FINAL 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

FGEIS Acceptance Date: __May 5, 2020__

TOWN OF BETHLEHEM
PLANNING BOARD

FINAL 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

FGEIS Acceptance Date: ___May 5, 2020_____

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iii. FIRMS/ORGANIZATIONS INVOLVED IN THE PREPARATION OF THE FGEIS

The list of firms and organizations involved in the preparation of the FGEIS are as follows:

- McFarland Johnson, Inc.
- Camoin Associates, Inc.

1. INTRODUCTION

This Final Generic Environmental Impact Statement (FGEIS) is prepared for the Port of Albany Expansion Project (formerly known as Beacon Island). Pursuant to the State Environmental Quality Review Act (SEQRA), the purpose of the FGEIS is to respond to substantive comments on the Draft Generic Environmental Impact Statement (DGEIS) and Supplemental Draft Generic Environmental Impact Statement (SDGEIS) received by the general public and all interested and involved agencies.

The DGEIS for the Port Expansion Project 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. The SDGEIS was determined acceptable for public comment by the Town on December 17, 2019. A public information meeting was held on January 6, 2020, and the public comment period ended on January 17, 2020.

Pursuant to the requirements of SEQRA, the FGEIS includes the DGEIS and SDGEIS by reference, all verbal and written comments received during the public hearing and throughout the comment period. The main purpose of this FGEIS is to respond to all applicable 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 and SDGEIS 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. The thresholds established are as follows:

Table 1.0-1: Proposed Project Thresholds

Criteria	Proposed Maximum Thresholds
Building Area	1,130,000 SF
Area of Disturbance	70 acres
Vehicle Trips	465 trips during AM peak hour, 529 trips during PM peak hour, and 151 truck trips during peak hour
Maritime Trips	21 ships/barges per year
Rail Trips	4-5 cars per day (on existing scheduled trains), 2 unit trains per month

Impervious Surface	50 acres
Water Demand	16,950 gallons per day
Sewer Demand	16,950 gallons per day
Odors Threshold	0.1ppm

DGEIS Table 3.13-1: Town of Bethlehem Schedule of Area, Yard, and Bulk Requirements

Feature	Required	Proposed
Minimum lot size, nonresidential	5 acres	81.62 acres
Minimum front yard, from right-of-way	100 feet	1284 feet
Minimum front yard, from center line	125 feet	N/A
Minimum side yard	25 feet	308 feet
Minimum rear yard	50 feet	753 feet
Minimum highway frontage	150 feet	N/A [(1)]
Maximum height	The lesser of four stories or 60 feet	85 feet[(2)]
Minimum lot depth	200 feet	2850 feet
Minimum lot width	150 feet	757 feet
Maximum lot coverage	30%	15.9% [(3)]

[(1)] Site is a pre-existing nonconforming lot per zoning law. Highway frontage not met, and is permitted for development so long as no change that would increase nonconformity
[(2)] Variance request needed
[(3)]1,130,000 sf two-story building has a footprint of 565,000 sf

1.1. SUMMARY OF WRITTEN COMMENTS

Section 2 of the FGEIS provides a table of applicable comments raised during the public hearing. public meeting, and written comments received during the comment period. Comments addressed herein include those received in writing from agencies and the general public, as well as those comments made by the speakers at the public hearing and public meeting. All written

comments are included in **Appendix A of the FGEIS** and the transcript from the public hearing is included in **Appendix K of the FGEIS**.

2. TABLE OF COMMENTS

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT (DGEIS)

In accordance with 6 NYCRR Part 617.9(b)(8), the FGEIS must respond to substantive comments received. The following table identifies substantive comments received during the public comment period specific to environmental impacts associated with the Albany Port District Commission Port of Albany Expansion Project. Comments received during the public comment period are not relevant to the evaluation and identification of environmental impacts, the development of appropriate mitigation measures, or comments that concur with or object to the proposed action without elaboration are not included in this table. However, such comments are considered by the Lead Agency and are incorporated into the public record. To avoid unnecessary repetition, several broad categories or topic areas have been created based on the topic areas evaluated in the DGEIS so that related comments could be grouped appropriately. Many comments could fall under more than one topic, but to avoid repetition have been addressed within a single topic area or category. Also, several commenters provided comments on multiple topic areas and those comments are reflected below.

Topic Area	Name/ Agency	Source	Overview of Comment
1.1 Executive Summary	MJ Engineering	Written Comment Letter, September 13, 2019	Project improvements are categorized as proposed private and public. Confirm under public improvements that the off-site water system and potentially sanitary sewer would not also be considered public if all or portions of that work would be conveyed to the utility provider.
1.2 Proposed Action	MJ Engineering	Written Comment Letter, September 13, 2019	First paragraph should include a description of the proposed three phases of development (the phase descriptions will need to be consistent with Section 2.3. Proposed Action and phases evaluated in Section 3.7 Traffic and Transportation).
1.3 Potential Significant	MJ Engineering	Written Comment Letter,	This section shall be expanded to include all impacts, even if the project proposed appropriate

Adverse Impacts		September 13, 2019	mitigation measures, not just impacts that cannot be avoided.
1.3 Potential Significant Adverse Impacts	MJ Engineering	Written Comment Letter, September 13, 2019	For ease of review by the general public it may be better suited to list all potential impacts by topical area in tabular form.
1.4 Proposed Mitigation Measures	MJ Engineering	Written Comment Letter, September 13, 2019	For ease of review by the general public it may be better suited to list all mitigation measures and thresholds triggering those mitigation measures being considered by topical area in tabular form.
1.4.5 Groundwater	MJ Engineering	Written Comment Letter, September 13, 2019	In the first sentence of the paragraph delete "State Department of Conservation" and replace with NYSDEC as it is an acronym identified within the DGEIS.
1.4.8 Drainage	MJ Engineering	Written Comment Letter, September 13, 2019	The first sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.
1.4.8 Drainage	MJ Engineering	Written Comment Letter, September 13, 2019	It is understood the project will seek coverage under GP-0-15-002 and shall be stated. It shall be noted that GP-0-15-002 will expire in January of 2020 and replaced with GP-0-20-001. The NYSDEC has yet to define a transition period and there is a potential that this project may need to seek coverage under the new General Permit.
1.5 Considered	MJ Engineering	Written Comment Letter,	Provide a table summarizing all alternatives evaluated. This table may include alternative name, description of anticipated uses, square footage of structure, etc.

Alternatives		September 13, 2019	
1.5 Considered Alternatives	MJ Engineering	Written Comment Letter, September 13, 2019	There is reference that under this alternative that the site would remain as Heavy Industrial. This is an erroneous statement since the development plan does not ask for a change in the site's current zoning designation.
1.6 Matters to be Decided	MJ Engineering	Written Comment Letter, September 13, 2019	Include "Planning Board" after Town of Bethlehem in the first sentence for clarity of which regulatory body at the Town level is the Lead Agency.
1.6 Matters to be Decided	MJ Engineering	Written Comment Letter, September 13, 2019	Modify text to reflect that the Planning Board will issue a Statement of Findings in accordance with SEQRA upon completion of the FGEIS. Once SEQRA has been completed, the Planning Board will conduct a preliminary site plan review.
1.6.1 List of Required Permits and Approvals	MJ Engineering	Written Comment Letter, September 13, 2019	Delete Town of Bethlehem Engineering Department as they are a subset of the Department of Public Works. This edit shall be made globally in the DGEIS.
1.6.3 List of Required Permits and Approvals	MJ Engineering	Written Comment Letter, September 13, 2019	This section will restate the information presented in Section 2.6. There are discrepancies between the two section, missing permits required, or actions listed under the incorrect agency: a. Under USACE, if the project site is not within the Town of Bethlehem's approved water supply service area, then a Joint Application will be necessary. Add this approval if deemed necessary. b. Under NYSDEC, delete "Stormwater MS4 Permit". It is correctly listed under Town of Bethlehem Engineering. c. Under NYSDEC, if the project site is not within the Town of Bethlehem's approved water supply service area, then a Water Withdrawal

			Application Supplement WW-1 will be necessary from the NYSDEC. Add this approval if deemed necessary. d. Under NYSDEC, for the individual Wastewater Permit, state the applicable General Permit number. e. Under NYSDEC, list the need to gain coverage under General Permit GP-0-15-002 for Stormwater Discharges from Construction Activities. f. Under Albany County Health Department, this approval appears to be for public water systems improvement pursuant to the scope of work outlined in the Engineering Department memorandum. As such, this should be reworded to state "Application for Approval of Plans for Public Water Supply Improvements Form DOH-348". g. Under Town of Bethlehem Engineering, retitle to Town of Bethlehem Department of Public Works. h. Under Town of Bethlehem Engineering (retitled to Town of Bethlehem Department of Public Works), delete "Stormwater MS4 Permit" and replace with "MS4 SWPPP Acceptance Form". i. Under Town of Bethlehem Engineering (retitled to Town of Bethlehem Department of Public Works), add "5-acre Disturbance Waiver Request. j. In the event the Town's existing water district needs to be extended to include the site, Town of Bethlehem Town Board acceptance of a Map, Plan and Report and approval of the district extension will be necessary and shall be noted. k. Add the Town of Bethlehem Town Board for the acceptance of water system infrastructure improvements planned to supply the project. l. Add Albany County Planning Board for issuance of a recommendation under a 239 M and N referral. m. In the event the Town's existing sewer district needs to be extended to include the site for

			treatment of sewage by the Town of Bethlehem, Town of Bethlehem Town Board acceptance of a Map, Plan and Report and approval of the district extension will be necessary and shall be noted. n. If the Owner decides to pursue the approach of sending sewage to the Albany County facility, please note the need for an intermunicipal agreement between the County and the Town of Bethlehem.
2.1Project Location	MJ Engineering	Written Comment Letter, September 13, 2019	Provide a site location map within the text for easy reference.
2.2 Site Description	MJ Engineering	Written Comment Letter, September 13, 2019	In the first sentence, the term “natural” is unclear. If this is intended to mean “undeveloped” state as such.
2.3 Description of Proposed Action	MJ Engineering	Written Comment Letter, September 13, 2019	Three phases of development are mentioned but not explained (i.e. square footage for each phase). Each phase should be clearly described as this is important to establishing thresholds for possible future mitigation.
2.3 Description of Proposed Action	MJ Engineering	Written Comment Letter, September 13, 2019	The maximum development scenario directs the reader to Figure 2.3-1 to view this site concept. There should also be a reference to where the alternate site concepts can be viewed (Appendix O).
2.3 Description of Proposed Action	MJ Engineering	Written Comment Letter, September 13, 2019	Figure 2.3-1 should follow section 2.3-1.
2.3 Description of	MJ Engineering	Written Comment Letter,	Identify the existing zoning designation for the site pursuant to the most current zoning map for the Town of Bethlehem. This would be suitable

Proposed Action		September 13, 2019	prior to the listed permitted use discussed in this section.
2.5 Construction Activities	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	The bridge design proposal should have enough hydraulic opening to allow passage for anticipated high flows (vessel traffic may need to be consideration as well), span the entirety of the Creek without any pier structures, and be designed so that the abutments are placed at a distance of at least 1.25 x's stream bed width.
2.5 Construction Activities	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	Proposals to significantly alter the existing condition of the shoreline (sheet pile or concrete vertical walls, elevation increases, etc.) are not generally compatible with Article 15 standards and alternative considerations should be evaluated and presented with an application for permit, discussing justification for the chosen alternatives. Work windows (September 1-November 30) to reduce impacts to naturals resources will likely be incorporated if a permit is issued.
2.5 Construction Activities	Jim Carreiro	Public Hearing Comment, September 3, 2019	During construction when coal ash is disturbed, will there be sufficient protections to protect water supply? I am concerned the remediation being recommended may be sufficient, but if it doesn't work or if there is a disaster, where is this leaching into the Hudson River and will it go into our water supply?
2.5 Construction Activities	MJ Engineering	Written Comment Letter, September 13, 2019	In the first sentence of the second paragraph "1.1.3" should be replaced with "1.13".
2.5 Construction Activities	MJ Engineering	Written Comment Letter, September 13, 2019	The second paragraph mentions the project may be constructed in a single phase or up to three phases. For the phased approach, a graphic example would be beneficial to understand location and whether it is achievable/realistic.

2.5 Construction Activities	MJ Engineering	Written Comment Letter, September 13, 2019	The section notes that a 5-acre disturbance waiver will be required. This statement shall be rewritten indicating that a 5-acre disturbance waiver request will be submitted to the Town of Bethlehem DPW for review and approval. This is a discretionary decision of the Town that may or may not be approved based upon the merits of the request. Further, if approved, it may be rescinded at any time based upon observed performance.
2.5 Construction Activities	MJ Engineering	Written Comment Letter, September 13, 2019	There needs to be a discussion of construction phase noise impacts, reference to the Town of Bethlehem's Town Code, Chapter 81 and the project will comply with this chapter.
2.6 Required Approvals	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	Project will require the following permits: • Protection of Waters Permits (for Hudson River work and the proposed bridge over the Normans Kill) • Water Quality Certification • Approval of the cap over the remediations area/site • Sewer and Water district extensions/approvals
2.6 Required Approvals	MJ Engineering	Written Comment Letter, September 13, 2019	This section will restate the information presented in Section 1.6.3. There are discrepancies between the two section, missing permits required, or actions listed under the incorrect agency. a. Under Town of Bethlehem Planning Board, acceptance of new water and sewer mains are listed as being under their jurisdiction. This is an action subject to Town of Bethlehem Town Board approval. b. Under Town of Bethlehem Planning Board, 5-acre Waiver approval is listed as being under their jurisdiction. This is an approval considered by and issued by the Town of Bethlehem Department of Public Works.

			c. Under Town of Bethlehem Department of Public Works, add issuance of MS4 SWPPP Acceptance Form and approval of 5-acre Disturbance Waiver. d. Under Albany County Planning Board, b should be rewritten to state 239 M and N referral. e. Under New York State Department of Environmental Conservation, identify whether a Water Supply Application is necessary for the extension of the Town of Bethlehem's water supply area.
2.7 Purpose and Process of SEQRA	MJ Engineering	Written Comment Letter, September 13, 2019	Expand to identify what process steps have occurred for this project and when – preparation of EAF, determination of significance, lead agency, public scoping, public hearing, public comment period, etc.
2.7 Purpose and Process of SEQRA	MJ Engineering	Written Comment Letter, September 13, 2019	Include a list/table of all steps in the SEQRA process specific to this project, including dates.
3.1 Soils, Geology and Topography	John Smolinsky	Written Comment, August 14, 2019	1**a)** 3.1.2, pages 3-4, para 2 and 3-6, para 1 - Give examples of "further investigations" and the general circumstances when they would be required and the thresholds that trigger them. **1b)** 3.1.3 Dynamic Compaction – What are the hours of the dynamic compaction operations? How many days/week? **1c)** Will there be off-site monitoring of noise and vibration? Where will it/they be located? How will monitoring be reported and what are the remedial actions if impacts are excessive? **1d)** Is dynamic compaction proposed for the entire site? What methods will be used on other parts of the site? **1e)** If off-site disposal of cut material is necessary, where is the disposal site? What is the permitting process?

