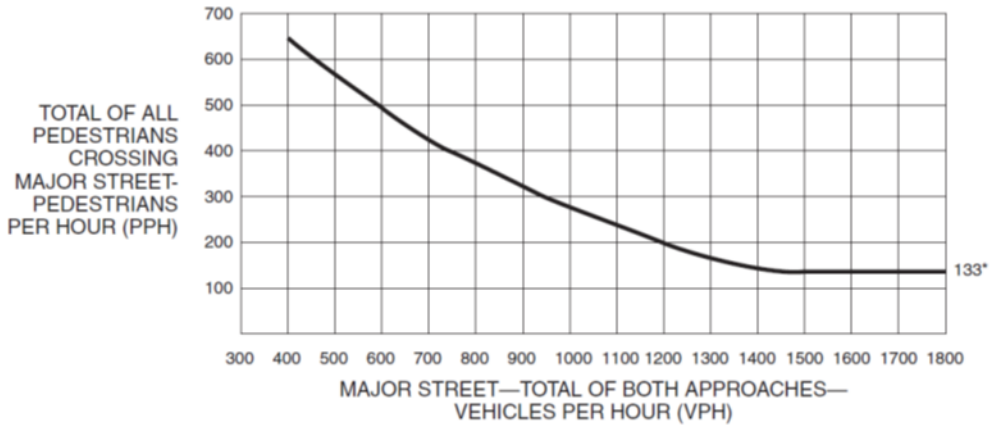
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-7.

The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

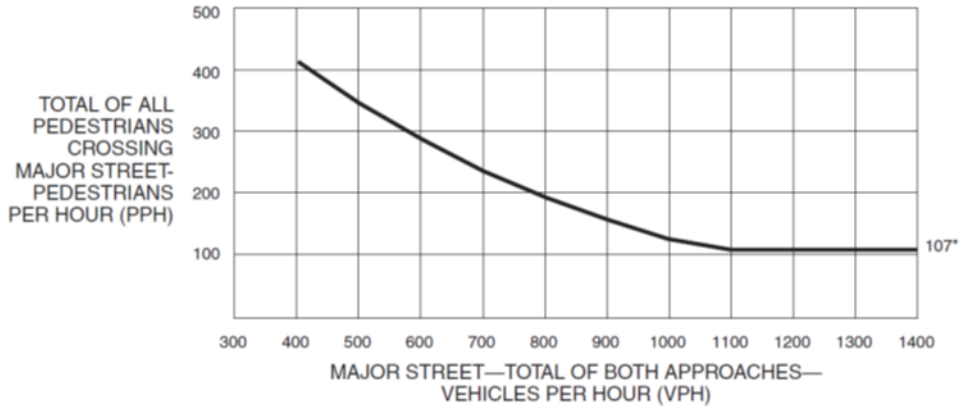
Warrant Not Met, no pedestrians were observed during the traffic counts.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



*Note: 107 pph applies as the lower threshold volume.

Warrant 5, School Crossing

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period (see Section 7A.03) and there are a minimum of 20 schoolchildren during the highest crossing hour.

Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant Not Met, No school in the vicinity of the intersection.

Warrant 6, Coordinated Signal System

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **(Not Applicable)**

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. **(Not Applicable)**

Warrant 7, Crash Experience

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

No, Currently in process for this corridor according to Town Police)

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

No, over the last three years 4 crashed total, 3 with multiple vehicles, 2 included injuries and 1 included property damage.

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 56 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 56 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 70 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Yes, Condition B is met.

Warrant 7 not met.

Warrant 8, Roadway Network

The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or **(Proposed entering volume is 1299 vehicles during the PM peak hour)**

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday). **(NOT REVIEWED)**

A major route as used in this signal warrant shall have at least one of the following characteristics:

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
B. It includes rural or suburban highways outside, entering, or traversing a city.
C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Warrant not met based on condition A

Warrant 9, Intersection Near a Grade Crossing

The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and **(NOT MET)**
B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13. **(NOT MET)**

Warrant not met no railroad crossing in close proximity to the intersection.

SIGNAL WARRANT WORKSHEET

(Based on MUTCD 2009 Edition Signal Warrant Guidelines)

Project Name		Port of Albany	
Date:	4/1/2019	Analyst:	TCH
Major Street		River Road - NYS Route 144 (Full Build)	
# of Lanes per Direction		1	
Minor Street		Glenmont Road – NYS Route 32 (Full Build)	
# of Lanes per Direction		1	

Warrants Met:

Warrant:		**Met?**
Warrant 1 – Eight Hour Vehicular Volume	1A	N
	1B	Y
	1C	N
Warrant 2 – Four Hour Vehicular Volume		Y
Warrant 3 – Peak Hour	3A	N
	3B	Y
Warrant 4 – Pedestrian Volume	4A	N
	4B	N
Warrant 5 – School Crossings		N
Warrant 6 – Coordinated Signal System		N
Warrant 7 – Crash Experience		N
Warrant 8 – Roadway Network		N
Warrant 9 – Intersection Near a Grade Crossing		N
Signal Should be Considered?		**Y**

Traffic Volume Data:

Hour	Both Approach Volumes		Higher Volume Approach		Crossing Ped. Volume	
	Major	Minor	Major	Minor	Major	Minor
7:00-8:00	773	185	528	185	0	0
8:00-9:00	573	212	371	212	0	0
9:00-10:00*	394	84	186	84	0	0
1:00-2:00*	378	81	195	81	0	0
2:00-3:00*	412	89	218	89	0	0
3:00-4:00*	505	108	307	108	0	0
4:00-5:00	861	98	632	98	0	0
5:00-6:00	846	65	646	65	0	0
AM Peak	820	198	572	198	0	0
PM Peak	932	99	695	99	0	0

* =Volumes projected based on percentage growth associated with proposed development.

Accident Data:

Time Frame (Mo.)	Total Number of Accidents	Property Damage/Injury Acc.	Acc. Correctable with a Traffic Signal
36	10	0	0

Applicable Signal Warrant Details:

Warrant 1, Eight-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:
A. The vehicles per hour given in both of the 70 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or

No, only 3 hours meet warrant 1A.

B. The vehicles per hour given in both of the 70 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, only 4 hours meet warrant 1B.

In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.
C. The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

A. The vehicles per hour given in both of the 56 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and

B. The vehicles per hour given in both of the 56 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, only 4 hours meet warrant 1C.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

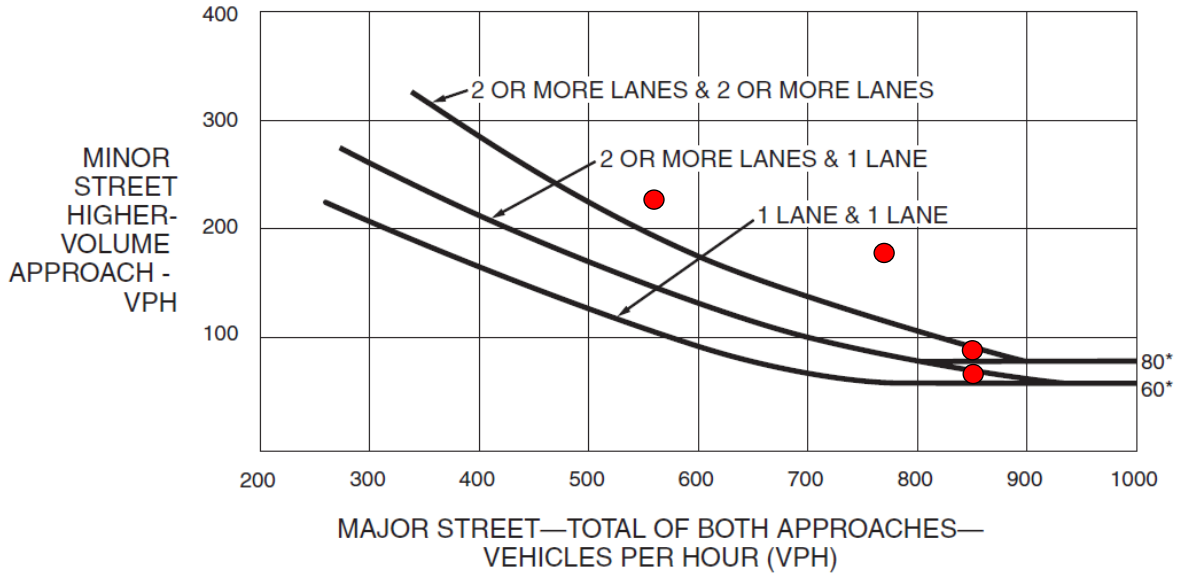
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Warrant 2, Four-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-2 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Yes, four hours meet Warrant 2.

Warrant 3, Peak Hour

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

No, Glenmont Road has 1.96 hours of delay during the evening peak hour

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

Yes, the Minor-street approach does exceed 100 vehicles per hour (178 vehicles per hour during the AM peak hour).

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for Intersections with three approaches.

Yes, the total entering volume does exceed 650 vehicles per hour (935 vehicles per hour during the AM peak hour and 941 vehicles per hour during the PM peak hour).