			1f) When is an underwater dredging plan submitted? What are the potential upstream and downstream impacts on the Hudson River considering currents, tides and boat traffic and wakes? **1g)** Are there alternative site preparation and construction and disposal methods? Are they the same for all four development scenarios?
3.1 Soils, Geology and Topography	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	For commercial or industrial use at Brownfield Cleanup, Environmental Remediation and State Superfund sites (of which this site is not currently), the Department would typically require a cover system over remaining contaminated soil. Language for the standard remedial element of a cover system at a commercial or industrial site is as follows: "A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs."
3.1 Soils, Geology and	NYSDEC	Written Comment August 30, 2019	Dredging along the Hudson shoreline is under consideration in conjunction with the Wharf option. The shoreline of the property along the Hudson River is currently comprised of native rock, stone rip rap, and concrete grouted sloped

Topography		Revised September 13, 2019	banks. The slope is gentle and naturally vegetated in many locations. Alternatives to the impacts of dredging must be considered and presented as part of any application to dredge. Proposals must also be considered and presented as part of any application to dredge. Proposals must also be reduced to the minimum extent necessary and the need justified. Work windows (September 1 – November 30) to reduce impacts to naturals resources will likely be incorporated if a permit is issued.
3.1 Soils, Geology and Topography	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	Any material that will be dredged from the Hudson River must be sampled and analyzed for contaminants of concern – especially PCB's. Recommended sampling methods and the list of contaminants are both contained in TOGS 5.1.9 Chapter II. Table 1 of the TOGS is outdated as far as the most applicable EPA Methods. Instead of the listed method, the applicant should choose the method with a practical quantification limit (PQL) that is sufficiently sensitive to allow a meaningful comparison to the Class A threshold for that parameter. If there is no sufficiently sensitive analytical method, then choose the method with the lowest PQL. There are additional procedures that should be followed in order to qualify for upland management of any dredge material (BUD) on the property.
3.1 Soils, Geology and Topography	Jim Carreiro	Public Hearing Comment, September 3, 2019	The second part is the ongoing remediation. Are we going to be able to monitor what is coming out of this because once you disturb these fields, will we have the ability to maintain monitoring and make sure that it, again, doesn't get into our water supply? Imagine the disaster that would occur, if there were to be a mistake and do we have a sufficient protection, with an insurance, to make sure that our community's water supply is not significantly tainted.

3.1 Soils, Geology and Topography	Gianna Aiezza	Public Hearing Comment, September 3, 2019	Are you working with the DEC regarding the fly ash? Who would be the responsible party or the permitee under Part 375?
3.1 Soils, Geology and Topography	MJ Engineering	Written Comment Letter, September 13, 2019	The discussion presented in Section 3.1.3 in its entirely provides substantive discussion of the dynamic compaction process and that there will be no vibration that would reach damaging levels effecting adjacent structures. This discussion provides both the potential impact and a technical data that there will be no adverse impact relating to excess vibration. While the Scoping Document requests this discussion in Section 3.1.4, it may be more appropriate in Section 3.1.2.
3.1 Soils, Geology and Topography	MJ Engineering	Written Comment Letter, September 13, 2019	There should also be a discussion if dynamic compaction will achieve the audible ranges for parcels in proximity to the site.
3.1 Soils, Geology and Topography	MJ Engineering	Written Comment Letter, September 13, 2019	3.1.2 states "…the project will be designed to balance earthwork and therefore no on-site soil will be removed from the project site." While 3.1.3 states "It is possible that some coal ash may need to be transported off-site…" Clarify which statement is accurate.
3.1 Soils, Geology and Topography	MJ Engineering	Written Comment Letter, September 13, 2019	There should be mention of the need to prepare a SWPPP that addresses both construction phase site disturbances as well as long term stormwater management practices, then referring to the appropriate section of the DGEIS for the technical discussion of the stormwater practices.
3.1 Soils, Geology and Topography	Gianna Aiezza	Written Comment, September 13, 2019	I know I asked them to add who would be response for the fly ash remediation and to discuss 6 NYCRR Part 375, but also on Page 3-6, it says construction would be completed under a Site Management Plan. This is not correct, construction would be completed through a Work Plan approved by DEC. A SMP is after the site is

			completed for future construction or maintenance once the site is "closed" with DEC. The wording in this section should be changed to say it will be completed under an approved work plan with DEC.
3.2 Vegetation and Wildlife	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	Freshwater Mussel species have been documented to potentially exist within the proposed project area. Potential impacts must be avoided and minimized. Surveys and relocation efforts may be required dependent upon the selected project.
3.2 Vegetation and Wildlife	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	Dependent on the selected project proposal SAV surveys may be required and potential impacts avoided and minimized.
3.2 Vegetation and Wildlife	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	The Department's Threatened & Endangered Species staff confirm that eagles are no longer present on the island, and therefore, impacts to eagles is unlikely.
3.2 Vegetation and Wildlife	NYSDEC	Written Comment August 30, 2019 Revised September 13, 2019	Tree removal is suggested to occur between November 1 and March 31 in order to protect potential long-eared bat habitats.
3.2 Vegetatio	NYSDEC	Written Comment	Several of the projects currently under consideration have the potential to impact protected sturgeon species known to occupy the area. Potential impacts must be avoided and

n and Wildlife		August 30, 2019 Revised September 13, 2019	minimized. For unavoidable impacts, mitigation may be necessary.
3.2 Vegetation and Wildlife	MJ Engineering	Written Comment Letter, September 13, 2019	List the NYSDEC and USFW conservation measures specific to the Northern Long-eared Bat, which may include but are not limited to installing barriers to identify tree clearing limits, not performing site construction activities after sunset or other identified BMPs.
3.2 Vegetation and Wildlife	MJ Engineering	Written Comment Letter, September 13, 2019	Identify the available mitigation measures planned to protect the Small's Knotweed and Cobra Clubtail.
3.2 Vegetation and Wildlife	NOAA	Emailed/Written Comment September 13, 2019	<u>Endangered Species Act</u> Atlantic Sturgeon Atlantic sturgeon are present in the waters of the Hudson River and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPSs) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Transient adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area to opportunistically forage. Depending on the time of year and the bottom substrate in the area, the project site could be in Atlantic sturgeon spawning habitat and early life stages could be present. Atlantic sturgeon prefer to spawn in freshwater and on hard bottom substrate. Spawning occurs from April 15 to August 31. Eggs and yolk-sac larvae could be present from April 15 to September 30. Post yolk-sac larvae could be present from April 15 to October 31. Young-of-the-year and juvenile Atlantic sturgeon could also be present in the project area.

			On August 17, 2017, NOAA Fisheries published a final rule designating critical habitat for the Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon (82 FR 39160). The effective date of the rule was September 18, 2017. The action you have proposed will occur in an area that is designated as critical habitat.
3.2 Vegetation and Wildlife	NOAA	Emailed/Written Comment September 13, 2019	*Shortnose Sturgeon* Shortnose sturgeon are present in the waters of the Hudson River and could occur in their adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. Transient juvenile and adult individuals could occur in the proposed project area to opportunistically forage. Depending on the time of year and the bottom substrate in the area, the project site could be in shortnose sturgeon spawning habitat and early life stages could be present. Shortnose sturgeon prefer to spawn in freshwater and on hard bottom substrate. Spawning occurs from March 15 to May 15. Eggs and yolk-sac larvae could be present from March 15 to June 15. Post yolk-sac larvae could be present from March 15 to July 15. Young-of-the-year and juvenile shortnose sturgeon could also be present in the project area. As project details develop, we recommend you consider the following effects of the project on sturgeon: • For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work. • For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams). • Consider the related effects to water quality if any outfalls are built (i.e., will

the standards still be met, will the effluent volume change, and will there be any effects to the species).

- For pile driving or other activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon.

Organism	Injury	Behavioral Modification
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS

Depending on the amount and duration of work that takes place in the water, listed species of sturgeon and designated critical habitat may occur within the vicinity of your proposed project. The federal action agency will be responsible for determining whether the proposed action may affect listed species. If they determine that the proposed action may affect a listed species, they should submit their determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, NMFS, Greater Atlantic Regional Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 or nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See - http://www.greateratlantic.fisheries.noaa.gov/section7. After receiving a complete, accurate comprehensive request for consultation, in

			accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact me (978-282-8490; Edith.Carson-Supino@noaa.gov).
3.2 Vegetation and Wildlife	NOAA	Emailed/Written Comment September 13, 2019	<u>Magnuson-Stevens Fishery Conservation and Management Act - Essential Fish Habitat</u> The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with us on any action or proposed action authorized, funded, or undertaken, by such agency that may adversely affect essential fish habitat (EFH) identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905. The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that: *An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.* The project area has not been designated as Essential Fish Habitat for an federally managed species. The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies

			consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated EFH. The project area identified in the DGEIS has not been designated as EFH for any federally managed species. The area does provide habitat for other NOAA trust resources covered by the FWCA including American shad, alewife, blueback herring and striped bass. In addition, wetlands, submerged aquatic vegetation and shallow water habitat provide a wide range of ecological services for a wide variety of fish and wildlife. The Clean Water Act Section 404 (b)(1) Guidelines required that impacts to these aquatic habitat be avoided and minimized to the maximum extent practicable. Compensatory mitigation should then be provided for all unavoidable impacts. If this project is authorized, funded or undertaken by a federal agency, the lead federal agency will be required to consult with us under authorities listed above. If you have any questions regarding these comments, please contact Karen Greene (732-872-3023; Karen.Greene@noaa.gov).
3.3 Regulated Wetlands and Surface Waters	USACOE	Written Comment September 5, 2019	I have no specific comments on this project to date. My office conducted a site visit to review the wetland line earlier this year. I the project will require any dredging, discharge of fill or placement of any structures over, under or within the Hudson River, then an authorization from my office pursuant to Section 10 of the Rivers and

			Harbors Act would be required. In addition, should the project require the placement of fill into the any other waters and/or wetlands, then an authorization pursuant to Section 404 of the Federal Clean Water would be required.
3.3 Regulated Wetlands and Surface Waters	MJ Engineering	Written Comment Letter, September 13, 2019	Within the text of this section identify whether the USACOE has issued a Jurisdictional Determination on the delineated freshwater wetlands located on the site. If they have, correspondences from the USACOE shall be provided as an appendix.
3.4 Floodplains and Floodways	John Smolinsky	Written Comment, August 14, 2019	Evaluate the range – from worst case to conservatively expected - of climate change scenarios regarding Hudson river flooding, water levels and flow. What consideration has been given to resiliency of the proposals considering the range of climate change scenarios?
3.4 Floodplains and Floodways	Gianna Aiezza	Written Comment, September 13, 2019	When discussing and evaluating projected seal level rise, the DGEIS should use the medium projection for analysis, not the low projection. There are five levels of projection - low, low-medium, medium, high-medium and high. The medium projection is the amount of sea-level rise that is about as likely as not and is a more appropriate projection to be using for analysis than the low projection - it is not conservative enough to use the low projection. Also, is the discussion on the impact to the flood plain taking into consideration the 1' cover that would be required for the fly ash? This should be clarified and should be taken into account if it is not.
3.4 Floodplains and Floodways	MJ Engineering	Written Comment Letter, September 13, 2019	This section notes the project will use floodplain design standards that meet or exceed floodplain development requirements and building codes. Provide a list of the measures that will meet or exceed the referenced standards.
3.4 Floodplain	MJ Engineering	Written Comment Letter,	Reference should be made that a Floodplain Development Permit application pursuant to Bethlehem Town Code Chapter 69-Flood Damage

s and Floodways		September 13, 2019	Prevention will need to be provided to the Town Building Division for review and approval by the Town Building Inspector.
3.4 Floodplains and Floodways	NYSDEC	Written Comment September 13, 2019	The Community Risk and Resiliency Act (CRRA) was signed on September 22, 2014. CRRA applies to all major permit application under Article 15 (Protection of Waters), and adds mitigation of sea-level rise, storm surge and flooding to Smart Growth Public Infrastructure Policy Act criteria and guidance. CRAA requires consideration of sea-level rise, storm surge and flooding in specified facility-siting regulations, permits and funding programs. Things that should be evaluated in the DEIS relative to this project include location, design, risk analysis and operational considerations to address sea level rise and create greater resiliency for communities, infrastructure, and ecosystems.
3.6 Climate and Air Quality	Thomas Goodfellow	Written Comment, August 14, 2019	I am concerned about mitigating any negative environmental effects of the project on the disparaged communities in the South End and Pastures areas of the City of Albany. These areas already suffer great environmental and social injustice from the volume of diesel traffic in their neighborhoods, the proximity to I-787 auto emission pollution and proximity to the “bomb train” yards at and adjacent to the Port facilities. Any project developed must consider the impact and mitigate any further deterioration of environmental justice on the neighboring communities.
3.6 Climate and Air Quality	Gianna Aiezza	Written Comment, September 3, 2019	I will have the same comment on the air quality section. They did not discuss the results of the DEC’s air quality study. It has been going on for the last few years and the data is not too old to consider. It is a comprehensive study with actual data and it is important to be considered when looking at project impacts in the Port.

3.6 Climate and Air Quality	Gianna Aiezza	Written Comment, September 13, 2019	Air Quality - This section did not address potential VOC emissions, potential combustion emissions (NOx, etc) or PM. In addition, it did not discuss the DEC's air quality study as requested - it said there was a study that showed no impacts but that is not accurate. There were black carbon and PM measurements related to truck traffic and this should be discussed in relation to the anticipated increase in trucks. It showed that Ezra Prentice had emissions similar to a city, yes, but it was not proportionate to the size of the city. They definitely had impacts related to traffic. The potential for odors should be discussed and a threshold identified for odor. Emissions from the potential tenant would be handled under an air permit with DEC with the exception of mobile sources and odors. Mobile sources are not permitted and odor is not necessarily covered in an air permit. Section 3.6.3 - It cannot be assumed that the emissions increases from trucks are considered to be low if a trucking facility was to be the tenant. A threshold needs to be identified for this section. Also, under Air Quality it says odors are unlikely, but this cannot be known if a tenant is unknown. A threshold for potential odor needs to be identified. What if an asphalt storage facility became the tenant? It would potentially meet the other thresholds but could create an odor problem. The thresholds for each section need to be added to the DGEIS so it is clear what they are. I know there was a table at the presentation but it needs to be incorporated into the Report.
3.6 Climate and Air Quality	New York State Attorney General's Office	Written Comment Letter, September 13, 2019	Ezra Prentice is a low-income public housing project in Albany's South End. It is a potential environmental justice area because it suffers a disproportionate adverse environmental impact when compared to other communities. The Ezra Prentice community is exposed to noise and air pollution from traffic along South Pearl Street,

		Revised September 16, 2019	from I-787, the adjacent rail yard, an Albany County wastewater treatment plant, and from a nearby bulk petroleum storage and marine transfer facility. The project has the potential to exacerbate air pollution and quality of life problems at Ezra Prentice by increasing car and truck traffic along South Pearl Street and increasing adjacent rail operations. Currently air monitoring indicates that benzene concentrations are higher than most other urban monitors in the state, as well as other concerning items including particulate matter. Current monitoring indicate that diesel trucks are large causes of the concentrations at Ezra Prentice.
3.7 Traffic and Transport ation	John Smolinsky	Written Comment, August 14, 2019	Address the potential circumstances and mitigation of oversize truck loads including routing, closures, delays and frequency.
3.7 Traffic and Transport ation	Town of Bethlehem Police Department	Written Comment, August 16, 2019	As a member of the Town's joint traffic safety committee and ex-officio member of the Town bike pedestrian committee, it should be noted that the River Road corridor is specifically one of our highest crash stretches in the Town. As this is a 55 MPH roadway, any additional entry/exit roads should be carefully vetted for safety recommendations and traffic impacts. As you are aware the River/Glenmont and River/Anders intersections have been approved by the state for additional safety signage. These areas are within our GTSC grant target area and require extra patrols to reduce crashes and mitigate traffic concerns. The concept of off ramps, or specialized turning roads in these areas or as related to River Road could be extremely beneficial in maintain the safety of the state roadway. It would be in our best interest to include any traffic changes with the plan, as opposed to

			formulating them after its inception. Thank you for your consideration.
3.7 Traffic and Transportation	Brian Gyory	Written Comment, August 19, 2019	General confusion as to the "intended route". Applicant indicated that 100% of traffic at exit 23 would be flowing through and not turning onto 9w, but the figures don't reflect that. In addition it as indicated that the Ezra Prentice neighborhood will not be experiencing any additional truck traffic, but the figures shown do not show this.
3.7 Traffic and Transportation	Brian Gyory	Written Comment, August 19, 2019	Provide a clear concise narrative showing the number of trucks and cars expected to use the site (threshold) and the route map showing intended traffic route and how the project would enforce this.
3.7 Traffic and Transportation	Brian Gyory	Written Comment, August 19, 2019	Report states no impact on pedestrian and bicycle network, please provide backup documentation as to what was looked at here and explain how this project will not impact pedestrians and bikes both within the project site limits as well as the entire network
3.7 Traffic and Transportation	Gianna Aiezza	Written Comment, September 1, 2019	I am requesting that they come prepared with maps to illustrate their assumptions and to have clearly marked the routes and residential neighborhoods including Ezra Prentice. It is clear that traffic will impact them contrary to what Steve said at the meeting when we accepted the EIS as complete. The EIS says nothing about not allowing traffic to go by that neighborhood as he stated so they need to be prepared to fully discuss the traffic section in relation to that neighborhood as well as other residential neighborhoods. Furthermore, they did not take into account and discuss the traffic study conducted by CDTC in May 2018. I specially asked during scoping that they discuss that study in the EIS. They claim in the report the data from the DEC report is too old however the CDTC report was issued in May 2018 and extremely relevant and it was not done by the DEC. Furthermore the CDTC study focuses on the exact area they are looking to increase truck traffic. A link to the

			report is below. I am requesting that the Port review it and be ready to discuss it at the meeting. I am also requesting that they revise their report (obviously not before Tuesday) to discuss the findings and how they relate to their findings and the proposed increases in trick traffic. I would like them to be prepared to discuss it for Tuesday. This is not a new request so they should have already reviewed it as I specifically asked during scoping that they review all of the studies done in this neighborhood and discuss them in the EIS. https://www.cdtcmpo.org/images/freight/S-Pearl-HV-Draft-May-25-2018_rev.pdf
3.7 Traffic and Transportation	Jeffery Beal	Public Hearing Comment, September 3, 2019	Has a traffic circle been discussed at the main intersection to the Port? I wonder if a circle would be more appropriate at that intersection instead of a light and a turn lane to facilitate the greater flow of traffic.
3.7 Traffic and Transportation	Jeffery Beal	Public Hearing Comment, September 3, 2019	The new proposed south entrance is very tricky. When you're travelling southbound on 144, or River Road, it is already a relatively blind turn. The speed limit is 55 miles per hour, the road does a zigzag, and you're going downhill around the Port . It will be tricky.
3.7 Traffic and Transportation	Jeffery Beal	Public Hearing Comment, September 3, 2019	Missed intersection of 144 and Wemple Road, which is already a very tricky intersection. The Town has commented on the uniqueness of that intersection and with additional workers potentially coming along 144 this intersection is critical.
3.7 Traffic and Transportation	Patti Beeler	Public Hearing Comment, September 3, 2019	The amount of traffic on the 9W north merge on to 787 is a concern. Traffic flies out from the thruway and the Port merge is to the right. There are some pretty serious traffic issues at that location.
3.7 Traffic and	Brian Gyory	Public Hearing Comment,	Who owns Port Road?

Transport ation		September 3, 2019	
3.7 Traffic and Transport ation	Brian Gyory	Public Hearing Comment, September 3, 2019	Bike network south end connector, has that route been evaluated and looked at?
3.7 Traffic and Transport ation	Brian Gyory	Public Hearing Comment, September 3, 2019	Onramp from 787 from 9W and if the majority of truck traffic. Need to document the capacity of the truck route
3.7 Traffic and Transport ation	Gianna Aiezza	Public Hearing Comment, September 3, 2019	Are there any upgrades to the Port roads recommended?
3.7 Traffic and Transport ation	Gianna Aiezza	Public Hearing Comment, September 3, 2019	Can the Planning Board do more than allow the Port to recommend truck traffic be routed through lease means? Can there be something more than recommend that is enforceable?
3.7 Traffic and Transport ation	Gianna Aiezza	Public Hearing Comment, September 3, 2019	Is there a rail-staging area of tracks behind Ezra Prentice and could we have those tracks specifically addressed and any impacts of those addressed. If the Port is to have no impact on those tracks, if that can be pointed out.
3.7 Traffic and Transport ation	John Smolinsky	Written Comment, September 13, 2019	Evaluate the moves required for truck traffic to access I-787 via Thruway Exit 23 or 9W ramp and to travel onto the Port Exit Ramp. Address the adequacy and safety of the required maneuvers to accomplish the applicant's preferred truck route. Comments from NYS DOT and NYS Thruway Authority would also be useful information.
3.7 Traffic and Transport ation	John Smolinsky	Written Comment, September 13, 2019	The applicant's preferred truck route may parallel and cross the proposed bicycle path connecting the Albany County Helderberg Hudson Rail trail and the Hudson Mohawk bike trail in Corning

			Park. The routes and proximity of the of the Truck and bike routes should be discussed and any mitigation or other measures to ensure safe operation of both should be discussed.
3.7 Traffic and Transportation	NYSDEC	Written Comment Letter, September 13, 2019	The DEIS discusses potential increases in vehicle traffic utilizing the Port expansion area. A discussion of anticipated increased vessel traffic should be included in the DEIS, as well as any anticipated impacts on river traffic, sturgeon or other potential impacts.
3.7 Traffic and Transportation	MJ Engineering	Written Comment Letter, September 13, 2019	Provide a summary of the methodologies, findings and conclusions from the Traffic Impact Study (TIS) rather than copying the TIS language.
3.7 Traffic and Transportation	MJ Engineering	Written Comment Letter, September 13, 2019	See TIS (Appendix I) for comments pertaining to the content.
3.7 Traffic and Transportation	MJ Engineering	Written Comment Letter, September 13, 2019	Related to oversized load transports, provide any correspondence from NYSDOT that confirms the CHA referenced Traffic Control Plan is the preferred travel route. How are the procedures in the Plan applicable to this project? Describe the travel route for oversize load transports, origin and destination, associated with the Port of Albany project and identify roadways in the Town of Bethlehem that may be affected.
3.7 Traffic and Transportation	MJ Engineering	Written Comment Letter, September 13, 2019	The Feura Bush Road/Glenmont Road intersection is currently in the design phase for a roundabout, as identified in the traffic impact study, and currently under review by NYSDOT. Describe how any oversized load transport route through this intersection can be accommodated by the roundabout design. Are modifications necessary?
3.7 Traffic and	MJ Engineering	Written Comment Letter,	River Road will serve as the major north-south route for vehicles to access the site as identified by the trip distribution figures. Describe the

Transport ation		September 13, 2019	existing conditions/environment along River Road, ownership, daily traffic volume, posted speed limit, 85th %-ile speed, percentage of daily truck traffic, accident patterns, etc.
3.7 Traffic and Transport ation	MJ Engineering	Written Comment Letter, September 13, 2019	South Port Road will serve as the major access location for traffic entering/exiting the site. Describe the existing conditions/environment of South Port Road including but not limited to pavement conditions, roadway width, travel lanes, shoulders, ownership, etc. Is the road fully owned by the Town or is it a highway by use roadway and adjacent property owners have rights to the land? What are the impacts to the current roadway condition due to the proposed increase in traffic (vehicle and truck) and what is the mitigation? Does the road need to be widened? Identify distance? What entity will own and maintain new roadway improvements?
3.7 Traffic and Transport ation	MJ Engineering	Written Comment Letter, September 13, 2019	All concept maps identify "Proposed Access Acquisition" along a triangular shaped area along west side of Port Road South just north of the new bridge. Identify current ownership and acquisition options.
3.7 Traffic and Transport ation	Gianna Aiezza	Written Comment, September 13, 2019	Page 3-49 in the traffic section said it is assumed that no trucks would use Glenmont Road. This assumption is not realistic, as the Cumberland Farms is in this direction and it is likely that some trucks would go this way for fuel and the amenities. From Cumberland Farms it is easy to get back on the highway - both 787 and the Thruway. This is the closest store of this kind and there is a high volume of trucks there at any given time of day. This location was a former Tuck Stop and it is unrealistic to say no trucks will go this way.
3.7 Traffic and Transport ation	Gianna Aiezza	Written Comment, September 13, 2019	Please add a map showing the roads being discussed to this section of the Report. It is helpful to have in this section.

3.7 Traffic and Transportation	Gianna Aiezza	Written Comment, September 13, 2019	Signal Warrant Analysis - if Glenmont Rd & 144 meets the criteria for a signal, it should be considered regardless of the gap analysis. Especially considering that it is unrealistic to think no trucks will use this route given the access to Cumberland Farms and the truck fueling station located there.
3.7 Traffic and Transportation	Gianna Aiezza	Written Comment, September 13, 2019	Please address my comments on the rail I made at the public hearing and address my comment that this is not necessarily the most conservative scenario for truck traffic. A smaller building with a trucking facility and truck storage would be a worse scenario for truck traffic.
3.7 Traffic and Transportation	Gianna Aiezza	Written Comment, September 13, 2019	As discussed at the public hearing, please revise the Report to say they will require tucks go through the Port and how they will do that including how they will check compliance with the requirement. Also discuss the Port road upgrades that will make that feasible.
3.7 Traffic and Transportation	Gianna Aiezza	Written Comment, September 13, 2019	Add a discussion of the traffic study conducted by CDTC in May 2018 and discuss relevant information from that study in this section where appropriate.
3.7 Traffic and Transportation	NYSDOT	Written Comment Letter, September 14, 2019	The NYSDOT acknowledges that the Town of Bethlehem will be designated as the Lead Agency for this environmental review. NYSDOT believes we are an involved agency under SEQR given that access to the proposed extension is provided by State Route 32.
3.7 Traffic and Transportation	NYSDOT	Written Comment Letter, September 14, 2019	The NYSDOT recommends an expanded discussion regarding existing Environmental Justice concerns along Route 32 (South Pearl Street) corridor north of the proposed expansion.
3.7 Traffic and Transportation	NYSDOT	Written Comment Letter,	A NYSDOT Highway Work Permit would be required for any work proposed within the State Row-of-Way.

		September 14, 2019	
3.7 Traffic and Transportation	NYSDOT	Written Comment Letter, September 14, 2019	With respect to the Region 1-Traffic comments on the Traffic Study provided and including our crash analysis of the Route 32/144 intersection: a. Route 32 @ Route 144: recommendation is to install a traffic signal b. Signal warrant analysis is Appendix D, page 313 indicates Warrant 1B is met c. Warrant 1B 70% volume is to be used, "…if the posted or statutory speed limit or 85% speed on the major street exceeds 40 MPH, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000…" Neither of these conditions apply. d. The "Should Signal Be Considered" row in the "Warrants Met" table on page 313 is shown as NO. e. Warrant 2: Four Hour Vehicular Volume, Figure 4C-1 on page 315 plots all 4 points below "2 OR MORE LANES & 1 LANE", yet concludes 3 out of the four hours meet warrant 2. No hours meet warrant 2. f. Warrant 3: All three items in paragraph A are not met, therefore this warrant is not met. Also, paragraph A2: volume on minor street approach exceeds 150 vph for two moving lanes. None of the minor street volumes shown in the traffic volume data table on page 313 are over 150. g. Crash analysis was not completed. h. The Department evaluated the most recently available 5 years of crash data from the intersection. Warrant 7, Crash Experience is not met.

			i. Level-of-service is not a warrant for traffic signals
3.7 Traffic and Transportation	NYSDOT	Written Comment Letter, September 14, 2019	The Department does not concur with the consultant's recommendation for the installation of a traffic signal at the intersection of Route 32 and Route 144.
3.7 Traffic and Transportation	Brian Gyory	Written Comment, September 14, 2019	How is the "intended route" followed. Is this the current way the port is working with tenants. Please provide additional details on current traffic from port and how this will affect the surrounding neighborhoods (including Ezra Prentice).
3.7 Traffic and Transportation	Brian Gyory	Written Comment, September 14, 2019	New intersections should be looked at to the same level as original intersections identified in draft scoping document. All ramps/portions of exit 23 as well as intersection of Wemple and River Road (144).
3.7 Traffic and Transportation	Brian Gyory	Written Comment, September 14, 2019	Bike network. How does this project impact the Albany South End Bikeway connector which is set to be constructed soon (along the same route as trucks are supposed to take for this project).
3.8 Drainage	Brian Gyory	Written Comment, August 19, 2019	Commented earlier about green infrastructure. No mention of these comments-in terms of viability of it. It is mentioned in the report, but due to fly ash the system would need to be lined. This should be mentioned and considered as to whether this type of stormwater management is practicable on site. General threshold information should be provided here, for the design at hand how much stormwater will be managed and how would it be managed (size of practices, etc)
3.8 Drainage	John Smolinsky	Written Comment, September 13, 2019	What is the potential for leachate or run-off from the site during soil compaction, land disturbance, construction, and post-construction? Fully describe the measures necessary to monitor and evaluate any discharges during each phase of site development.