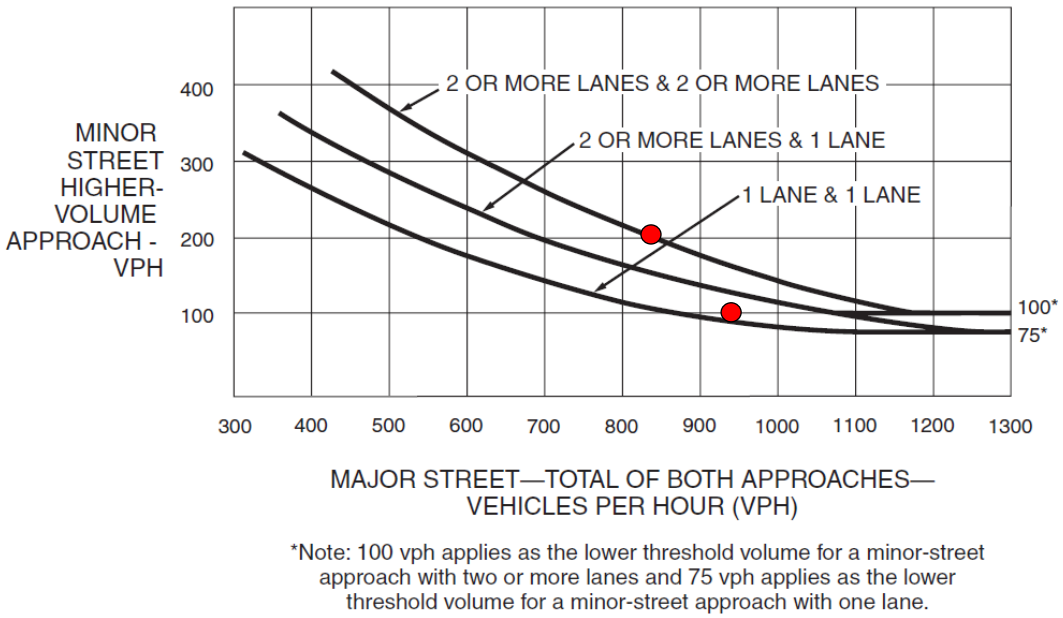
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-4 for the existing combination of approach lanes.

Yes, the AM&PM peak hours meet warrant 3B.

If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 4, Pedestrian Volume

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:

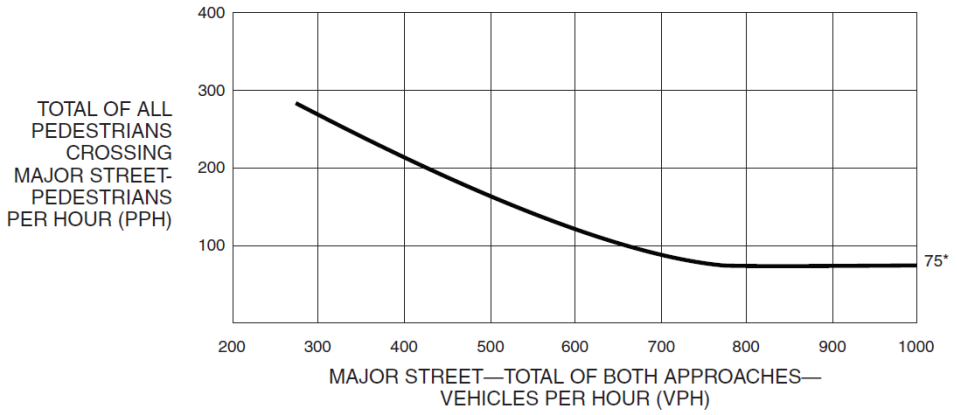
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-8.

The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

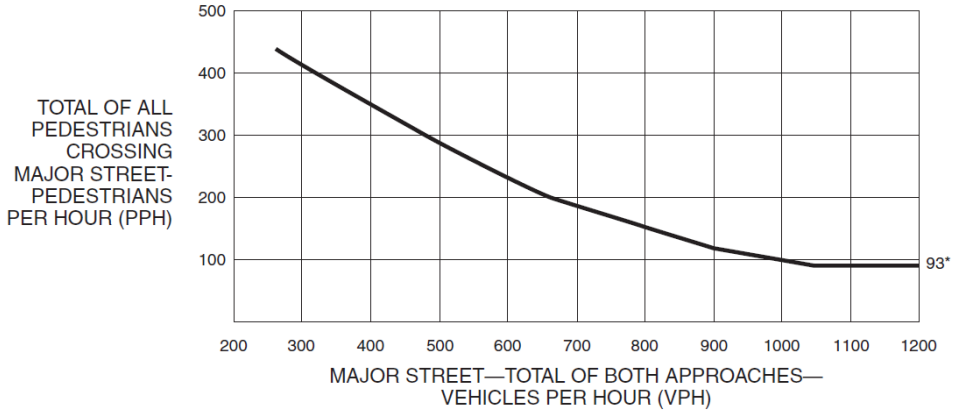
Warrant Not Met, no pedestrians were observed during the traffic counts.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Warrant 5, School Crossing

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period (see Section 7A.03) and there are a minimum of 20 schoolchildren during the highest crossing hour.

Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant Not Met, No school in the vicinity of the intersection.

Warrant 6, Coordinated Signal System

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **(Not Applicable)**

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. **(Not Applicable)**

Warrant 7, Crash Experience

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

No, Currently in process for this corridor according to Town Police)

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

No, over the last three years 10 crashed total, 8 with multiple vehicles, 0 includes injuries or property damage.

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 56 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 56 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 70 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Not met

Warrant 7 not met.

Warrant 8, Roadway Network

The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or **(No, proposed entering volume is 935 vehicles during the am peak hour and 941 vehicles during the PM peak hour).**

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday). **(NOT REVIEWED)**

A major route as used in this signal warrant shall have at least one of the following characteristics:

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
B. It includes rural or suburban highways outside, entering, or traversing a city.
C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Warrant not met based on condition A

Warrant 9, Intersection Near a Grade Crossing

The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and **(NOT MET)**
B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13. **(NOT MET)**

Warrant not met no railroad crossing in close proximity to the intersection.

SIGNAL WARRANT WORKSHEET

(Based on MUTCD 2009 Edition Signal Warrant Guidelines)

Project Name		Port of Albany	
Date:	4/1/2019	Analyst:	TCH
Major Street		NYS Route 144 (Full Build)	
# of Lanes per Direction		1	
Minor Street		Proposed Site Driveway (Full Build)	
# of Lanes per Direction		1	

Warrants Met:

Warrant:		Met?
Warrant 1 – Eight Hour Vehicular Volume	1A	N
	1B	N
	1C	N
Warrant 2 – Four Hour Vehicular Volume		N
Warrant 3 – Peak Hour	3A	N
	3B	N
Warrant 4 – Pedestrian Volume	4A	N
	4B	N
Warrant 5 – School Crossings		N
Warrant 6 – Coordinated Signal System		N
Warrant 7 – Crash Experience		N
Warrant 8 – Roadway Network		N
Warrant 9 – Intersection Near a Grade Crossing		N
Signal Should be Considered?		**N**

Traffic Volume Data:

Hour	Both Approach Volumes		Higher Volume Approach		Crossing Ped. Volume	
	Major	Minor	Major	Minor	Major	Minor
7:00-8:00	725	35*	462	35*	0	0
8:00-9:00	534	31*	353	31*	0	0
9:00-10:00	365	21*	197	21*		
2:00-3:00	350	21*	202	21*		
3:00-4:00	381	23*	284	23*		
4:00-5:00	467	28*	395	28*		
5:00-6:00	797	71*	382	71*	0	0
6:00-7:00	783	34*	185	34*		
AM Peak	841	35*	514	35*		
PM Peak	669	71*	452	71*		

* = Projected volumes

Accident Data:

Time Frame (Mo.)	Total Number of Accidents	Property Damage/Injury Acc.	Acc. Correctable with a Traffic Signal
NA	NA	NA	NA

Applicable Signal Warrant Details:

Warrant 1, Eight-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:

A. The vehicles per hour given in both of the 70 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or

No, zero hours meet warrant 1A.

B. The vehicles per hour given in both of the 70 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, zero hours meet warrant 1B.

In applying each condition, the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.

C. The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

A. The vehicles per hour given in both of the 56 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and

B. The vehicles per hour given in both of the 56 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

No, zero hours meet warrant 1C.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

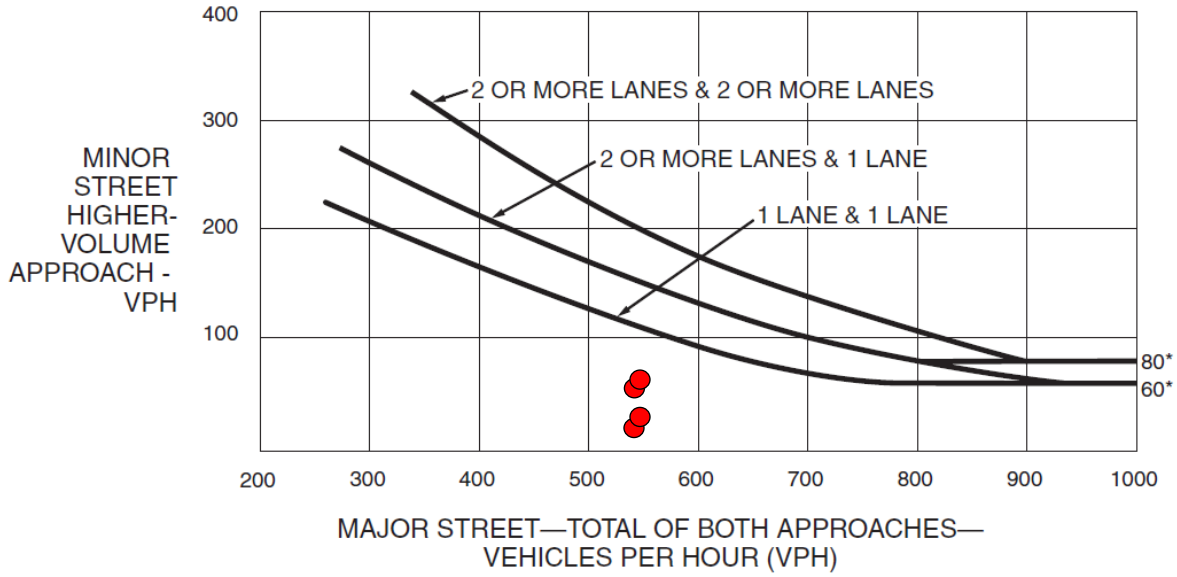
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Warrant 2, Four-Hour Vehicular Volume

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-2 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

No hours meet Warrant 2.

Warrant 3, Peak Hour

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

Warrant Not Met

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

Minor-street approach does not exceed 100 vehicles per hour.

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for Intersections with three approaches.

The total entering volume does not exceed 650 vehicles per.

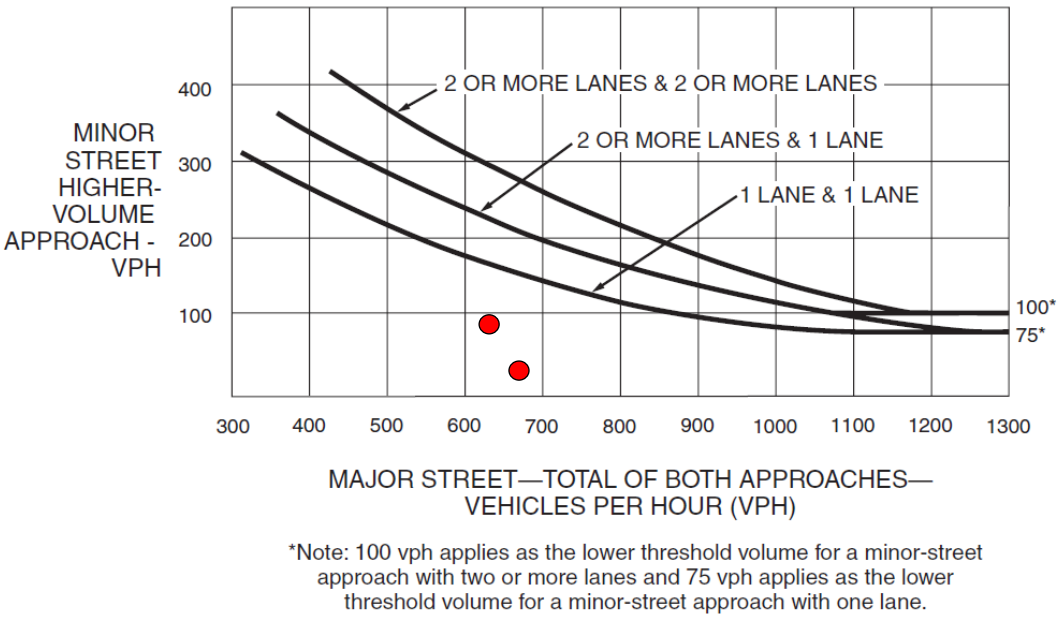
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-4 for the existing combination of approach lanes.

No hours meet Warrant 3B.

If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 4, Pedestrian Volume

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:

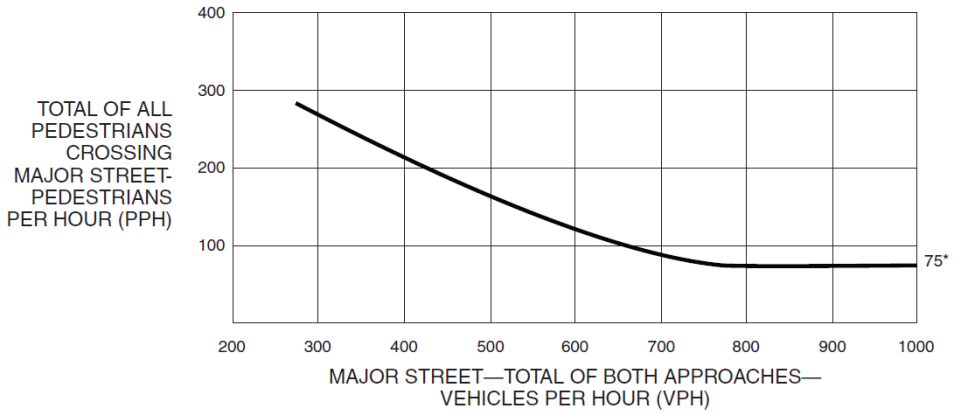
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-8.

The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

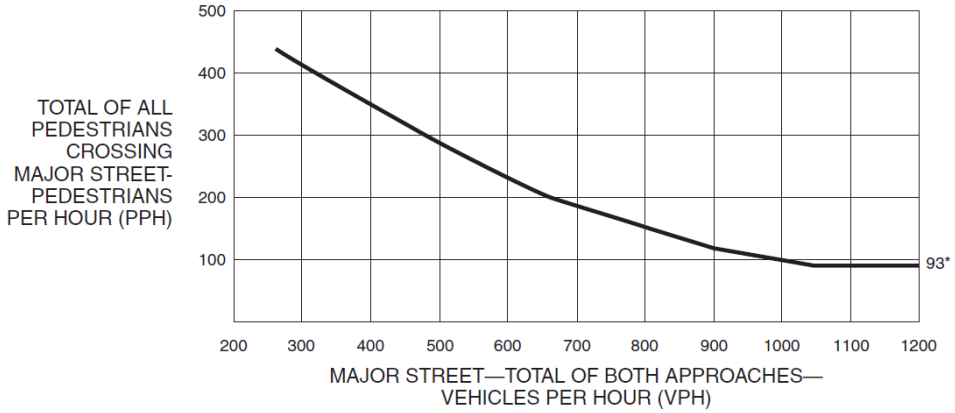
Warrant Not Met, no pedestrians were observed during the traffic counts.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Warrant 5, School Crossing

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period (see Section 7A.03) and there are a minimum of 20 schoolchildren during the highest crossing hour.

Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant Not Met, No school in the vicinity of the intersection.

Warrant 6, Coordinated Signal System

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **(Not Applicable)**

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. **(Not Applicable)**

Warrant 7, Crash Experience

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and **(NOT REVIEWED)**

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and **(NOT REVIEWED)**

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 56 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 56 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 70 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours**. (NOT REVIEWED)**

Warrant 8, Roadway Network

The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or **(Proposed entering volume is 721 vehicles during the AM peak hour)**

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday). **(NOT REVIEWED)**

A major route as used in this signal warrant shall have at least one of the following characteristics:

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
B. It includes rural or suburban highways outside, entering, or traversing a city.
C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Warrant not met based on condition A

Warrant 9, Intersection Near a Grade Crossing

The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and **(NOT MET)**
B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13. **(NOT MET)**

Warrant not met no railroad crossing in close proximity to the intersection.

APPENDIX E

PUBLIC PARTICIPATION PLAN

Albany Port District Commission

PUBLIC PARTICIPATION PLAN

for the

Albany Port District Commission Port of Albany Expansion Project

Albany Port District Commission

106 Smith Boulevard

Albany, NY 12202

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION AND OBJECTIVES OF THE PUBLIC PARTICIPATION PLAN

This Public Participation Plan (PPP) has been prepared by the Albany Port District Commission to aid in informing and involving the Ezra Prentice Community about the Albany Port District Commission Port of Albany Expansion Project.

The objective of this PPP is to promote communication and to assist the Ezra Prentice Community in understanding the Port of Albany Expansion Project. Community outreach and participation in this State Environmental Quality Review (SEQR) process provides the Albany Port District Commission and the Town of Bethlehem with an opportunity to provide information to the Ezra Prentice Community and obtain public input as part of the SEQR process.

Specific objectives of this PPP for the Port of Albany Expansion Project are to:

- Keep the local community informed about the Port of Albany Expansion Project and the associated Supplemental Draft Generic Environmental Impact Statement (DGEIS);
- Ensure the opportunity for open communication with the community throughout the SEQR process;
- Ensure outreach efforts include the neighboring Ezra Prentice Community; and
- Create opportunities for the Ezra Prentice Community to be informed and to contribute information and perspectives on the Port Expansion Project and Supplemental DGEIS process and report.

In order to achieve the aforementioned objectives, this PPP provides information regarding the following: (1) Port of Albany Expansion Project; (2) details regarding the process for identification of stakeholders; (3) meaningful opportunities for the Ezra Prentice Community to be informed and to provide input; (4) availability of written information for the public; (5) document repository; and, (6) the manner in which the Albany Port District Commission will

report the results of its community outreach activities to the Town of Bethlehem Planning Board.

A Contact List (Appendix A) has been prepared to assist in providing information to area residents, elected officials, and other interested parties who want to be kept informed about the status of the Project and the Supplemental DGEIS process. For additional information, the public is encouraged to contact the Albany Port District Commission at the following:

Albany Port District Commission
106 Smith Boulevard
Albany, NY 12202
(518)463-8763
Development@portofalbany.us

2.0 PROJECT BACKGROUND

The Project Site is located on the east side of River Road/Route 144 along the Hudson River at approximately Hudson River Mile 142 (HRM 142) and consists of 81.62 acres. The Project Site is located immediately north and south of the Hudson River's confluence with the Normans Kill in the Town of Bethlehem, Albany County, New York. The Project Site includes a 4.794-acre parcel of land (Tax Map No. 98.01-2-10) along the west side of South Port Road and a 76.825-acre parcel (Tax Map No. 98.00-2-10.23) south of the Normans Kill. The site has two existing and one proposed easement. One existing easement approximately 1.3 acres, located at the southwest corner of the property provided by National Grid for crossing rights to connect the property to River Road/NYS Route 144. The second existing easement is approximately 0.4 acre and is located along the west side of the property and is also provided by National Grid and connects the property to River Road/NYS Route 144 for utility crossings.

The main parcel (Tax Map No. 98.00-2-10.23), known as "Beacon Island", is bound by the following properties:

- To the North: various industrial and warehouse facilities
- To the South: Public Service Enterprise Group Power New York Power Plant (PSEG)
- To the East: Hudson River
- To the West: National Grid overhead electric and natural gas line transmission corridor

On December 17, 2019 the Bethlehem Planning Board accepted and deemed complete the Supplemental DGEIS and issued the document for public review .

3.0 COMMUNITY OUTREACH & PARTICIPATION ACTIVITIES

The Albany Port District Commission is committed to informing and involving the Ezra Prentice Community in the Port of Albany Expansion Project. Community outreach will provide the Ezra Prentice Community with information regarding the Port Expansion Project and the SDGEIS and encourage their feedback.