3.8 Drainage	MJ Engineering	Written Comment Letter, September 13, 2019	In the first paragraph, fourth sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.
3.8 Drainage	MJ Engineering	Written Comment Letter, September 13, 2019	Within this section, following the first paragraph, mitigate measures are listed. Further explanation of how the project will mitigate increased peak runoff rate during and after construction is necessary. The Existing and Proposed Hydrology tables do not support this statement as Drainage Area 3 and 4 have substantial increases in runoff for all storm events under the developed site condition.
3.8 Drainage	MJ Engineering	Written Comment Letter, September 13, 2019	The DGEIS notes the water quality practices being proposed including bioretention and stormwater ponds. Provide the NYSDEC designation for each practice proposed. (e.g. Bioretention is a F-5 designation).
3.8 Drainage	Brian Gyory	Written Comment, September 14, 2019	Green Infrastructure-It is mentioned that the site is contaminated with Fly Ash. Please elaborate on factors/considerations for stormwater management on site (no infiltration, just filtration)
3.9 Water Service (Potable and Fire Protection)	John Smolinsky	Written Comment, August 14, 2019	Address the age and condition of existing water infrastructure that is projected to be used and necessary to support the proposal. As appropriate discuss mitigation.
3.9 Water Service (Potable and Fire	MJ Engineering	Written Comment Letter,	The section provides discrete discussion of work the Town DPW did to evaluate the technical feasibility of providing water to the project. The section needs to be expanded to talk about the Town's overall water system including source,

Protection)		September 13, 2019	treatment, storage, distribution, permitted and/or design capacities (storage, treatment), amount supplied, and system demands. Much of this information may be obtained from a recent Town of Bethlehem Water Quality Report.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	It should be stated that the project site is not fully within an existing Town of Bethlehem approved water service area and a district extension would be required to service the project site.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	There should be discussion of the source of water during construction, not just source during operation.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	The fire flow demand is stated as being 2,300 gpm at 20 psi. State whether this is a needed fire flow at on-site hydrants or demands associated with an automatic fire sprinkler system.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	Option 1 identifies the need for a tank to supply the buildings fire suppression system. Confirm Option 2 and 3 do not also require this tank. If not required, state as such. Further, the general geometry of this tank should be discussed, most importantly its height and whether it triggers any special approvals not already identified for that height or if it will be visible from identified vantage points.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	Option 2 discusses two points of connection to the Town's water system and looping of a water main through the project site. The looped water main would be dedicated to the Town as part of their distribution system. The Town does not desire to take this dedication due to the water mains location and complications of access for potential maintenance. As such, it shall be revised

			to state all on-site water mains shall be owned and operated by the project sponsor. The 2 points of connection shall require a hot box with metering and backflow prevention. Additionally, pressure reducing valves will need to be installed for both Options 2 and 3.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	It should be identified which of the two offsite water distribution system improvement options is preferred by the Town and that provides the least impact to its system In discussions with the Town, they prefer Option 3 as it provides the benefit of town system redundancy. However, the 1,200 feet of 12" water line shall be considered to be run down Old River Road instead of River Road. The second to last paragraph identifies the water demands for the alternatives being evaluated. Clarify if each demand by phase is average day, maximum day or peak hourly demands. A table presenting this data may be more appropriate covering all demand conditions for each development option being considered.
3.9 Water Service (Potable and Fire Protection)	MJ Engineering	Written Comment Letter, September 13, 2019	State that all off-site water distribution system improvements will be completed by the project sponsor, entirely at their expense and will be offered to the Town of Bethlehem following installation at no cost to the Town of Bethlehem. This paragraph should also state that water system infrastructure after the master meters and/or hot boxes shall be privately owned and operated.
3.10 Sanitary Sewer	John Smolinsky	Written Comment, August 14, 2019	Address the age and condition of existing sewer infrastructure that is projected to be used and necessary to support the proposal and, as appropriate, discuss mitigation. In the discussion of Albany County vs. Bethlehem sanitary sewer options, discuss and compare the potential of sanitary sewage overflow into the Hudson because of inadequate separation of storm water and sanitary waste. Also discuss mitigation of impacts, if any.

3.10 Sanitary Sewer	Brian Gyory	Written Comment, August 19, 2019	Additional information what the maximum threshold for daily flow from the facility will be as well as what the capacity at the Albany County facility and Town of Bethlehem facility are. In addition it was mentioned that onsite treatment was also an option. Additional detail should be included to indicate the size of this and whether it would work with existing site subsurface conditions.
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	This section identifies the connection to the Albany County Water Purification District as he preferred option and further indicates that the Port of Albany is coordinating with the Albany County Sewer District to determine the capacity to treat waste form the project. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis. This would include a hydraulic analysis of existing infrastructure and determination if the alignment would need to cross private property not under control by the project sponsor. If this is the preferred option, appropriate analysis shall be included in the DGEIS. Further, a “will serve” letter should be obtained from the Albany County Sewer District indicating their ability and willingness to serve the project. This section also needs to discuss the possible need for out of district use by Albany County. This may require a municipal agreement.
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	The section identifies two potential options for connecting to the Town of Bethlehem’s sewer system. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis. This would include a hydraulic analysis of existing infrastructure and determination if the alignment would need to cross private property not under control by the project sponsor. This option will also require the analysis of the existing Glenmont Road pump station and the elevated pipe crossing at the thruway.

3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	There is an on-site option presented for a soil based septic system. The DGEIS appears to suggest this option may be technically infeasible due to poor soil conditions. If in fact this option is not technically feasible, the DGEIS should state as such, rather than stating it is "not considered favorable".
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	There is a second on-site option presented for an on-site package treatment plant. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis.
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	This section only discusses the potential impacts from the preferred connection to the Albany County Sewer District. All options discussed in Section 3.10.1, if considered technically feasible, also need to be discussed in Section 3.10.2.
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	Since the preferred option is stated as being the connection to the Albany County Sewer District, until an appropriate technical analysis is completed, the potential impacts can not be fully defined. When a "will serve" letter is received from the Albany County Sewer District, it should be referenced in this section.
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	This section only discusses the mitigation measures for the preferred connection to the Albany County Sewer District. All options discussed in Section 3.10.1, if considered technically feasible, also need to be discussed in Section 3.10.3. The port should have the same language about the project sponsor installing the sewer infrastructure to town standards at no cost to the town. Same language should be added in the water mitigation measures.
3.10 Sanitary Sewer	MJ Engineering	Written Comment Letter, September 13, 2019	Since the preferred option is stated as being the connection to the Albany County Sewer District, until an appropriate technical analysis is completed, the mitigation measures cannot be fully defined. When a "will serve" letter is

			received from the Albany County Sewer District, it should be referenced in this section.
3.12 Aesthetic and Visual Resources	John Smolinsky	Written Comment, August 14, 2019	Illustrate the difference between the compliant 60' building height vs. 85 height which requires a variance. Discuss the applicable criteria necessary to justify a variance.
3.12 Aesthetic and Visual Resources	MJ Engineering	Written Comment Letter, September 13, 2019	In the first paragraph, correct the issue date of the NYSDEC Program Policy - Assessing and Mitigating Visual Impacts.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	In the first sentence, the term "natural" is unclear. If this is intended to mean "undeveloped" state as such.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	This section mentions the potential subdivision of the parcel. It should be noted that if there is a subdivision, it may present future regulatory approvals specific to the on-site water and sewer systems. When two parcels are serviced by a water and/or sewer main, these mains need to be listed under Section 1.6.3 and 2.6 of the DGEIS as potential additional permits/approvals being necessary.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	Table 3.13-1 identifies 2,140 feet of proposed highway frontage. Where is this highway frontage located on the parcel? If this area is the linear strip of land along existing Port Road South, it does not meet the definition of both highway frontage and lot depth. It appears the parcel may be considered a pre-existing non-conforming lot due to its irregular shaped nature along Port Road South.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter,	Provide a plan sheet showing the existing property front, side and rear yard setbacks. This will establish the existing condition of the site related to area and yard requirements.

		September 13, 2019	
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	Concept plans should show the location of the proposed Town roadway right-of-way terminus along Port Road South. Identify any change in highway frontage of the parcel.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	This section mentions if the project site were to be subdivided, the on-site roadway would become a public roadway owned by the Town or County. The Town Highway Superintendent has indicated he does not wish to own and maintain the road within the Port site. Provide any correspondence from the County indicating their acceptance of a future roadway. Should the roadway be owned and maintained by the Port of Albany as a private street address if the Town Zoning Law and Subdivision Regulations permit lots to be created with frontage on private streets serving as the minimum highway frontage.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	Should a private street travel through the site, identify on plan sheet any subdivided lots would meet the front, side, rear setbacks and all area, yard, and bulk requirements.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	Add text explaining the proposed building height of 85', which exceeds the maximum allowable height of 60 feet in the zoning district as a potential impact.
3.13 Land Use and Zoning	MJ Engineering	Written Comment Letter, September 13, 2019	Clearly identify proposed mitigation (if any) and any necessary permits, approvals or variances required should the height of a proposed structure exceed the maximum allowable height. Include any required permits or approvals under Section 1.6.3 and 2.6 as potential additional permits/approvals being necessary.

3.15 Emergency Services	John Smolinsky	Written Comment, August 14, 2019	Describe the adequacy of emergency equipment, and adequacy of stations and their proximity, the expected and desired response times, and availability of on-site emergency services.
3.15 Emergency Services	Brian Gyory	Written Comment, August 19, 2019	Additional information needed on staffing equipment and how the proposed project would potentially impact these services. Camoin appendix starts to answer these questions, but they are not in the report body and should be referenced and discussed in further detail.
3.15 Emergency Services	MJ Engineering	Written Comment Letter, September 13, 2019	The DGEIS notes that the responding fire department has been notified of the project. Considering the planned height of the building, it will be important that the District provide input regarding their ability to appropriately respond to an event at the site.
3.15 Emergency Services	Brian Gyory	Written Comment, September 14, 2019	Can the fire department handle a 85' building with current equipment?
3.16 School District	John Smolinsky	Written Comment, August 14, 2019	8a) These sections should include a discussion of potential IDA applications of tenants and "PILOT" agreements which may provide alternative fiscal/benefit scenarios.
3.17 Fiscal and Economic Impact	John Smolinsky	Written Comment, August 14, 2019	8a) These sections should include a discussion of potential IDA applications of tenants and "PILOT" agreements which may provide alternative fiscal/benefit scenarios. 8b) Page 3-87 – Provide a breakdown of the total jobs for each concept; for example: managers, professional, skilled workers, and laborers, etc.
3.17 Fiscal and Economic Impact	Gianna Aiezza	Written Comment, September 13, 2019	As discussed at the public hearing, I requested they add a discussion of the possible tax implications of different type of lease agreements. They need to discuss all the possible tax outcomes and how each affect the financial benefit to the Town.

3.17 Fiscal and Economic Impact	MJ Engineering	Written Comment Letter, September 13, 2019	The analysis should also examine the local impact under a scenario where the Port of Albany constructs and owns the building(s). As the property owner, the Port of Albany land is exempt from local property taxes (County, School, Town) and this comparison should be provided. Further, privately owned building(s) would be eligible for tax abatements through the Town of Bethlehem Industrial Development Agency. A comparison of fiscal impacts for local property taxes (County, School, Town) associated with applying the IDA's Standard and Enhanced abatements should be provided.
3.18 Recreation and Open Space	John Smolinsky	Written Comment, August 14, 2019	9a) The environmental setting discussion needs an introductory description of the recreation in the area of the site; this discussion then provides the basis for evaluating changes and impacts that might occur as a result of the proposal(s). The introductory description should include biking (Inc. Albany County Helderberg Hudson Rail Trail), pedestrian, and water sports and evaluate the impact on them. 9b) Recreation is addressed in various sections of the DGEIS: Section 3.18 should describe the existing condition of the impacts resulting from this proposal – even though there is discussion in several other sections it is preferable to also address the topic in this section. A second-best option is the provide cross references to the other sections where recreation is discussed.
3.18 Recreation and Open Space	Brian Gyory	Written Comment, August 19, 2019	I believe this topic has been discussed enough at our meeting on 8/6, but to clarify the Recreation chapter should reference all of the other sections to tie in information about the recreational impacts within a one mile radius. This should include: traffic, visual analysis, maritime, etc.
3.18 Recreation and	MJ Engineering	Written Comment Letter,	Table 3-18-1: Existing Town Owned Parks and the Town of Bethlehem Recreational and Cultural Resources map should be included in Section 3.18.1 – Environmental Setting as an overview of

Open Space		September 13, 2019	existing conditions, not in Section 3.18.3 – Mitigation Measures.
3.18 Recreation and Open Space	MJ Engineering	Written Comment Letter, September 13, 2019	Provide discussion on the expected increase in ships to the site and impacts to recreational boaters, kayakers, etc. who utilize the adjacent recreational lands and the Hudson River. Henry Hudson Park serves as a put-in location for boats and kayaks. Other City of Albany recreation areas that serve as put-ins that may also be impacted by increased ship volume (21/day).
3.19 Solid Waste Disposal	John Smolinsky	Written Comment, August 14, 2019	Will C& D waste be disposed at the Dunn C&D site in Rensselaer? If disposal is not prohibited at that site then impacts should be discussed and evaluated.
3.20 Environmental Justice	Gianna Aiezza	Written Comment, September 13, 2019	As discussed at the public hearing, please address the location of Ezra Prentice and the potential need to follow the DEC's Environmental Justice Policy.
3.20 Environmental Justice	New York State Attorney General's Office	Written Comment Letter, September 13, 2019 Revised September 16, 2019	Ezra Prentice is a low-income public housing project in Albany's South End. It is a potential environmental justice area because it suffers a disproportionate adverse environmental impact when compared to other communities. The Ezra Prentice community is exposed to noise and air pollution from traffic along South Pearl Street, from I-787, the adjacent rail yard, an Albany County wastewater treatment plant, and from a nearby bulk petroleum storage and marine transfer facility. At the Public Hearing on September 3, 2019 it does not appear that any affirmative efforts were made to secure the involvement or participation of Ezra Prentice or other nearby South End communities in the hearing or project development.
4.0 Reasonable Alternativ	John Smolinsky	Written Comment,	Meeting code for a 60-foot height requirement should be discussed. The requirement for an 85 feet height should be justified and discussed

es to be Considered		August 14, 2019	relative to each of the four potential development scenarios.
4.0 Reasonable Alternatives to be Considered	MJ Engineering	Written Comment Letter, September 13, 2019	For each of the alternatives presented, there needs to be a discussion of the independent impacts each creates and what level of mitigation is needed to offset those impacts. This serves the purpose of establishing specific thresholds.
4.0 Reasonable Alternatives to be Considered	MJ Engineering	Written Comment Letter, September 13, 2019	It may be beneficial to present an alternatives development scenario such as the prior Beacon Harbor project that also had an Environmental Impact Statement. This will illustrate the impacts associated with a project that sought to develop the site in a way that did not conform to the existing zoning district.
5.0 Adverse Environmental Impacts Which Cannot be Avoided	John Smolinsky	Written Comment, August 14, 2019	Discuss the 85-foot height requirement. This section may need further revision depending on final impact analysis and mitigation measures.
5.0 Adverse Environmental Impacts Which Cannot be Avoided	MJ Engineering	Written Comment Letter, September 13, 2019	There needs to be a discussion of environmental impacts that will be temporary from construction activities (e.g. noise, dust, traffic).
5.0 Adverse Environmental Impacts Which	MJ Engineering	Written Comment Letter, September 13, 2019	This section needs to be further expanded to discuss long-term unavoidable impacts associated with operation of the project which may include localized and intermittent increases in traffic on local roadways, loss of existing terrestrial and forested habitat, increase demands on municipal water and sanitary sewer service, consumption of

Cannot be Avoided			petroleum hydrocarbon fuels and the subsequent release of air pollutants and GHGs. All of these impacts relate to the increased intensity of use of the site that translates to additional population arriving to and departing from the site both during the construction phase and operational phase. It should be stated whether these impacts are anticipated to be significant and if significant whether they can be minimized through various general or site-specific avoidance and mitigation measures. It should also be stated that if the identified mitigation measures are implements, the project is expected to result in a positive, long term overall impact that will be offset the adverse effects that cannot otherwise be avoided.
5.0 Adverse Environmental Impacts Which Cannot be Avoided	MJ Engineering	Written Comment Letter, September 13, 2019	A discussion of general mitigation measures should be provided. This may include but is not limited to: i. Discussing how agency and public input is solicited and appropriately addressed as part of the environmental review process. ii. That response to comments and preparation of a GFEIS will provide the information necessary for the lead agency to draw conclusions (Findings Statement) regarding the project's overall environmental impact, and impose conditions on SEQRA approval, if necessary. iii. Discussion that compliance with other applicable federal, state and local regulations/guidelines governing the construction and design of the proposed project will serve to minimize adverse impacts. iv. Discussion of local experts being engaged for the preparation of critical plans as well as to provide third party technical reviews to assure impacts are avoided to the maximum extent practicable.
5.0 Adverse	MJ Engineering	Written Comment	A discussion of site-specific mitigation measures should be provided. This would be restating of

Environmental Impacts Which Cannot be Avoided		Letter, September 13, 2019	any mitigation measures already identified in Section 3, by topic.
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	List of Tables and Figures; Update titles and page numbers per the report. There are numerous errors in these tables
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 2, Figure 1; This is referenced as Project Location Map in the text of the report
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 11, No-Build Conditions, Paragraph 1; Provide backup documentation/support that CDTC was consulted to confirm the 0.5% growth rate is consistent with the regional travel demand STEP model
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 11, No-Build Conditions, Paragraph 2; The last sentence contains “study competed”. Competed should be changed to completed
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 11, No-Build Conditions, Paragraph 3; Include the trip generation rates from the CME study in the appendix
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 13, Build Conditions, Trip Distribution; Provide backup documentation/support that CDTC was consulted to see if the distributions are consistent with the regional travel demand STEP model
Appendix I Traffic	MJ Engineering	Written Comment	Page 13, Build Conditions, Trip Generation, Paragraph 1; Explain how the trip generation rate

Impact Study		Letter, September 13, 2019	was calculated. I.E. were the calculations performed utilizing the turning movement counts, ATR counts or other data?
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 13, Build Conditions, Trip Generation, Paragraph 1; The conclusion that "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." was made. This is a single site within the Port and should be analyzed as such. If a single large manufacturer is the future tenant, the trip generation has the potential to almost double. Explain why the current trip generation for the Port is most appropriate
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 14, Paragraph 2; The trip generation rate calculations are not included in Appendix B. Please provide
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 23, Traffic Operations; Reference is made to the 2010 Highway Capacity Manual (HCM). A new 6th Edition of the HCM was issued in 2016. Why was this edition not utilized?
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 24, Intersection No. 1; The applicant is responsible for the coordination of any monitoring of traffic signal timing with the agency responsible for the signal. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 24, Intersection No. 2; The applicant is responsible for the coordination of any monitoring of traffic signal timing with the NYSDOT. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented

Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 24, Intersection No. 3; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 24, Intersection No. 3; Reference the guidelines utilized to determine “adequate levels of service”
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 25, Intersection No. 3; The applicant is responsible for the follow up traffic study. Explain how the applicant will perform this study and any mechanisms or procedures that would be utilized or implemented
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 25, Intersection No. 5; Include discussion that signal warrant analysis will need to be revised and submitted as part of the site plan review process with the Town of Bethlehem
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 25, Intersection No. 6; Include type of existing control at this intersection
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 25, Intersection No. 6; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented
Appendix I Traffic	MJ Engineering	Written Comment Letter,	Page 25, Intersection No. 6; The analysis on this page concludes a traffic signal is recommended and provides direction that the signal should be

Impact Study		September 13, 2019	installed prior to Phase II. However, page 43 states "Consider installation of a traffic signal…" Clarify when consideration of this signal will occur. During Site Plan Review through Town of Bethlehem, etc.?
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 26, Intersection No. 8; Include the LOS from the CME report for the proposed roundabout
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 26, Intersection No. 9; Reference the guidelines utilized to determine "acceptable level of service"
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 26, Intersection No. 10; Expand on why no quantitative analysis was performed
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 26, Intersection No. 10; Include the year the NYSDOT data was collected that was utilized to evaluate this interchange
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 26, Intersection No. 10; Provide reference for the "typical daily fluctuation at this type of urban high-volume intersection which will typically be around ±10%"
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 26, Intersection No. 11; Provide more detail as to how the access to NYS Route 144 will be restricted
Appendix I Traffic	MJ Engineering	Written Comment Letter,	Page 27, Table 4; Check LOS letter designation and delays for all. Specifically, for the NYS Route

Impact Study		September 13, 2019	144/Glenmont Road intersection overall LOS for 2029 Build Phase III.
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 29, Truck Impact Analysis, Paragraph 4; Provide a proposed conclusion regarding whether or not trucks should be allowed to use the NYS Route 144 access
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 29, Truck Impact Analysis, Paragraph 3; Figure 14a and 15a are not in Appendix B. Please provide
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 29, Truck Impact Analysis, Truck Volume Assessment, Paragraph 1; Explain why the data from the other studies is not relevant
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 29, Truck Impact Analysis, Truck Volume Assessment, Paragraph 2; Explain how the trip generation rate was calculated. I.E. were the calculations performed utilizing the turning movement counts, ATR counts or other data?
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Table 5; It appears that a note associated with the ITE Code in the title is missing (if not missing, remove the asterisks).
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Table 5; Are the AM and PM peak hours for the trucks and passenger vehicles the same? If yes, then include in discussion for clarification
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Paragraph 3; Explain why was data from the South Albany Traffic Report utilized instead of data collected as part of the TIS for this project

Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Paragraph 3; Quantify how significantly less the overall traffic volumes are during the midday hours
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Table 6; Check the math for the % increase. Calculation should be (proposed – existing) / existing
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Table 6; Identify what the two columns under Existing Truck Volume and Proposed Truck Volume represent
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 30, Paragraph 5; The third sentence is confusing. It appears that trucks will be using the southern driveway although it is stated this will be restricted to passenger vehicles only
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 31, Paragraph 1; It should be noted that the traffic control plan will need to be coordinated and approved by any other agencies with jurisdiction of the roadways traveled
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 31, Truck Sensitivity Analysis, Paragraph 1; A reference is made to the Synchro printouts included in Appendix B. While they are located there, per the table of contents and appendix covers, these should be included in Appendix C
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 31, Truck Sensitivity Analysis, Paragraph 1; The results table is not included in Appendix B. Please provide
Appendix I Traffic	MJ Engineering	Written Comment Letter,	Page 31, Truck Sensitivity Analysis, Paragraph 3; The applicant is responsible for any improvements along with the coordination with

Impact Study		September 13, 2019	the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 31, Truck Sensitivity Analysis, Paragraph 4; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 35, Figure 16; This figure does not match the figure presented at the public hearing. Public Hearing reflected the Northbound/Eastbound route along I787/Exit 2 and I787/I87 Exit 23. Explain why and revise figure and analysis if necessary
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 35, Figure 16; Legend representation of "( )", "[ ]" should be consistent with symbol on route
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 35, Figure 16; There is no text reference to this Figure. What is the Figure intended to show? Provide discussion
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 36, Signal Warrant Analysis, Paragraph 2; Provide a conclusion whether a signal is recommended. The signal warrant worksheet says a signal should be considered for both scenarios analyzed
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter,	Page 37, Paragraph 2; Change "elevate" to alleviate

		September 13, 2019	
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 37, Site Distance Analysis; Site should be Sight
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 37, Site Distance Analysis, Paragraph 1; Table 7 is wrong table reference
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 37, Table 8; Confirm that EB 17-007 was reviewed for modified perception reaction time used in calculating standard distance
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 37, Table 8; Provide a figure that shows the available distances from the proposed access driveway
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 37, Table 8; It appears the available intersection sight distances are overestimated. There is a vertical curve on the Route 144 bridge over the railroad tracks to the north and the vegetation on the west side of NY Route 144 to the south appear to restrict available intersection sight distances to values below what was reported. Intersection sight distances should be provided for AASHTO Cases B1 and B2 for passenger vehicles only based on the restriction of no heavy vehicles using this access. Verify the standard intersection sight distances and ensure any adjustments for grade of the roadway are included. Discussion should include a description of the cases and any adjustments including references to design standards and other publications. Include discussion on standard versus available stopping sight distance for both

			passenger vehicles and trucks that are traveling on NY Route 144 approaching the proposed access
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 39, Public Transportation Analysis; Figure 16 is the wrong figure reference
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 39, Public Transportation Analysis; What are the impacts to public transportation travel in the study area if the mitigation measures previously noted are not implemented
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Page 42, Conclusions and Recommendations; Summarize who is responsible for mitigation measures and any mechanisms or procedures that would be utilized or implemented to complete the mitigation
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Appendix B; Review volume inputs to ensure they match the figures in the report and modify either as required
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Appendix C; No data included. This was included in Appendix B
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Appendix D; Include NYS Route 32 with Corning Hill Road
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Appendix D; Include scenario on page 1 for which the warrants were performed

Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Appendix D; MUTCD Section 4C.01, paragraph 17 states data analyzed should be for 12 hours and contain the greatest percentage of the 24-hour data. Identify why only 4 hours is provided for the last four warrant evaluations
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Appendix D; It appears the 8-hour warrant was not analyzed. Please identify how the determination of if a signal is or is not recommended was made
Appendix I Traffic Impact Study	MJ Engineering	Written Comment Letter, September 13, 2019	Provide an assessment of overall accident types (rear end, right-angle, etc.) occurring on River Road. According to the Bethlehem Police Department, the River Road corridor is one of the Town's highest crash stretches. Identify the reasons for not providing a separate southbound left-turn lane or northbound right-turn lane along River Road that would allow turning vehicles to move out of the through travel lane to access the site
Appendix J Stormwater Report	MJ Engineering	Written Comment Letter, September 13, 2019	Section I.B shall also reference the extensive soil investigation completed and their findings as it may relate to stormwater management
Appendix J Stormwater Report	MJ Engineering	Written Comment Letter, September 13, 2019	Section III, In the first paragraph, first sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal mars
Appendix J Stormwater Report	MJ Engineering	Written Comment Letter,	Section III indicates that the SWPPP will be prepared meeting various objectives. Further explanation of how the project will mitigate increased peak runoff rate during and after construction is necessary. The Existing and

		September 13, 2019	Proposed Hydrology tables found in the Section 3.8.3 of the DGEIS do not support this statement as Drainage Area 3 and 4 have substantial increases in runoff for all storm events under the developed site condition
Appendix J Stormwater Report	MJ Engineering	Written Comment Letter, September 13, 2019	Section III.B shall list all available green infrastructure practices available and then identify why each has not been selected
Appendix J Stormwater Report	MJ Engineering	Written Comment Letter, September 13, 2019	Section III.B identifies the water quality practices being proposed including bioretention and stormwater ponds. Provide the NYSDEC designation for each practice proposed. (e.g. Bioretention is a F-5 designation).
Appendix O Site Layout	MJ Engineering	Written Comment Letter, September 13, 2019	On Boundary Survey - Label metes and bounds in darker font
Appendix O Site Layout	MJ Engineering	Written Comment Letter, September 13, 2019	On all concepts, the property line that parallels the Normans Kill should reflect a front yard setback of 130-ft
General Applicability for DGEIS Document	MJ Engineering	Written Comment Letter, September 13, 2019	For clarity purposes, all tables and maps should be located immediately after reference in the text
General Applicability for DGEIS Document	MJ Engineering	Written Comment Letter, September 13, 2019	Create bookmarks for each section in the pdf for ease of viewing
General	Thomas Goodfellow	Emailed/ Written Comment,	I love the idea of the Port being used to support the wind farms off of Long Island, and elsewhere. The looming catastrophe of climate change

		August 14, 2019	demands that any new facility be prohibited from any activity supporting the fossil fuel industry including any manufacture, production, storage or shipping of supplies or materials for fracking, fossil fuel pipelines, refineries, power plants, or storage facilities, etc, except as a temporary response to a temporary declared exception related to a declared emergency, with the approval of the Town Board. Such a provision needs to be included in the scope of this and any other new project
General	Lisa A. Ford	Emailed/Written Comment September 10, 2019	As a property owner in Bethlehem, I oppose the Port of Albany Expansion Project. I think it unwise to continue to expand fossil fuel transportation routes when humans should be doing the exact opposite, for a number of reasons including health, safety, the environment, and future generations. The rail industry has yet to upgrade to the more safe tanker cars. When there is a catastrophic incident, and there most assuredly will be, our community will bare the brunt of damages and require a huge effort to attempt to control the damage. Emissions will certainly increase. Those with, or the potential for, air quality related health issues will suffer and/or perhaps increase their rate of expiration. The health of the riverfront, in the event of a catastrophic incident, may never recover. The fact that the Hudson is a tidal water body essentially means allowing bomb trains to unload oil onto ships means that inevitable spills poison the ocean. All fish and water fowl become targets. Perhaps drinking water, for who truly knows how many, is impacted? There will be increased traffic in town due to this project. Have the proper and necessary traffic analyses been completed This also increases greenhouse gas emissions as well as all of the health and safety issues mentioned previously. Noise and light pollution will increase. None of this is welcomed news nor good for the

			environment. People want to own property and live in this town, it is a very desirable area for so many wonderful reasons. We should do nothing to jeopardize that uniqueness in the Capital Region. If Bethlehem property owners are the last line of defense, and this email is the only recourse to let my feelings on the matter be known, I am against the project. I do not feel that the benefits will outweigh all of the actual and potential risks. I am not a gambling person. The risks are too grave and innumerable to specifically mention them all. Thank you for the opportunity to comment.
General	Bethlehem Chamber of Commerce	Written Comment September 13, 2019	On behalf of the Bethlehem Chamber and its 430 member businesses that employ 11,000 people I write to express the Chamber's support of the Albany Port Commission District's Expansion Project. The expansion of the Port of Albany in the town of Bethlehem would allow Bethlehem to play a major role in the offshore wind industry. This clean, renewable form of energy will be a significant source of affordable power for New Yorkers in the next decade. This industry is poised to bring a substantial number of jobs to our community creating a robust long term economic impact. The Port Commission is a government entity that works on a daily basis ensuring state and federal rules and regulations are followed. The leadership of the Port Commission are recognized for their expertise around the country. We are confident this project will be done with integrity. It is also important to note that the Port of Albany was the first port in New York State to be certified in the Green Marine Program. This is another indication of the importance environmental stewardship is to Port leadership.