The results of these community outreach and participation activities will be reported to the Town of Bethlehem Planning Board as described in Section 4.0 Submittals.

3.1 Stakeholders and Contact List

The contact list (Appendix A) of interested and affected parties is being developed through various online resources and includes local, state, and federal representatives and resident associations and other interested parties. The contact list will be updated on an ongoing basis through public comments, and individuals expressing interest in the permits. The initial contact list is provided in Appendix A. The Port of Albany project contact is as follows:

Albany Port District Commission Contact

Albany Port District Commission
106 Smith Boulevard
Albany, NY 12202
(518) 463-8763
development@portofalbany.us

3.2 Publication of Notice in Newspaper

Public notices for the SDGEIS will be posted in the legal section of the Albany Times Union. In addition, those parties on the contact list (Appendix A) will be notified of the upcoming issuance of the SDGEIS through a mailer notice sent in advance of the publication. The mailer will be sent via regular mail to the stakeholder list and via email to those who have email addresses on the contact list.

3.3 Public Information Meetings

One (1) Public Information meeting will be held to provide the community with an opportunity to ask questions on a proposed project. The meetings will be held within the Ezra Prentice community at a location suggested by the stakeholders. They will be held in the evening to provide an opportunity for the maximum number of people to attend. Times will be coordinated with the community.

The meeting for the SDGEIS will be held on Monday January 6, 2020 at 5:30pm at the Albany Housing Authority, located at 200 South Pearl Street, Albany, NY. This time and location was determined through coordination with the Albany Housing Authority and observations from attending the latest NYSDEC public presentations held for the Ezra Prentice community. It was observed that all or the majority of residents attended the early evening presentation. The location was chosen due its ability to accommodate a large audience, its proximity to the Ezra Prentice community (approximately 1 mile north of Ezra Prentice), is ADA accessible

and has pedestrians, motor vehicles, and public transportation accommodations as it is on a CDTA bus route. In addition, as mentioned above the facility has housed previous public meetings for the Ezra Prentice community.

Notice of meeting locations, dates, and times will be provided in flyer form in a direct mail piece mailed to resident's homes and emailed to those who have provided email addresses. The meeting will include a public hearing format where the Port presents the Port of Albany Expansion Project information as described in the SDGEIS and the community provides input and asks questions.

3.4 Document Repositories

Document repositories will be established to provide information and documents related to the Port of Albany Expansion Project. The documents will include: the DGEIS and the SDGEIS. Both documents will include information on the project such as proposed site plans, photo simulations renderings, engineering reports, maps, and other information gathered and developed during the course of the preparation of the DGEIS and SDGEIS, as well as the written information related to this PPP.

The document repositories for the Port of Albany Expansion Project application are listed below:

Town of Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
(518) 439-4955
Hours:
Monday - Friday: 8:30am – 4:30pm

Albany Housing Authority

200 South Pearl Street

Albany, NY 12202-1834

(518) 641-7500

Hours:

Monday – Friday: 8:30am – 5pm

4.0 SUBMITTALS

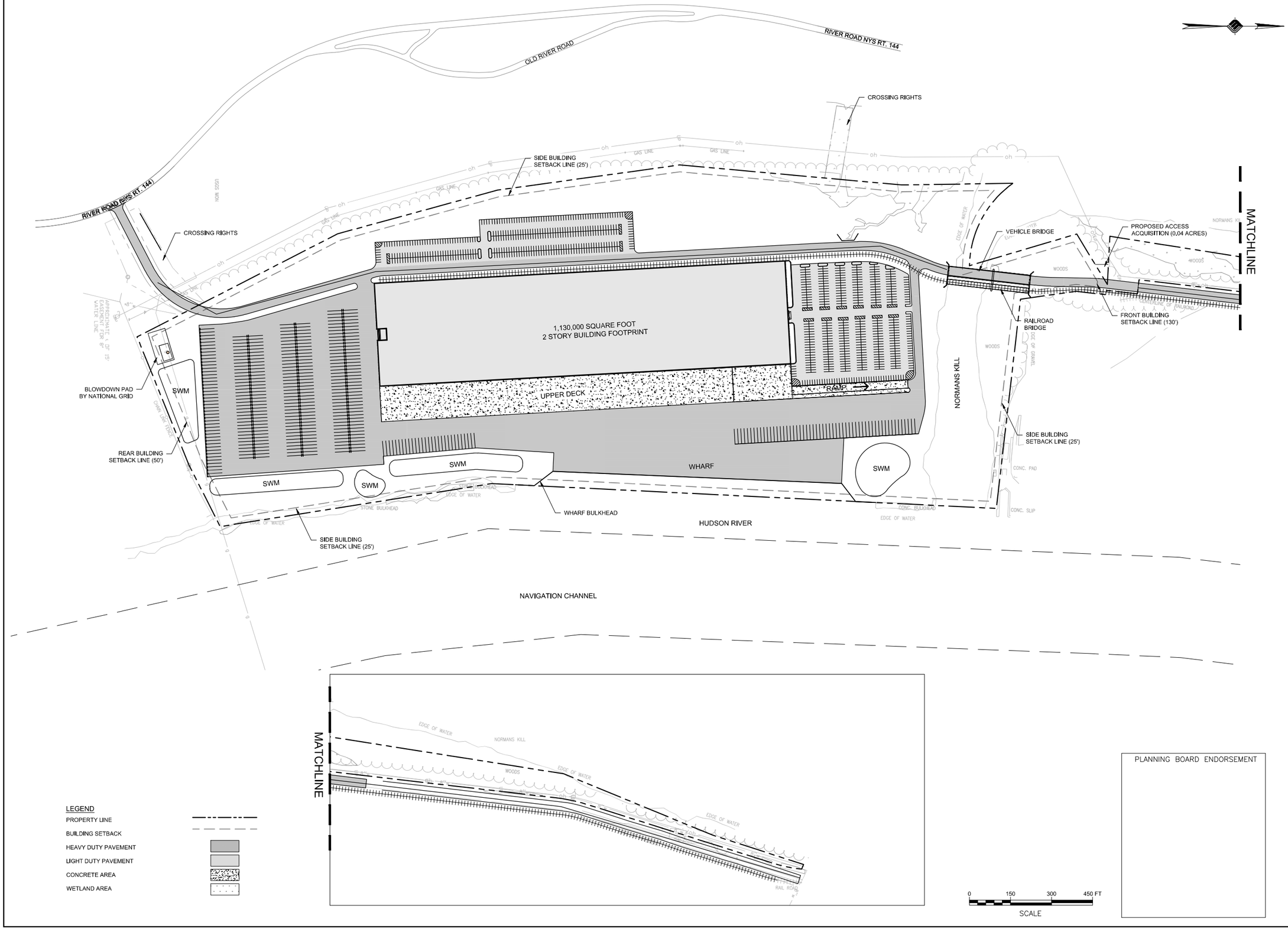
A final report describing the completed PPP activities will be provided to the Town of Bethlehem Planning Board summarizing progress in implementing the PPP; substantive concerns raised; resolved; and the PPP completion date.

Community Outreach & Participation Plan
PERMIT APPLICATION

FIGURES

1. Maps

Figure 1.1 Site Plan



LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- HEAVY DUTY PAVEMENT
- LIGHT DUTY PAVEMENT
- CONCRETE AREA
- WETLAND AREA

0 150 300 450 FT

SCALE

PLANNING BOARD ENDORSEMENT

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
CONCEPT DESIGN

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	NOT TO SCALE
DATE	MAY 2019
PROJECT	18437.00

DRAWING TITLE
CONCEPT A

DRAWING NUMBER
FIGURE 1.1
SITE PLAN

Figure 1.2 Building Photo Simulation Renderings

Location 1: at the end of South Port Street looking south into the site.

Location 2: at northwest property line of the project looking east into the site.

Location 3: on NYS Route 144 at the proposed southwest entrance to the project looking east into the project site.

Location 4: on Glenmont Road at the location of cleared vegetation allowing a view of the Hudson valley looking east toward the project.

Location 5: on the Hudson River looking west into the site.

Community Outreach & Participation Plan
PERMIT APPLICATION

APPENDICES

Community Outreach & Participation Plan
PERMIT APPLICATION
APPENDIX A

A. Contact List

Elected Officials	
Neil D. Breslin New York State Senate District 44	172 State Street, Capitol Building Room 430C Albany, NY 12247 Phone: (518) 455-2225 breslin@nysenate.gov
John T. McDonald III New York State Assembly District 108	Albany Office LOB 417 Albany, NY 12248 Phone: (518) 455-4474 McDonaldJ@nyassembly.gov
Daniel P. McCoy Albany County Executive	Harold L. Joyce Albany County Office Building 112 State Street, Room 1200 Albany, NY 12207 Phone: (518)447-7040 County_Executive@albanycountyny.gov
Lucille M. McKnight Albany County Legislator – District 1	79 Third Avenue Albany, NY 12202 (518)463-9883 Lmknight@mycap.rr.com
Kathy M. Sheehan Mayor, City of Albany	24 Eagle Street, Room 102 Albany, NY 12207 Phone:(518) 434-5100 mayor@albanyny.gov
Hon. Corey Ellis Albany Common Council President	90 State Street, Floor 7 Albany, NY 12207 (518)591-4654 cellis@albanyny.gov
Hon. Dorcey Applyrs Albany Common Council Member-First Ward	6 South Marshall Street Albany, NY 12209 (518)894-8981 dorceyapplyrs@gmail.com