			As other communities are vying for this industry let's do what we can to make Bethlehem an important part of the wind energy supply chain.

SUPPLEMENTAL DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT (SDGEIS)

In accordance with 6 NYCRR Part 617.9(b)(8), the FGEIS must respond to substantive comments received. The following table identifies substantive comments received during the public comment period specific to environmental impacts associated with the Albany Port District Commission Port of Albany Expansion Project. Comments received during the public comment period are not relevant to the evaluation and identification of environmental impacts, the development of appropriate mitigation measures, or comments that concur with or object to the proposed action without elaboration are not included in this table. However, such comments are considered by the Lead Agency and are incorporated into the public record. To avoid unnecessary repetition, several broad categories or topic areas have been created based on the topic areas evaluated in the SDGEIS so that related comments could be grouped appropriately. Many comments could fall under more than one topic, but to avoid repetition have been addressed within a single topic area or category. Also, several commenters provided comments on multiple topic areas and those comments are reflected below.

Topic Area	Name/ Agency	Source	Overview of Comment
3.6 Climate and Air	Charlotte Buchanan	Written Comment Letter, January 16, 2020	People at the public hearing on January 6th properly raised the issue that air pollution does not remain with the trucks and trains producing it, but disperses, and in the case of the Port would increase air pollution inhaled by the nearby residents. To my knowledge, however, no attention has been paid to the impact to residents living on the banks of the Hudson River, just south of the Port. I respectfully request that in any of the scenarios for the use of the expansion, potential additional noise, pollution, and odors be determined and mitigated.

3.6 Climate and Air	Aaron Mair	Public Information Meeting Comment, January 6, 2020	What about air monitoring? Trucks are basically a proxy for PM 2.5 diesel particulate emissions. So, while you may alter your route, the emissions are still within this area and they may rise. Air, as a medium - it doesn't stay on any street. It goes up and it can spread and adds to the air shed and it has already burned PM 2.5. So, has there been an analysis of on one of your worst-case scenarios you have for tenants and they are having an increased volume traffic and you may alleviate the road burden and the risk of kids being hit by traffic, but you still have added to the poor quality – poor air quality obtained in one area etcetera. Has that been modeled in your analysis? Transportation road hazards and safety are one issue. The other trucks in additional train traffic is idling diesel engines and that emission is going to add to the already polluted air cloud that already sits over the south end during peak ozone days during the summer which will make it significantly worse. So, you're actually doing a lot of PM 2.5 loading as well as sulfur dioxide as well as aromatic hydrocarbons that will be emitted from these tracks. Has that been added to your modeling, in essence, of air pollution contaminants? That's a driving problem. This is a science of physics. And again thermodynamics of heat during the summer with self rising particulates and polyaromatic hydrocarbons are known as a contributor. That's why they have the laws that regard buses and what have you. So, even though the trucks are off-site, they are. The point of the matter is what is the wind direction for southerly winds? What does that mean? That means the wins come out of the south and they blow north. So, if you've got a wind pattern that's going south and blowing north – peak emissions where kids are off during the summer. Their playgrounds are right here. So, what you have is increasing the potential for again PM 2.5 that will increase, irrespective of the fact that more trucks, irregardless of their route, are still adding to the PM 2.5 particulates right now. So, the issue you're having is cumulative and it can add to impacts.

			Even though the traffic may be mitigated, the point of the matter is you're still loading significant air pollutants which is a huge issue. It's a huge issue with the trains. The issue is pollution loading through the air. So, that study is an impact and that's a question that the community needs to have taken into consideration.
3.6 Climate and Air	6th Legislative District	Written Comment Letter, January 16, 2020	But Ezra Prentice has been declared an "environmental justice community," which has legal implications for all of the industrial development nearby. Remediation efforts have been offered, but strike us as woefully short of the mark. Moving the truck traffic to the Port's interior road system – an expensive and time consuming enterprise at best – is moving the diesel fumes further from front doors to roads that are still as close as several football fields away. And more than doubling the truck traffic once the wind turbine facility is built strikes us as a poor bargain. Diverting traffic several hundred feet away from residences, as well as the other mitigation steps offered so far, are halfway measures that would insult any other community. Yet because Ezra Prentice is a public housing site, with residents who are low income and predominately people of color, this is seen as acceptable.
3.6 Climate and Air	Michael Burgess	Written Comment Letter, January 17, 2020	I am writing to support efforts by the residents of the South End in Albany who live in the Ezra Prentice Homes related to the development plans of the Port of Albany on 80 acres in the Town of Bethlehem. Residents want to meet and express their concerns about environmental and health issues to the Port of Albany's board and officials about plans to assemble and ship wind turbines. Air pollution is a concern to the residents of the Ezra Prentice Homes and further truck traffic could make the situation worse. Residents have suffered from being in an industrial area and

			already have oil trains sitting on tracks within feet of their homes. I urge the Town of Bethlehem Planning Board to delay approval of the Port of Albany's plans until the relevant parties especially the board of the Port meet with residents of Ezra Prentice to come up with mutually agreed mitigation plan. The effort to build, assemble and ship new wind turbines is a sound and welcome global environmental policy but we need to consider the local environment and the impact on low income residents who will be effected by the increased development and traffic.
3.7 Traffic and Transportation	Jesenia Alcantar	Public Information Meeting Comment, January 6, 2020	To your last point saying that trucks and rail would be decreased – is that as of now or what is currently happening, or is that a worst-case scenario?.
3.7 Traffic and Transportation	Aoelene Smith	Public Information Meeting Comment, January 6, 2020	So, if you are creating 1,600 jobs, how do you only have four or five cars coming in?
3.7 Traffic and Transportation	Aoelene Smith	Public Information Meeting Comment, January 6, 2020	So, you may have 1,600 passenger cars in regards to 1,600 extra jobs being created. If there are 1,600 people coming to work in there are 1,600 people going home during peak hours - So, in other words there could be 1,600 extra vehicles in a 24-hour period going one way which in a 24-hour period could mean 32-something extra cars in a 24-hour period passing. It would be 3,200 extra vehicles going through South Pearl Street every day because it is shiftwork.
3.7 Traffic and Transp	Wendy Dwyer	Public Information Meeting Comment,	I do have a question. Is this going to be on some type of bus route? That leads into my second question because – how are you going to be reaching out to different organizations to help

ortatio n		January 6, 2020	people get employment? I think there should be a study to go through your ledgers to figure out who lives where and how many people are already employed from the south end in the City of Albany. How is this going to be properly distributed – the community that is being impacted.
3.7 Traffic and Transp ortatio n	MJ Engineering	Written Comment Letter, January 16, 2020	Page 3-10, Paragraph 1: Clarify build out phases. It is not clear if they are total areas or additional areas for Phase II.
3.7 Traffic and Transp ortatio n	MJ Engineering	Written Comment Letter, January 16, 2020	Page 3-10: states that "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…" It further says: "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." What physical restrictions will be in place to prohibit truck access at the southern entrance? One option is an overhead height bar that physically restricts a truck.
3.7 Traffic and Transp ortatio n	MJ Engineering	Written Comment Letter, January 16, 2020	Page 3-17: Regarding Appendix G – is the clause language to be used for both a tenant occupying a building owned/built by the Port, AND a building that is privately built with the Port leasing the land. It should be applicable to both scenarios. Please confirm. It is expected the clause language will be applicable to building that is privately built. If so, how will the Port enforce the clause language on a building it does not own?
3.7 Traffic and Transp ortatio n	MJ Engineering	Written Comment Letter, January 16, 2020	1. Regarding future improvements to City streets – the FGEIS would benefit from an overall map of the preferred truck route that identifies: i. the improvements that are undertaken by McLaren (based on their map).

			ii. Current condition of Church Street and Boat Street (what is pavement condition, why no improvements needed?) iii. Future improvement plans for the remaining Raft Street, and Normanskill St/Port St. What is current condition of these roadways? Current condition of rail crossings, how many? What funding sources are available? Timeframe for improvements? iv. Regarding Step 4 – responsibility is identify as Albany, FHWA, NYSDOT, CDTC…but this would have to be prompted by POA. Reference should be made to POA involvement.
3.7 Traffic and Transportation	MJ Engineering	Written Comment Letter, January 16, 2020	Page 3-22: Pedestrian and Bicycle: the assessment of impacts should be related to the users of the Bikeway Connector along South Pearl Street, the Exit 2 Ramp, and at the Exit 2 intersection with Church Street. No trucks using South Pearl Street will have a positive impact on the bike/ped users along the South Pearl St. section of Bikeway Connector. If this is correct, state as such. What are impacts to peds/bikes crossing Church St intersection with the increase in trucks traffic at intersection? Will there be conflicts? What is mitigation?
3.7 Traffic and Transportation	New York State Attorney General's Office	Written Comment Letter, January 16, 2020	The Supplemental EIS could be enhanced by further discussion of the Port's plans for upgrading the City of Albany roads within the Port to facilitate the additional traffic during construction and operation. This discussion should include the scope and timeline of such road improvement plans, including the extension of the road and construction of the new bridge over Normanskill Creek.

3.7 Traffic and Transportation	New York State Attorney General's Office	Written Comment Letter, January 16, 2020	Improved road signage can help ensure that trucks avoid Ezra Prentice. Current signage along Interstates 87 and 787, Routes 32 and 144, and nearby streets is not sufficiently informative to direct heavy-duty vehicles to the Port and can be confusing. The enhanced signage (see attachment), created for illustrative purposes, is intended to help direct drivers to access and egress from the Port of Albany on routes that avoid South Pearl Street where Ezra Prentice is located. The proposed signage directs drivers to use the Northern Port entrance via Church Street when traveling along Interstate 787 in any direction and when utilizing Interstate 87 west. It also directs drivers to the Southern Port entrance when travelling from the South (or if they miss their exits off the interstates needed to access the Northern Port Entrance), also avoiding Ezra Prentice.
3.7 Traffic and Transportation	Robert F. Leslie	Written Comment January 17, 2020	Based on the AG letter and sign package recommendation, the EIS should include an assessment of potential truck rerouting impacts associated with the no-right turn restriction at South Pearl Street and Port Road South (signalized intersection to southern Port entrance). See sign image on page 9 of the signage document. Concern is that the truck turn restriction while intended for newly generated trucks from the Port Expansion will restrict all trucks (existing Port related trucks and non-Port related trucks) from making a right turn. What is the potential impact to Corning Hill Road/River Road intersection if the sign package mitigation measure was to be in place? Corning Hill Road (while a state owned roadway) is mainly residential in nature. Slide 33 in the public meeting presentation illustrates the truck route along River Road, roads within the Port, I787, and I87. Corning Hill Road is not identified as the recommended truck route.

			Unintended impacts from a mitigation measure (sign package/turn restrictions) need to be considered.
3.13 Land Use and Zoning	Jim Freeman	Public Information Meeting Comment, January 6, 2020	Nowhere in this have I seen staying ahead of the curve and greening the Port of Albany. All these buildings – will there be solar panels on these buildings? Will there be alternative energy with a much cleaner process? The Port is completely antiquated and there are all these opportunities that I am not seeing addressed at all. So, can you explain that at all? No place in these conceptual drawings are there solar panels. Seriously, the whole place is antiquated. You have an opportunity here in the Port of Albany to really modernize it and make a big difference including possibly electrifying the south end with renewable energy. Instead of the pollution you're putting out daily that kills people, you can have state-of-the-art and have a model for the whole United States. You have that opportunity.
3.17 Fiscal and Economic Impact	Jim Freeman	Public Information Meeting Comment, January 6, 2020	How many of those jobs will be on the south end?
3.17 Fiscal and Economic Impact	Aoelene Smith	Public Information Meeting Comment, January 6, 2020	How many jobs did you say earlier you are hoping to create with this?
3.17 Fiscal and Economic Impact	Wendy Dwyer	Public Information Meeting Comment, January 6, 2020	So, is there some type of requisite for them in order for them to obtain that job to employ the people from the community? So let's say there's a construction company and in order for us to give you this job, you have to have an X-amount of people from the community to build. Afterwards, what's going to be the standard? Are you then

			going to reach out? What type of job training will you be providing? What type of professional development can actually happen within the community? Will you be reaching out to the community colleges, the high schools and things of that sort?
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 1, Paragraph 2: Clarify build out phases. It is not clear if they are total areas or additional areas for Phase II.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 3, Figure 2: This concept plan differs from the plan for Concept A shown in the SDGEIS as it does not show a connection from the truck parking area to the access road leading to NYS Route 144 at the southeast corner of the proposed building. Please explain why the concept plans are different.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 4, Paragraph 4: It is stated that South Port Road is an urban major collector. The roads within the port are classified Urban Local Roads (FC 19) per the most recent Region 1 highway inventory available on the NYSDOT website. Please confirm the roadway classification.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 13, Paragraph 1: Section 3.7.1 states the background growth rate was accepted by NYSDOT and this paragraph states it was submitted. Identify which state is correct.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 13, Paragraph 2: It should be noted that the Kenwood Commons project is no longer active.
Appendix D Traffic	MJ Engineering	Written Comment Letter,	Page 30, Paragraph 2: Explain how enforcement by local law enforcement be coordinated/implemented.