Hon. Derek Johnson Albany Common Council Member-Second Ward	69 Trinity Place Apt. 209 Albany, NY 12202 (518) 720-7118 dejohnson@albanyny.gov
Media	
The Times Union	News Plaza, Box 15000 Albany, NY 12212 tucitydesk@timesunion.com
Other	
Steven T. Longo Executive Director Albany Housing Authority	200 South Pearl Street Albany, NY 12202 Phone: (518)641-7518
BeBe White President Ezra Prentice Homes Tenants Association	Phone: (518) 470-3171 No email address
Jessie Alcantara Secretary A Village	Office: 3 Lincoln Square, Albany, NY 12202 Mailing: PO Box 10152, Albany,
Jahkeen Hoke Executive Director A Village	Office: 3 Lincoln Square, Albany, NY 12202 Mailing: PO Box 10152, Albany, NY 12201 Phone: (518) 451-9849
NYSDEC Office of Environmental Justice	625 Broadway, 14th Floor Albany, NY 12233 Phone: (518) 402-9498
Nancy Baker NYSDEC Environmental Permits Administrator	1130 North Westcott Road Schenectady, NY 12306 Phone: (518) 357-2452

Patrick K. Jordan Albany Port District Commission General Counsel	106 Smith Blvd. Albany, NY 12202 (518) 463-8763 pjordan@portofalbany.us
Center for Disability Services	700 South Pearl Street Albany, NY 12202 (518) 427-2310
Stacy Pettigrew Executive Director The Radix Center	153 Grand Street Albany, NY 12202 (518) 605-3256

B. Example Project Summary Brochure

Community Meeting
Port of Albany Expansion Project
Supplemental DGEIS

Opportunity to provide input into the proposed project
Port of Albany Expansion Project Supplemental DGEIS

Hosted by:
ALBANY PORT DISTRICT COMMISSION
106 SMITH BOULEVARD, ALBANY, NY 12202

Location: Albany Housing Authority
200 South Pearl Street, Albany, NY 12202
Date: January 6, 2020
Time: 5:30 pm

The Project will:

Outline project components

What Happens at a Community Meeting?

- The Port will present a short overview of the project.
- You can make oral comments to the Port on the project and ask questions.
- You can discuss the project informally with the Port representatives.
- You can present written comments to the Port at the meeting, January 6, 2020 or any time before the close of the comment period on January 17, 2020.

Information and Contacts:

- Public Information Repositories, including the permit application are located at:
  - Town of Bethlehem Town Hall, 445 Delaware Avenue, Delmar, NY 12054,
  - The Albany Housing Authority, 200 South Pearl Street, Albany, NY 12202

- The APDC contact is:

Albany Port District Commission Contact
Albany Port District Commission
106 Smith Boulevard
Albany, NY 12202
PH: (518) 463-8763
development@Portofalbany.us

- The Town of Bethlehem Contact is:

Robert F. Leslie, AICP
Town of Bethlehem
Department of Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
PH: (518) 439-4955; FAX: (518) 439-5808

APPENDIX F

SEQRA CORRESPONDENCE

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK

SEQR RESOLUTION

DETERMINATON OF SIGNIFICANCE
AMENDED POSITIVE DECLARATION

ALBANY PORT DISTRICT COMMISSION INDUSTRIAL PARK PROJECT (PORT OF ALBANY EXPANSION)
SITE PLAN APPLICATION #19-00100001, FORMERLY 18-00100012

WHEREAS, the Planning Board of the Town of Bethlehem has received a site plan application from the Albany Port District Commission, for the Albany Port District Industrial Park Project for the industrial development of 81.57 +/- acres of land located on the east side of Route 144 (River Road) between the Normans Kill and PSEG with the Hudson River located to the east; and,

WHEREAS, the Planning Board has (1) classified the application as a Type 1 action, (2) established itself as Lead Agency, (3) issued a Positive Declaration, (4) determined a Generic Environmental Impact Statement (GEIS) is appropriate for the project, (5) provided notice of said Positive Declaration, (6) received and accepted a Draft GEIS Scope, (7) adopted the Final Scope for the GEIS; (8) determined Draft GEIS was complete on August 6, 2019, (9) held a public hearing on September 3, 2019, and (10) established a public comment period between August 6, 2019 and September 14, 2019; and

WHEREAS, during the public comment period, the Planning Board received multiple comments regarding the inclusion of an analysis of the project's potential impacts on the Ezra Prentice Homes in the City of Albany, including but not limited to environmental justice issues and consideration of alternatives to mitigate or eliminate impacts on the Ezra Prentice community. Impacts on the Ezra Prentice community including environmental justice was not an environmental topic identified in the GEIS scope; and

WHERAS, identified areas of environmental impact on the Ezra Prentice Homes may include, but not limited to, environmental justice, climate and air quality, traffic and transportation, water service (potable and fire protection), sanitary sewer, historical, cultural and archeological resources, aesthetic and visual resources, land use and zoning, community character and compatibility with comprehensive plan, emergency services, school district, fiscal and economic impact, recreation and open space; and

WHEREAS, the proposed action has potential to create one or more significant adverse environmental impacts related to the Ezra Prentice community and preparation of a Supplemental Draft Generic Environmental Impact Statement, for which the applicant has consented, will enable the Planning Board as Lead Agency to consider the potential effects on the Ezra Prentice Homes.

NOW, THEREFORE, BE IT RESOLVED, by the Bethlehem Planning Board, as follows:

1. That, based upon its review of the DGEIS and supporting materials, as well as the full EAF Parts 1 and 2, and its own independent analysis and comparison with the Criteria for Determining Significance found at 6 NYCRR 617.7, the site plan application for the Albany Port District Commission Industrial Park constitutes an action which may have a significant adverse effect on the Ezra Prentice Homes and therefore requires ***preparation of a Supplemental Draft Generic***

Environmental Impact Statement to address impacts on the Ezra Prentice community including environmental justice concerns;

2. That the scope of the Supplemental DGEIS shall be as set forth in the attached memorandum from the Director of Economic Development and Planning to the Planning Board dated November 14, 2019;

3. that this Determination of Significance shall be considered a Positive Declaration made pursuant to Article 8 of the Environmental Conservation Law; and,

4. the Department of Economic Development and Planning is herby authorized and directed to prepare, file and publish notice of this Determination as prescribed at 6 NYCRR 617.12.

On a motion by Brian Gyory, seconded by Scott Lewendon, and a vote of _Four (4) for, _Zero (0) against, One (1) abstained and Zero (1) absent, this RESOLUTION was adopted on November 19, 2019.

14-12-8 (3/99)-9c

SEQR

State Environmental Quality Review
POSITIVE DECLARATION
Notice of Intent to Prepare a Draft EIS
Determination of Significance

Project Number **Date** 11/20/2019

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Town of Bethlehem Planning Board as lead agency, has determined that the proposed action described below may have a significant impact on the environment and that a Draft Environmental Impact Statement will be prepared.

Name of Action:

Albany Port District Industrial Park Expansion

SEQR Status: Type 1 ☑
Unlisted ☐

Scoping: No ☑ Yes ☐ If yes, indicate how scoping will be conducted:

Description of Action:

Albany Port District Commission (Port) is proposing to construct an industrial park with 5 conceptual layouts that range from 1.3 million square feet to 160,000 square feet of industrial use facilities (warehouse space and laydown area). Each concept would include associated access roads, employee parking, trailer parking, utility extensions, rail access from the north over Normans Kill and south through the PSEG site, and a bulkhead along Hudson River for on and offloading of equipment and materials (wharf).

Location: (Include street address and the name of the municipality/county. A location map of appropriate scale is also recommended.)

Port Road South, Bethlehem New York
Tax Map Numbers: 98.01-2-1.0 and 98.00-2-10.23

Reasons Supporting This Determination:

Please see attached memo and resolution.

For Further Information:

Contact Person: Rob Leslie, AICP, Director of Planning-Town of Bethlehem

Address: 445 Delaware Avenue, Delmar NY 12054

Telephone Number: 518-439-4955 ext 1157

A copy of this notice must be sent to:

Department of Environmental Conservation, 50 Wolf Road, Albany, New York 12233-1750

Chief Executive Officer, Town/City/Village of Bethlehem

Any person requesting a copy

All Involved agencies

Applicant (If any)

Environmental Notice Bulletin, Room 538, 50 Wolf Road, Albany, NY 12233-1750

Agency Use Only [If Applicable]

Project : Albany Port District Industrial Park Expansion

Date : November 19,2019

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See Planning staff memo from R. Leslie, dated November 14, 2019, for why the project related environmental features may result in a significant adverse environmental impact and required the development of a Supplemental GEIS.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the _____ as lead agency that:

☐ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☑ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Albany Port District Commission Industrial Park

Name of Lead Agency: Bethlehem Planning Board

Name of Responsible Officer in Lead Agency: Robert Leslie

Title of Responsible Officer: Director of Planning

Signature of Responsible Officer in Lead Agency: Robert Leslie Date: 11/20/19

Signature of Preparer (if different from Responsible Officer) Elizabeth Herr Date: 11/20/19

For Further Information:

Contact Person: Robert Leslie

Address: 445 Delaware Avenue, Delmar NY 12054

Telephone Number: 518-439-4955 x1157

E-mail: rleslie@townofbethlehem.org

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

APPENDIX G

TRUCK ROUTE SUPPORTING DOCUMENTATION

ALBANY PORT DISTRICT COMMISSION

ALBANY-RENSSELAER
106 Smith Blvd.
ALBANY, N.Y. 12202 – (518) 463-8763
FAX NO. (518) 463-8767

GEORGETTE STEFFENS
CHAIR, BOARD OF COMMISSIONERS

RICHARD J. HENDRICK
GENERAL MANAGER

TO: Steve Boisvert, PE, McFarland Johnson

FROM: Patrick K. Jordan, General Counsel

DATE: December 10, 2019

RE: Bethlehem Planning Board

Background

The Albany Port District Commission (APDC or Port) is a public authority governed by a Mayoral nominated and Governor appointed Board of Commissioners. Public authorities are instruments of the State created by the Legislature to further public interests. The APDC's mission is to responsibly and effectively manage the publicly-owned maritime Port of Albany-Rensselaer, driving the economy of the Capital Region and beyond while emphasizing transparency and public stewardship.

The APDC is not an authorized entity to issue legal fines or citations for violations of rules or regulations and therefore relies on the state and federal authorities to issue citations or enforce state laws regarding the traffic laws or the use of the public roadways in the Port District. The roadways within the Port District are owned by the City of Albany. Violations of state or local laws are enforced and prosecuted by those state and municipal agencies and law enforcement bodies that are vested with oversite authority. The APDC has the ability to terminate a lease if a term of the lease is violated or the APDC can move for an injunction through a judicial proceeding to enforce compliance with a lease mandate.

Security

The Port of Albany maintains a full security and threat assessment team which includes video surveillance monitoring. Truck movements will be monitored by Port Security via the Port video surveillance system and a periodic audit of the South Port Road entrance and exit will be conducted for compliance purposes. The City of Albany Police Department also monitors the camera feeds from the Port. Additional cameras will be added to the vicinity of South Port Road and Normanskill Street, in order to better monitor South Port Road where it intersects with South Pearl Street and Normanskill Street. If a tenant is found to have allowed trucks to improperly travel on South Pearl Street six (6) times in a calendar year, the tenant shall be considered in breach of their lease. The penalty for violating the terms of the lease are termination of the lease or a court proceeding to enforce the lease requirements. The APDC does not have statutory authority to levy penalties or fines.

Future Roadway Improvements

The Port of Albany is undergoing a multi-year $50 million maritime infrastructure improvement plan with the support of state and federal funds that is investing in major construction projects to enhance cargo lifting, handling and transport capabilities. The Port took the initiative to include a portion of Smith Boulevard for reconstruction by assigning the designation of "external maritime transport route" in the funding source, as a possibility for moving heavy lift cargo to and from the maritime terminal. This enabled funding for improvement to the portion of Smith Boulevard that runs adjacent to the maritime terminal. The Port has begun demolition of a large building located at the nexus of a difficult portion of the roadway that makes it challenging for trucks to use it as an alternative transportation route. Removal of this building will enable the road to be straightened out when the roadway improvements begin construction in 2020-2021. This portion of the roadway work is currently in the design phase, with funding assigned, but ultimate cost will not be determined until construction bids are let. Concept roadway improvement plans are attached that illustrates the new alignment. This work is intended to contribute to the comprehensive improvement of the city roads that run through the Port District that could serve as a future alternative truck route as envisioned and articulated in the 2018 CDTC report "City of Albany: S. Pearl St. Heavy Vehicle Travel Pattern Study".

Draft lease language regarding truck routing:

Pursuant to state law the APDC must negotiate individually with prospective tenants for the best use of the public lands that it maintains. Each lease is unique to the land being leased and the individual tenant. Those lease terms are then authorized by the Governor appointed Board of Commissioners.

Section X – <u>Truck routing</u>.

In deference to the City of Albany and the Town of Bethlehem and concerns regarding potential negative impacts to neighboring communities that include an environmental justice designation, it is the intention of the APDC to minimize truck traffic and its impact on the Ezra Prentice neighborhood adjacent to the Port of Albany. Recognizing that the Port contributes a portion (assessed at approximately 17%) of the local truck activity in this corridor, the port is seeking to act in partnership. To that effect the APDC directs Tenant to utilize the truck route within the Albany Port District (identified in the attached exhibit "x" and made a part hereof). All trucks, classified as Class 6 or higher by the Federal Highway Administration, doing business for, with or on behalf of Tenant will utilize the illustrated truck route. Said trucks will enter and exit the Port of Albany via Church Street when utilizing Interstate 787 in any direction and when utilizing Interstate 87 west. Said trucks traveling to or from points south of the Port of Albany will enter and exit the Port of Albany via Church Street or South Port Road. Said trucks will not traverse South Pearl Street in the City of Albany between its intersection with South Port Road and any points north unless transacting commerce within that local area to minimize local truck traffic impacts.

The Port of Albany maintains a full security and threat assessment team which includes video surveillance monitoring. Truck movements will be monitored by Port Security via the Port video surveillance system and a periodic audit of the South Port Road entrance and exit will be conducted for compliance purposes. The City of Albany Police Department also monitors the Port video surveillance system. Should said trucks (as defined above) be found to have violated these requirements for truck movements six (6) times within a calendar year, Tenant shall be considered in breach of this Lease.

This Lease in no way diminishes the legal requirement of the Tenant to observe all laws, statutes and ordinances of all federal, state or local jurisdictions regarding vehicles and traffic. Roadways within the Albany Port District are public roadways and vehicles traveling upon them are subject to state and local municipal enforcement and prosecution.

These requirements may be superseded by an order of the City of Albany, FHWA or NYSDOT or suspended due to an emergency situation.

Section X – Defaults.

(a) Time is of the essence of this Lease. The occurrence of any one or more of the following events constitutes a default of this Lease by Tenant with or without notice from the Landlord:

(1) The vacating or abandonment of the Demised Premises by Tenant.

(2) The failure by Tenant to make any payment of Rent, or any other payment required by this Lease, when due.

(3) The failure by Tenant to observe or perform any covenant, condition or agreement to be observed or performed by Tenant in this Lease.

(4) The discovery by the Landlord that any required report, financial statement or background statement provided to the Landlord by Tenant, any successor, grantee or assign was materially false.

Section X – Remedies, Reentry and Damages.

(a) Whenever any default (other than a default under Section X above, upon which termination of this Lease shall, at the Landlord's option, be effective immediately without further notice) continues unremedied in whole or in part for thirty (30) days after written notice is provided by the Landlord to Tenant (or for ten (10) days after written notice in the case of default for failure to pay any Rent, or other required payment when due), this Lease and all of Tenant's rights under it will automatically terminate if the written notice of default so provides. Upon termination, the Landlord may reenter the Demised Premises using such force as may be necessary and remove all persons and property from the Demised Premises. The Landlord will be entitled to recover from Tenant all unpaid Rent or other payments and damages incurred

because of Tenant's default including, but not limited to, the costs of re-letting, including tenant improvements, necessary renovations or repairs, advertising, leasing commissions and attorney's fees and costs ("Termination Damages"), together with interest on all Termination Damages at the Default Rates from the date such Termination Damages are incurred by the Landlord until paid.

(b) In addition to Termination Damages, and notwithstanding termination and reentry, Tenant's liability for all Rent or other charges which, but for termination of the Lease, would have become due over the remainder of the Lease term ("Future Charges") will not be extinguished and Tenant agrees that the Landlord will be entitled, upon termination for default, to collect as additional damages, a Rental Deficiency. "Rental Deficiency" means, at the Landlord's election, either:

(1) An amount equal to Future Charges, less the amount of actual rent, if any, which the Landlord receives during the remainder of the Lease term from others to whom the Demised Premises may be rented, in which case such Rental Deficiency will be computed and payable at the Landlord's option either:

(i) In an accelerated lump-sum payment; or
(ii) In monthly installments, in advance, on the first day of each calendar month following termination of the Lease and continuing until the date on which the Lease term would have expired but for such termination, and any suit or action brought to collect any portion of Rental Deficiency attributable to any particular month or months, shall not in any manner prejudice the Landlord's right to collect any portion of Rental Deficiency by a similar proceeding;

(c) If this Lease is terminated for default as provided in this Lease, the Landlord shall use reasonable efforts to re-let the Demised Premises in whole or in part, alone or together with other premises, for such term or terms (which may be greater or less than the period which otherwise would have constituted the balance of the Lease term), for such use or uses and, otherwise on such terms and conditions as the Landlord, in its sole discretion, may determine, but the Landlord will not be liable for, nor will Tenant's obligations under this Lease be diminished by reason for any failure by the Landlord to re-let the Demised Premises or any failures by the Landlord to collect any rent due upon such re-letting.

If upon any reentry permitted under this Lease, there remains any personal property upon the Demised Premises, the Landlord , in its sole discretion, may remove and store the personal property for the account and at the expense of Tenant. In the event the Landlord chooses to remove and store such property, it shall take reasonable steps to notify Tenant of the Landlord's action. All risks associated with removal and storage shall be on Tenant. Tenant shall reimburse the Landlord for all expenses incurred in connection with removal and storage as a condition to regaining possession of the personal property. The Landlord has the right to sell

any property which has been stored for a period of 15 days or more, unless Tenant has tendered reimbursement to the Landlord for all expenses incurred in removal and storage. The proceeds of sale will be applied first to the costs of sale (including reasonable attorney's fees), second to the payment of storage charges, and third to the payment of any other amounts which may then be due and owing from Tenant to the Landlord. The balance of sale proceeds, if any, will then be paid to Tenant.

(d) A suit or suits for the recovery of such damages, or any installments thereof, may be brought by Landlord from time to time at its election, and nothing contained herein shall be deemed to require Landlord to postpone suit until the date when the Term of this Lease would have expired if it had not been so terminated under the provisions of Section X, or under any provision of law, or had Landlord not re-entered the Demised Premises. Nothing herein contained shall be construed to limit or preclude recovery by Landlord against Tenant for any sums or damages to which, in addition to the damages particularly provided above, Landlord may lawfully be entitled by reason of default hereunder on the part of the Tenant. In the event of a breach by Tenant of any of its obligations under this Lease, Landlord shall also have the right of injunction.

(e) Remedies Cumulative. All rights, options and remedies of the Landlord contained in this Lease shall be construed and held to be distinct, separate and cumulative, and no one of them shall be exclusive of the other, and the Landlord shall have the right to pursue any one or all of such remedies or any other remedy or relief which may be provided by law or in equity, whether or not stated in this Lease.

Arts, Entertainment & Exhibits
Ports, Coastal & Waterfront
Real Estate Development
Public Infrastructure
Transportation
Government
Healthcare
Education
Industrial
Energy

December 11, 2019

Albany Port District Commission
109 Smith Boulevard
Albany, NY 12202

Attn: Megan Daly
Director of Economic Development and Procurement

Email: mdaly@portofalbany.us

Re: Basis of Design - Portions of Raft Street and Smith Boulevard;
Internal to the Port of Albany
McLaren File No. 190866

Dear Ms. Daly:

In response to the inquiry made by the Town of Bethlehem regarding the ability of Raft Street and Smith Boulevard to accommodate truck traffic, we are pleased to offer the following summary of our basis of design for the planned reconstruction of aforementioned roadways.