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Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Pages 31 & 32, Table 4: The Northbound and Southbound approaches to the I-787/I-87 Exit 23 Off Ramp are not correctly noted in the table.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 34, Table 6: The largest increase of ±30% in truck volumes is along the stretch of South Pearl St (NYS Route 32) in front of the Ezra Prentice community. Any new tenants should use the Church Street/Broadway intersection for ingress and egress from the Port when their destination is west, north or east and South Port Road for destinations to the South. This will mitigate any additional truck traffic in front of Ezra Prentice in the future beyond existing volumes. Any increase in truck volumes will increase delays and emissions in this area. Provide an additional table that shows the increase in truck volumes as a result of the restricted use of South Pearl Street. This tables should include all roadway segments included in Table 6.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 35, Paragraph 1: Percent trucks in the narrative does not match Figure 14. The first 40% should be 45% and second 40% should be 35%. The 60% should be 55%.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 41, Paragraph 1: Reference to Table 6 should be Table 7.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 41, Table 7: Were the increase in through traffic volumes considered when determining available turn movement gaps?

Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 43, Paragraph 1: The report recommends lowering the posted speed limit to 45 mph in the vicinity of the proposed driveway. Posted speed limits are based on the 85th percentile speed, which is 55 mph as stated in this paragraph. Is there any data that supports changing the speed limit in proximity to the proposed NYS Route 144 access drive to 45 mph?
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 43, Table 8: Explain the increase in sight distance when looking right. It is understood that the increase is obtained by clearing vegetation, but the sight lines shown in Figure SD-01 in Appendix B do not extend beyond the west edge of pavement. How does vegetation removal allow for more sight distance from 345 to 450' for the proposed driveway and 385 to 500' for the shifted driveway?
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 44, Table 9: The waterway is the Normans Kill, not Normanskill Creek.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 50, Table 12 and Paragraph 1: The text references an analysis of the merging highway but the LOS reported in the text is for the weaving areas from Table 12. The two LOS C with 29.9 and 31.1 pc/mi/ln should be LOS D per the merge areas section of Table 12.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Page 51, Third Bullet: Same comments as Page 43, Paragraph 1.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Appendix D Figure 16 is different than the "Recommended Truck Routes To/From Proposed Site" Figure shown in the presentation at January 6 public meeting. Appendix D Figure 16 shows truck route on Corning Hill Road, while Figure presented at the meeting (slide 33) does not show truck route on Corning Hill Road. Update the

			SGEIS to reflect the figure presented at the meeting since this addresses the goal of minimizing truck travel impacts on residential areas.
Appendix D Traffic Impact Study	MJ Engineering	Written Comment Letter, January 16, 2020	Please address public comments at the January 6 public meeting (supported by the Planning Board) related to assessing potential air quality impacts on the Ezra Prentice community (as a result of site generated truck traffic) based on the following: a. Additional truck traffic on Church Street/Boat St/Smith Blvd and River Road. b. Additional truck traffic on I-787 c. Site generated emissions related to potential warehouse, manufacturing, assembly, industrial park, distribution centers, packaging facilities, business office, and commercial storage uses identified in Section 1.1. What are potential emissions and could they impact Ezra Prentice community?
General	Paul Tick	Written Comment January 14, 2020	Delay approval of Port of Albany's application to allow residents an opportunity to meet with Port officials. Consider moving the complex to a more suitable location.
General	Aaron Mair	Public Information Meeting Comment, January 6, 2020	There are no handouts for the community. Are there handouts or documentation for this meeting? In order for people to meaningfully participate, do we have something beyond what we have heard? For the record for tonight, residents here in Albany north of the project do not have any documents and we will have to go to website in order to be informed to comment at this meeting.
General	Aoelene Smith	Public Information Meeting Comment,	I think the issue is that you continue to act as if you don't understand what the concern is. To say that this is just a generic piece or whatever - the bottom line is people that will be affected need to be in it from day one. It's not fair that you bring us something after the fact and say oh, we have

		January 6, 2020	done this, this and this and this is what we are proposing. That's the issue. You can go back and forth all night as to what you plan on doing, but the issue wasn't done from the jump. It's just out of respect. People are asking to always be conscious and cognitive of the fact that – look in the room. Are they all here? Are the people that live in this community, people that are present in this room – how are they going to get the information other than when you feel like it? I think you should just keep that in mind as you go forward.
General	Tom McPheeters	Public Information Meeting Comment, January 6, 2020	I do have a couple of quick questions. What is the anticipated cost of connecting the Beacon island and fixing all the roads up? Where's the funding coming from for that? Where's the timeline on that? What do you do about all those railroad crossings? How does that work? Are some of the trucks going to stop? These are all questions that I would like to see inserted in the response. You don't necessarily have to do it now. Thank you.
General	Willie White	Public Information Meeting Comment, January 6, 2020	Delay approval of Port of Albany's application to allow residents an opportunity to meet with Port officials. Consider moving the complex to a more suitable location.
General	Eaaiyah Haggray	Public Information Meeting Comment, January 6, 2020	Delay approval of Port of Albany's application to allow residents an opportunity to meet with Port officials. Consider moving the complex to a more suitable location.
General	Aaron Mair	Public Information Meeting Comment, January 6, 2020	Delay approval of Port of Albany's application to allow residents an opportunity to meet with Port officials. Consider moving the complex to a more suitable location.

General	Albany Housing Authority	Written Comment Letter, January 16, 2020	This letter is to offer wholehearted support of the Port of Albany's application to develop 80 acres of land in the Town of Bethlehem in a manner that will provide positive economic development while being sensitive to the environmental justice community of Ezra Prentice Homes in the South End of Albany. The Port's proposal to create new investment and substantial jobs dovetails nicely with the Albany Housing Authority's mission to develop housing and support economic development initiatives in the surrounding communities. Attracting new jobs and investments will support nearby housing, small businesses and an overall community feel that will continue to make people want to call the South End home. We need jobs to support our communities and this proposal has demonstrated it can create as many as 1,600 new well-paying jobs. I am pleased to see that the Port's proposal and ensuring updates have offered important mitigation efforts to offer no negative impacts to the Ezra Prentice community, which sits 1.7 miles away from the proposed expansion site. The Port's efforts to engage local civil stakeholders, hold a public meeting in the community, commitment to work on an alternative truck route and coordinate and install signage are all major safeguards for South Pearl Street and the residents of Ezra Prentice. My staff and I are in constant contact with the residents of the Ezra Prentice Homes, as well as the public and private funding partners supporting this residential community and well continue to work with all relevant partners. We look forward to continuing to work together as this project moves forward.

General	South End Neighborhood Association / Westminster Presbyterian Church / Radix Ecological Sustainability Center / Greater St. Johns COGIC / AVillage / Susan Schell / Ezra Prentice Tenants Association / Walls Temple A. M. E. Zion Church	Written Comment Letter, January 17, 2020	Delay approval of Port of Albany's application to allow residents to meet with and discuss with Port of Albany officials.

3. RESPONSE TO COMMENTS

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT COMMENTS

In accordance with 6 NYCRR Part 617.9(b)(8), the FGEIS must respond to substantive comments received. The following section identifies substantive comments received during the public comment period specific to the environmental impacts associated with the Albany Port District Commission Port of Albany Expansion Project and their associated responses. Comments received during the public comment period that are not relevant to the evaluation and identification of environmental impacts, the development of appropriate mitigation measures or comments that concur with or object to the proposed action without elaboration are not included in this section. However, such comments are considered by the Lead agency and are incorporated into the public record.

Comments have been organized and numbered as they relate to the DGEIS sections, with the DGEIS section heading listed. Similar comments are responded to the first comment in that group and then all subsequent duplicates will reference the original response that addresses their comment.

The following are the comments and responses to the public review process for both the DGEIS and SDGEIS

1.1 EXECUTIVE SUMMARY

1. MJ ENGINEERING AND LAND SURVEYING, P.C.: Project improvements are categorized as proposed private and public. Confirm under public improvements that the off-site water system and potentially sanitary sewer would not also be considered public if all or portions of that work would be conveyed to the utility provider.

RESPONSE:

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**

Proposed public improvements include:

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

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

1.2 PROPOSED ACTION

2. MJ ENGINEERING AND LAND SURVEYING, P.C.: First paragraph should include a description of the proposed three phases of development (the phase descriptions will need to be consistent with Section 2.3. Proposed Action and phases evaluated in Section 3.7 Traffic and Transportation).

   RESPONSE: The paragraph will end with the following addition:

   "The project could be constructed in one phase (the entire 1.13 million SF) or up to three phases. The phases of the project are as follows, phase 1 300,000 SF, phase 2 600,000 SF, and phase 3 full build at 1,130,000 SF." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

1.3 POTENTIAL SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS

3. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section shall be expanded to include all impacts, even if the project proposed appropriate mitigation measures, not just impacts that cannot be avoided.

   RESPONSE: See table below to comment 4.

4. MJ ENGINEERING AND LAND SURVEYING, P.C.: For ease of review by the general public it may be better suited to list all potential impacts by topical area in tabular form.

   RESPONSE: See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

Table 1.3-1: Potential Impacts and Proposed Mitigation Measures

DGEIS Section	Potential Impact	Proposed Mitigation
3.1 Soils, Geology, and Topography	Terrestrial Lands – Proposed Project will change surface coverage, increasing imperviousness which create a water quality impact due to stormwater runoff. Lands Under Water – Dredging will impact lands under water.	Dynamic compaction will be performed a minimum of 60 feet away from property line to meet Town noise ordinance at the property line. Dynamic compaction will be limited to occur between the lesser of 7am to 7pm or dusk to dawn as daylight permits. A SWPPP will be prepared that will implement Erosion and Sediment Control and bioretention ponds will improve the quality of stormwater run-off. A SSAP will be completed prior to dredging as part of permitting requirements. A SMP will be prepared that will require implementation of Engineering controls, such as cap/cover, using a close bucket, or similar method and installing a turbidity curtain will mitigate potential effects on environment.

3.2 Vegetation and Wildlife	Degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths in Normans Kill would impair habitat for Significant Coastal Fish and Wildlife Habitat. Removal of trees that could be Northern Long-eared Bat roosting habitat. Dredging could result in direct mortality of Atlantic Sturgeon, Shortnose Sturgeon, and Alewife Floater.	A SWPPP will be prepared that will outline the Erosion and sediment control measures to be implemented mitigate water quality impacts and to maintain river and Normans Kill bank cover, soil stabilization, and providing adequate riparian buffer areas for significant coastal fish and wildlife habitat. Removal of trees will only be performed between November 1 and March 31 to mitigate the Northern Long-wared Bat. Dredging activities will be conducted between September 1 and November 30 and use of a turbidity curtain will mitigate Atlantic Sturgeon and shortnose sturgeon impacts. Freshwater muscle survey will be completed to confirm presence or absence of freshwater mussels. An AMMP will be developed if necessary.
3.3 Regulated Wetlands and Surface Waters	Surface waters – Dredging within Hudson River. Wetlands – Construction of bridge crossing of the Normans Kill will impact 0.04 ac of emergent freshwater wetland.	Surface waters – All NYSDEC and ACOE permits will be requested that will outline water quality improvement plantings and enhancement and/or preservation of riparian areas along the Project Site shore line of the Hudson River and Normans Kill. Permits include NYSDEC Article 15 Protection of Water Permit and USACE Section 404/Section 10 Individual Permit Wetlands – USACE Section 404/ Section 10 Individual Permit or Section 404 Nationwide Permit will be obtained as required.
3.4 Floodplains and Floodways	The buildings and majority of the site improvements will be within the 100-year floodplain. Construction of wharf will require work within the floodway, including removal of material from the river.	Building and bridges lowest floor and roadway elevation respectively will be at elevation 20.3 feet above sea level. Which is 2 feet above the 100 yr. flood elevation and 1.3 feet above the projected sea level rise for year 2100.
3.5 Groundwater	Potential impacts from chemicals, toxins, or other pollutants released during construction and post construction activities.	A SWPPP will be prepared per NYSDEC regulations that will outline appropriate erosion and sediment controls, stormwater management. Fuel/chemical storage will be stored in compliance with NYSDEC SPDES or EPA SPCC permit regulations as required.
3.6 Climate and Air Quality	Climate – increased vehicular traffic will increase direct and indirect GHG emissions. Increase	Tenant will be encouraged to implement LEED practices to reduce GHG emissions.

	considered to be low and will not result in significant increase in GHG emissions. Air – Construction and traffic will result in air emissions, GHG emission, and odor impacts. Increased transportation will impact emissions. Potential spray paint booth could cause odor impacts.	Construction impacts will be mitigated with dust suppression and air monitoring by the NYSDEC at the perimeter of the property. . A CAMP will be completed during construction. Spray paint booth would have air permit in accordance with 6 NYCRR Part 201 and will be permitted and constructed with appropriate filtration and monitoring systems. Vegetative buffers will remain to mitigate potential odors from vehicles or equipment. A hydrogen sulfide limit of 0.01ppm for one hour period will be used as an odor threshold. Air emissions for Ezra Prentice community will be mitigated by the establishment and enforcement of truck routes through existing City of Albany Streets through the Port District and State Routes to eliminate new trucks traveling on South Pearl Street. See **Section 3.7** for further details on the required truck route. See **Section 3.20** for additional mitigation measures relating to truck route.
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 Public Transportation – No impacts Pedestrian and Bicycle - No noticeable impacts	Vehicle – Signal improvements including traffic signal timing change, construction of left turn lane, construction of right turn lane. Proposed access drive is stop sign controlled and requires clearing of existing vegetation and signage/lighting installation. See Proposed Threshold / Mitigation Table in Section 3.7.6 for further details on mitigation proposed in each phase (by square footage of building and vehicle trips).
3.8 Drainage	Proposed Project will change the surface coverage of the site, increasing impervious cover to 49.63 ac.	A full SPDES permit will be required. A SWPPP will be developed that will implement water quality bio-retention ponds and erosion and Sediment Control measures. All measures will be designed per the NYSDEC requirements and enforced during construction activities. A Site