1. The planned roadway reconstruction, whether full-depth or partial, will be designed to accommodate heavy truck traffic.
2. McLaren will utilize the ESAL (Equivalent Single-Axle Load) concept to measure the impact of the planned traffic on the proposed pavement. McLaren will coordinate with the Port of Albany to determine quantity, frequency, and types of trucks that are expected to utilize the roadway.
3. The ESAL analysis will include the expected impact of the traffic generated by the expansion into Bethlehem.

As we proceed with the design, McLaren will facilitate a meeting with the Port to review the anticipated traffic.

Very truly yours,

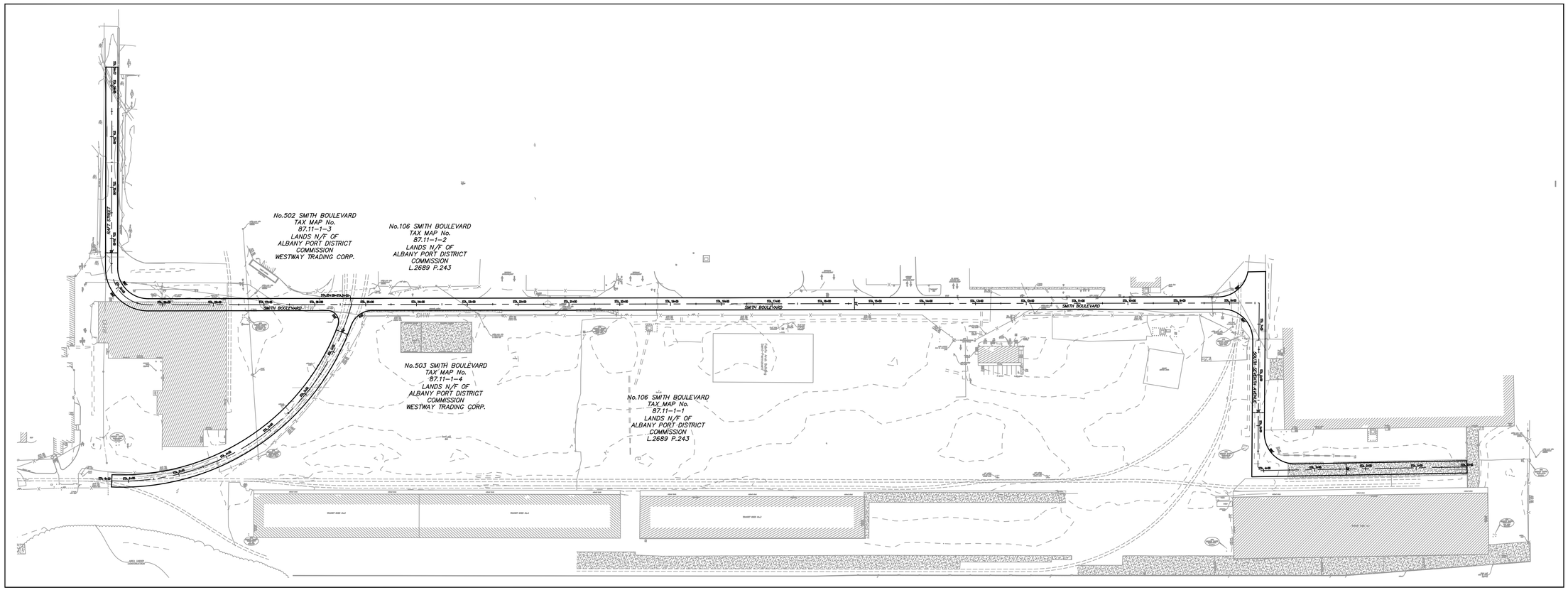
The office of
M.G. McLaren Engineering
and Land Surveying, P.C.

Reuben F. Hull, Jr., P.E.
Regional Director, Capital Region

RFH/kma

cc: File 190866, DLW, LJC – Internal
P:\Proj190\190866\3_Correspondence\Letters\Sent\Ltr01-Megan Daly-2019-12-11.docx

M.G. McLaren Engineering and Land Surveying, P.C.
The Patroon Building
5 Clinton Square
Albany, NY 12207
Phone (518) 992-4830
e-mail: mgmclaren@mgmclaren.com
On the web: www.mgmclaren.com



OVERALL ROADWAY LAYOUT

SCALE: 1"=100'

100' 0 100' 200' FEET

SCALE: 1" = 100'

NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP
applied ingenuity
M. G. McLaren Engineering
and Land Surveying P.C.
530 Chestnut Ridge Road, Woodcliff Lake, NJ 07677
T: 201.775.5500 F: 201.746.5522 www.mgmclaren.com

PROJECT

PORT OF ALBANY ROADWAY
MARITIME TERMINAL
RECONSTRUCTION

ALBANY. NEW YORK

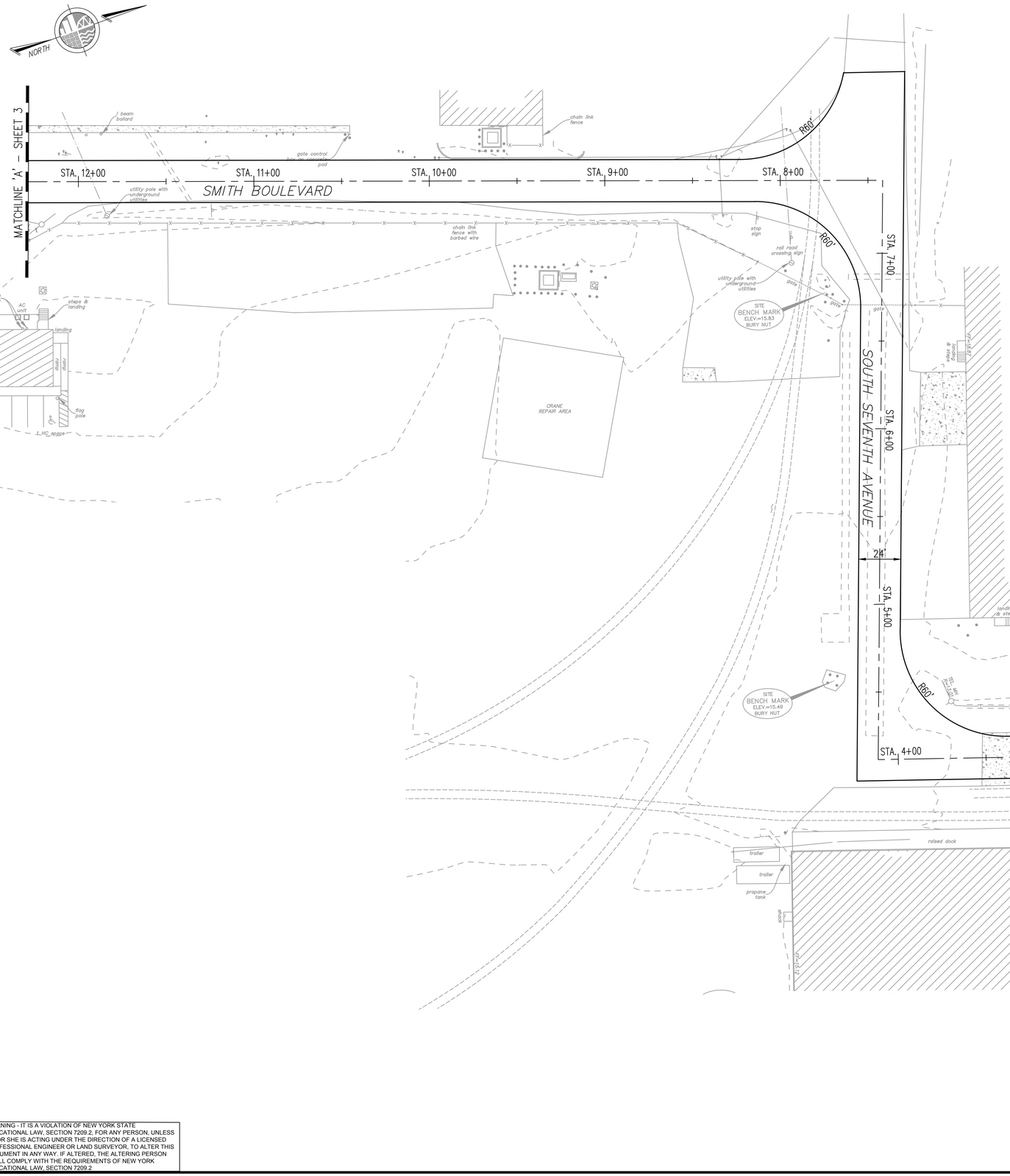
SHEET TITLE

ROADWAY LAYOUT EXHIBIT
SHEET 1

PROJECT NO.	190293
SCALE	AS SHOWN
DATE	12-06-2019
DRAWN BY	JLA
CHECKED BY	RFH
DRAWING NO.	1

1 OF 4 SHTS

FILE NAME: X:\Proj190\190293\10_Dwgs\CAD\ROAD RESTORATION\Roadway Reconstruction Site Plan.dwg PLOT TIME: Sat, 07 Dec 2019 - 4:11pm LAST SAVE: Sat, 07 Dec 2019 - 4:09pm BY: jpuderson



WARNING - IT IS A VIOLATION OF NEW YORK STATE EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2

NO	DATE	REVISION	BY

McLaren ENGINEERING GROUP
applied ingenuity
M. G. McLaren Engineering and Land Surveying, P.C.
530 Chestnut Ridge Road, Woodcliff Lake, NJ 07677
T: 201.775.5600 F: 201.746.3522 www.mgmclaren.com

PROJECT

PORT OF ALBANY ROADWAY
MARITIME TERMINAL
RECONSTRUCTION

ALBANY, NEW YORK

SHEET TITLE

ROADWAY LAYOUT EXHIBIT
SHEET 1

PROJECT NO.	190293
SCALE	AS SHOWN
DATE	12-06-2019
DRAWN BY	JLA
CHECKED BY	RFH

DRAWING NO.

2

2 OF 4 SHTS

FILE NAME: X:\Proj190\190293\10_Dwgs\CADD\ROAD RESTORATION\Roadway Reconstruction Site Plan.dwg PLOT TIME: Sat, 07 Dec 2019 – 4:12pm LAST SAVE: Sat, 07 Dec 2019 – 4:09pm BY: janderson

NORTH

MATCHLINE 'B' – THIS SHEET

MATCHLINE 'A' – SHEET 2

STA. 21+00 STA. 20+00 STA. 19+00 STA. 18+00 STA. 17+00 STA. 16+00 STA. 15+00 STA. 14+00 STA. 13+00

SMITH BOULEVARD

24'

WEITSMAN ENTRANCE/EXIT

WEITSMAN ENTRANCE/EXIT

MOHAWK PAPER ENTRANCE/EXIT

TO OFFICE PARKING LOT ENTRANCE/EXIT

"MOHAWK" sign

TEL. MH R=14.81

utility pole with underground utilities

concrete gutter

gate

chain link fence with barbed wire

chain link fence with barbed wire

chain link fence with barbed wire

chain link fence with barbed wire

SITE BENCH MARK ELEV.=17.75 CHISELED BOX ON LIGHT POLE

No.106 SMITH BOULEVARD
TAX MAP No.
87.11–1–1
LANDS N/F OF
ALBANY PORT DISTRICT
COMMISSION
L.2689 P.243

3–2" PVC CONDUITS

TEL./MH R=14.74

3–2" PVC CONDUITS 1–4" PVC CONDUIT

Fabric Arch Bu
Semi–Permane

gate/security key pads

emergency box on bollard

AC units

AC unit

switch panels

gate speed bump

gate control box on concrete pad

steps & landing

gate/security key pads

landing

MATCHLINE 'C' – SHEET 4

MATCHLINE 'D' – SHEET 4

MATCHLINE 'B' – THIS SHEET

STA. 30+00

R60'

R84'

STA. 29+00 STA. 28+00 STA. 27+00 STA. 26+00 STA. 25+00 STA. 24+00 STA. 23+00 STA. 22+00

STA.25+28=STA.0+00

SMITH BOULEVARD

24'

STA. 1+00

R45'

R22'

No.502 SMITH BOULEVARD
TAX MAP No.
87.11–1–3
LANDS N/F OF
ALBANY PORT DISTRICT
COMMISSION
WESTWAY TRADING CORP.

No.106 SMITH BOULEVARD
TAX MAP No.
87.11–1–2
LANDS N/F OF
ALBANY PORT DISTRICT
COMMISSION
L.2689 P.243

No.503 SMITH BOULEVARD
TAX MAP No.
87.11–1–4
LANDS N/F OF
ALBANY PORT DISTRICT
COMMISSION
WESTWAY TRADING CORP.

WESTWAY ENTRANCE/EXIT

gate

weight station speed bump

utility pole with underground utilities

steps & landing

gas meter & piping

steps

I beam barrier

I beam with sign

I beam

structure

SITE BENCH MARK ELEV.=17.75 SOUTHEAST "X" ON BURY NUT

railroad level

wood posts

concrete gutter

chain link fence with barbed wire

foundation remains

test pit

utility pole with 3 transformers & wires cut

boring

GARAGE FF=14.77 FF=14.38 FF=15.11 FF=14.71

concrete base (Typical)

12" pipe

I beam with sign

30' 0 30' 60' FEET

SCALE: 1" = 30'

WARNING - IT IS A VIOLATION OF NEW YORK STATE EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2

FILE NAME: X:\Proj\190\190293\VD_Dwgs\CADD\ROAD RESTORATION\Roadway Reconstruction Site Plan.dwg PLOT TIME: Sat, 07 Dec 2019 – 4:12pm LAST SAVE: Sat, 07 Dec 2019 – 4:09pm BY: janderson

NO	DATE	REVISION	BY

McLaren ENGINEERING GROUP
applied ingenuity
M. G. McLaren Engineering and Land Surveying P.C.
530 Chestnut Ridge Road, Woodcliff Lake, NJ 07677
T: 201.775.5600 F: 201.746.3522 www.mgmclaren.com

PROJECT

PORT OF ALBANY ROADWAY
MARITIME TERMINAL
RECONSTRUCTION

ALBANY. NEW YORK

SHEET TITLE

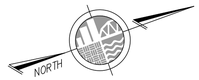
ROADWAY LAYOUT EXHIBIT
SHEET 2

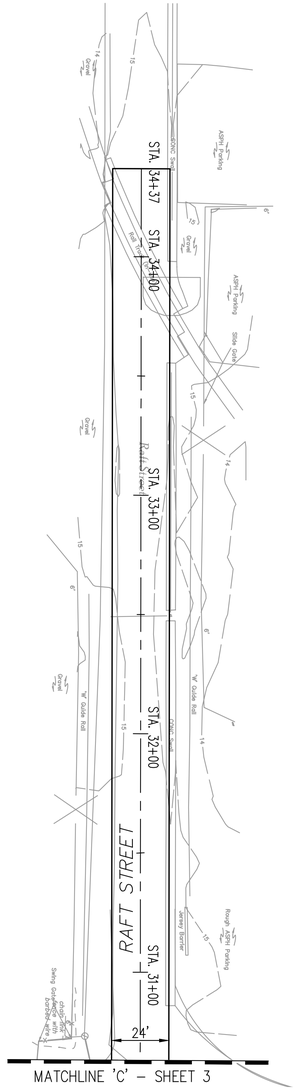
PROJECT NO.	190293
SCALE	AS SHOWN
DATE	12-06-2019
DRAWN BY	JLA
CHECKED BY	RFH

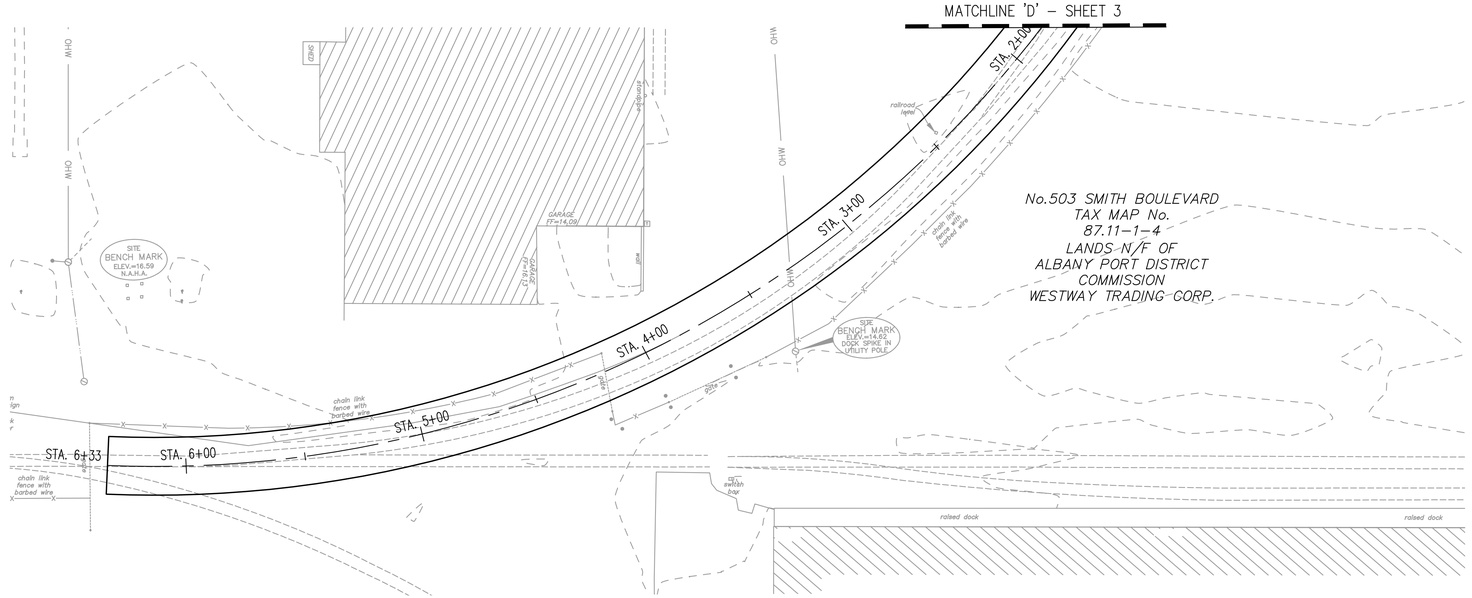
DRAWING NO.

3

3 OF 4 SHTS







30' 0 30' 60' FEET
SCALE: 1" = 30'

NO	DATE	REVISION	BY

McLaren ENGINEERING GROUP
applied ingenuity
M. G. McLaren Engineering and Land Surveying P.C.
530 Chestnut Ridge Road, Woodcliff Lake, NJ 07677
T: 201.775.5500 F: 201.445.5522 www.mgmclaren.com

PROJECT

PORT OF ALBANY ROADWAY
MARITIME TERMINAL
RECONSTRUCTION

ALBANY, NEW YORK

SHEET TITLE

ROADWAY LAYOUT EXHIBIT
SHEET 4

PROJECT NO.	190293
SCALE	AS SHOWN
DATE	12-06-2019
DRAWN BY	JLA
CHECKED BY	RFH

DRAWING NO. 4

4 OF 4 SHTS

FILE NAME= X:\Proj\901\190293\10_Dwgs\CADD\ROAD RESTORATION\Roadway Reconstruction Site Plan.dwg PLOT TIME: Sat, 07 Dec 2019 - 4:13pm LAST SAVE: Sat, 07 Dec 2019 - 4:09pm BY: janderson