		Management Plan (SMP) will be prepared to include a HASP, CAMP, and EWP.
3.9 Water Service (Potable and Fire Protection)	16,950 GPD water demand. 2,300 gpm fire demand. Connection to and extension of Town's water main.	Town existing watermain system will have a 6 MGD capacity once the Town completes upgrades to the current system in 2020. The new proposed project watermain will have adequate water to supply both the domestic and fire demand. The new watermain design will be completed in accordance with AWWA Standard C600, Town of Bethlehem Water District No. 1, Albany County Department of Health, and NYSDOH regulations. The new watermain extension to the project site will be at the expense of the Project Sponsor.
3.10 Sanitary Sewer	16,950 GPD sanitary demand treated with a private on-site package treatment system.	Package treatment system will be designed and permitted per the NYSDEC regulations. A SPDES permit from NYSDEC will be obtained.
3.11 Historic, Cultural, and Archeological Resources	No impact	None.
3.12 Aesthetic and Visual Resources	85' tall building can be seen, or partially seen, from 5 locations.	Variance for height of building will be pursued as needed. Height is the minimum necessary for the anticipated use. Building Architectural design will be in keeping with the aesthetic nature of the surrounding buildings in the area. Justification for variance has been provided. Buffer of on-site existing vegetation maintained along western edge of Project Site. Building colors will blend in with existing surroundings. Lighting will be full cut off, dark sky compliant.
3.13 Land Use and Zoning	Potential building height of 85' exceed the 60' maximum allowed per town code.	Variance for height of building will be pursued as needed. Justification for variance has been provided.
3.14 Community Character and Compatibility with Comprehensive Plan	No impact since the Project Site will be developed in accordance with Town's Comprehensive Plan and Draft LWRP.	None

3.15 Emergency Services	No Impact	Will serve letters from the emergency service providers have been provided. Buildings will be built according to current standards of the NYS Uniform Code for fire prevention. Roads will be designed and built to meet or exceed Town requirements including ability to accommodate emergency service vehicles. Should building be owned by APDC, an agreement to reimburse the Town of actual costs for emergency services would be established. See section 3.17 for further discussion of tax benefits for emergency services.
3.16 School District	No impact	None.
3.17 Fiscal and Economic Impact	Minimal added cost expected for Bethlehem Police Department ant Delmar-Bethlehem EMS.	Minimal added cost will be off-set by the taxes generated by the Proposed Project. Should building be owned by APDC, an agreement to reimburse the Town of actual costs for emergency services would be established.
3.18 Recreation and Open Space	No impacts. Proposed Project is consistent with Town's Comprehensive Plan and Zoning Ordinances.	None.
3.19 Solid Waste Disposal	No Impact , existing facilities have capacity for solid waste during construction and operation.	APDC will encourage future tenants to comply with Town's recycling policy.
3.20 Environmental Justice	Increased truck and rail traffic near the Ezra Prentice neighborhood and potential air toxin increased from truck traffic.	All truck traffic will be routed through the existing Port District and will avoid the Ezra Prentice neighborhood. Additional Environmental justice review and public outreach at time of site plan application by implementing the NYSDEC CP-29 at time of NYSDEC permit application concurrently with the Town of Bethlehem Site Plan application.

1.4 PROPOSED MITIGATION MEASURES

5. MJ ENGINEERING AND LAND SURVEYING, P.C.: For ease of review by the general public it may be better suited to list all mitigation measures and thresholds triggering those mitigation measures being considered by topical area in tabular form.
   RESPONSE: See table above in response to comment 4.

6. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 1.4.5 Groundwater In the first sentence of the paragraph delete "State Department of Conservation" and replace with NYSDEC as it is an acronym identified within the DGEIS.
   RESPONSE: In the first sentence of Section 1.4.5 Groundwater, "State Department of Conservation" shall be replaced with NYSDEC. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

7. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 1.4.8. Drainage The first sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.
   RESPONSE: The first sentence of Section 1.4.8 Drainage shall read "The project will have land disturbance of more than 1-acre and will require a full Stormwater Pollution Prevention Plan (SWPPP) that conforms to Part III A through C of the General Permit. A full SWPPP will be developed in accordance with permit GP-0-15-002, latest edition, regulations." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

8. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 1.4.8. Drainage It is understood the project will seek coverage under GP-0-15-002 and shall be stated. It shall be noted that GP-0-15-002 will expire in January of 2020 and replaced with GP-0-20-001. The NYSDEC has yet to define a transition period and there is a potential that this project may need to seek coverage under the new General Permit.
   RESPONSE: The permit designation "GP-0-15-002", shall be replaced with the permit designation "GP-0-15-002, or the active latest edition". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

1.5 CONSIDERED ALTERNATIVES

9. MJ ENGINEERING AND LAND SURVEYING, P.C.: Provide a table summarizing all alternatives evaluated. This table may include alternative name, description of anticipated uses, square footage of structure, etc.
   RESPONSE: See table below. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

   Note all concepts include a north / south access road with associated employee parking, truck parking, loading docks, a wharf and rail facilities for transport of products and materials.

Table 1.5-1: 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 .

10. MJ ENGINEERING AND LAND SURVEYING, P.C.: No Build There is reference that under this alternative that the site would remain as Heavy Industrial. This is an erroneous statement since the development plan does not ask for a change in the site's current zoning designation.

    RESPONSE: The sentence will be modified to read "The Site is zoned Heavy Industrial, and if it 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". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

1.6 MATTERS TO BE DECIDED

11. MJ ENGINEERING AND LAND SURVEYING, P.C.: Include "Planning Board" after Town of Bethlehem in the first sentence for clarity of which regulatory body at the Town level is the Lead Agency.

    RESPONSE: In Section 1.6 Matters to be Decided, the first sentence shall read, " As Lead Agency, The Town of Bethlehem Planning Board needs to provide SEQRA "Statement of Findings", as well as preliminary site plan approval. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

12. MJ ENGINEERING AND LAND SURVEYING, P.C.: Modify text to reflect that the Planning Board will issue a Statement of Findings in accordance with SEQRA upon completion of the FGEIS. Once SEQRA has been completed, the Planning Board will conduct a preliminary site plan review.

RESPONSE: The text will read "As Lead Agency, the Town of Bethlehem Planning Board will issue a Statement of Findings in accordance with SEQRA upon completion of the FGEIS. Once SEQUR has been completed, the Planning Board will conduct a preliminary site plan review". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

13. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 1.6.1. Involved Agencies Delete Town of Bethlehem Engineering Department as they are a subset of the Department of Public Works. This edit shall be made globally in the DGEIS.
RESPONSE: In Section 1.6.1 Involved Agencies, under local agencies, the Town of Bethlehem Engineering Department will be removed. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

14. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 1.6.3. Lists of Required Permits and Approvals This section will restate the information presented in Section 2.6. There are discrepancies between the two section, missing permits required, or actions listed under the incorrect agency:

a. Under USACE, if the project site is not within the Town of Bethlehem's approved water supply service area, then a Joint Application will be necessary. Add this approval if deemed necessary.
RESPONSE: The property is not within a Town Water District and therefore, an application to extend the water district will be made to the Town Board and the appropriate approval from the County Health Department will be pursued. The USACOE does not have jurisdiction over the water supply for the Project site, and as such the Joint Application is not associated with the list of water supply required permits.

b. Under NYSDEC, delete "Stormwater MS4 Permit". It is correctly listed under Town of Bethlehem Engineering.
In Section 1.6.3 Lists of Required Permits and Approvals, under NYSDEC, the words "Stormwater MS4 Permit" shall be changed to NYSDEC "General Permit GP-0-15-002, (latest edition) for Stormwater Discharges from Construction Activities" administered by the Town of Bethlehem Engineering. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

c. Under NYSDEC, if the project site is not within the Town of Bethlehem's approved water supply service area, then a Water Withdrawal Application Supplement WW-1 will be necessary from the NYSDEC. Add This approval if deemed necessary.
RESPONSE: See response to 14 a above.

d. Under NYSDEC, for the individual Wastewater Permit, state the applicable General Permit number.
RESPONSE: The NYSDEC applicable General Permit GP-0-15-002, latest edition. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

e. Under NYSDEC, list the need to gain coverage under the General Permit GP-0-15-002 for Stormwater Discharges from Construction Activities.
RESPONSE: See response to 14 b above.

f. Under Albany County Health Department, this approval appears to be for public water systems improvement pursuant to the scope of work outlined in the Engineering Department memorandum. As such, this should be reworded to state "Application for Approval of Plans for Public Water Supply Improvements Form DOH-348".
RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, under Albany County Health Department, the words "Potable Water Service Approval" shall be changed to "Application for Approval of Plans for Public Water Supply Improvements Form DOH348" "Backflow Prevention Form DOH-347" will be added. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

g. Under Town of Bethlehem Engineering, retitle Town of Bethlehem Department of Public Works.
RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, "Town of Bethlehem Engineering – Stormwater MS4 Permit" shall be removed. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

h. Under Town of Bethlehem Engineering (retitled to Town of Bethlehem Department of Public Works), delete "Stormwater MS4 Permit" and replace with "MS4 SWPPP Acceptance Form".
RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, under Town of Bethlehem Public Works, "MS4 SWPPP Acceptance Form" shall be added. "5-acre Disturbance Waiver Request" shall be added. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

i. Under Town of Bethlehem Engineering (retitled to Town of Bethlehem Department of Public Works), add "5-acre Disturbance Waiver Request.
RESPONSE: See response to 14g and h above.

j. In the event of the Town's existing water district needs to be extended to include the site, Town of Bethlehem Town Board acceptance of a Map, Plan and Report and approval of the district extension will be necessary and shall be noted.
RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, "Town of Bethlehem Town Board" shall be added. "Acceptance of Map, Plan & Report for Water District Extension" and "Acceptance of Water System Infrastructure Improvements" shall be added under "Town of Bethlehem Town Board". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

k. Add the Town of Bethlehem Town Board for the acceptance of water system infrastructure improvements planned to supply the project.
RESPONSE: See response 14 j above.

l. Add Albany County Planning Board for issuance of a recommendation under a 239 M and N referral.
RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, "Albany County Planning Board" will be added. "Recommendation under 239 M and N referral" will be

added under "Albany County Planning Board". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

m. In the even the Town's existing sewer district needs to be extended to include the site for treatment of sewage by the Town of Bethlehem, Town of Bethlehem Town Board acceptance of a Map, Plan and Report and approval of the district extension will be necessary and shall be noted.

RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, under "Town of Bethlehem Town Board", "Acceptance of Map, Plan & Report for Sewer District Extension" and "Acceptance of Sewer System Infrastructure Improvements" shall be added. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

n. If the Owner decides to pursue the approach of sending sewage to the Albany County facility, please note the need for an intermunicipal agreement between the County and the Town of Bethlehem.

RESPONSE See response to comment 125 in Section 3.10. Connection to the County Facility in no long the preferred option. An on-site sewer treatment plant is the preferred option to provide sanitary service for the project.

2.1 PROJECT LOCATION

15. MJ ENGINEERING AND LAND SURVEYING, P.C.: Provide a site location map within the text for easy reference.

RESPONSE: Figure 2.1-1 Site Location Map has been added to Section 2.1. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

2.2 SITE DESCRIPTION

16. MJ ENGINEERING AND LAND SURVEYING, P.C.: In the first sentence, the term "natural" is unclear. If this is intended to mean "undeveloped" state as such.

RESPONSE: The first sentence shall read "The site lies within an undeveloped, industrial, and rural/suburban context with limited access". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

2.3 DESCRIPTION OF PROPOSED ACTION

17. MJ ENGINEERING AND LAND SURVEYING, P.C.: Three phases of development are mentioned but not explained (i.e. square footage for each phase). Each phase should be clearly described as this is important to establishing thresholds for possible future mitigation.

RESPONSE: This section of the DGEIS references the Alternatives Section 4.0.

18. MJ ENGINEERING AND LAND SURVEYING, P.C.: The maximum development scenario directs the reader to Figure 2.3-1 to view this site concept. There should also be a reference to where the alternate site concepts can be viewed (Appendix O).

RESPONSE: A reference to Appendix O has been added. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

19. MJ ENGINEERING AND LAND SURVEYING, P.C.: Figure 2.3-1 should follow section 2.3-1.
RESPONSE: Figure 2.3-1 has been relocated to follow section 2.3. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

20. MJ ENGINEERING AND LAND SURVEYING, P.C.: Identify the existing zoning designation for the site pursuant to the most current zoning map for the Town of Bethlehem. This would be suitable prior to the listed permitted use discussed in this section.
RESPONSE: Existing Zoning is Heavy Industrial and shall remain. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

2.5 CONSTRUCTION ACTIVITIES

21. NYSDEC: The bridge design proposal should have enough hydraulic opening to allow passage for anticipated high flows (vessel traffic may need to be consideration as well), span the entirety of the Creek without any pier structures, and be designed so that the abutments are placed at a distance of at least 1.25 x's stream bed width.
RESPONSE: The final bridge design will be in accordance with NYSDEC and USACE permitting requirements, including consideration of navigation requirements. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

22. NYSDEC: Proposals to significantly alter the existing condition of the shoreline (sheet pile or concrete vertical walls, elevation increases, etc.) are not generally compatible with Article 15 standards and alternative considerations should be evaluated and presented with an application for permit, discussing justification for the chosen alternatives. Work windows (September 1- November 30) to reduce impacts to naturals resources will likely be incorporated if a permit is issued.
RESPONSE: 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; and
(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.
The project will comply with all required seasonal restrictions incorporated into future permits.
See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

23. MJ ENGINEERING AND LAND SURVEYING, P.C.: In the first sentence of the second paragraph "1.1.3" should be replaced with "1.13".

RESPONSE: 1.1.3 has been replaced with 1.13. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

24. MJ ENGINEERING AND LAND SURVEYING, P.C.: The second paragraph mentions the project may be constructed in a single phase or up to three phases. For the phased approach, a graphic example would be beneficial to understand location and whether it is achievable/realistic.
RESPONSE: Concept C illustrates 4 buildings which each building hypothetically representing each phase.

25. MJ ENGINEERING AND LAND SURVEYING, P.C.: The section notes that a 5-acre disturbance waiver will be required. This statement shall be rewritten indicating that a 5-acre disturbance waiver request will be submitted to the Town of Bethlehem DPW for review and approval. This is a discretionary decision of the Town that may or may not be approved based upon the merits of the request. Further, if approved, it may be rescinded at any time based upon observed performance.
RESPONSE: In Section 2.5 Construction Activities, the words "Approval to disturb more than five (5) acres at a time will be required." Shall be replaced with, "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." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

26. MJ ENGINEERING AND LAND SURVEYING, P.C.: There needs to be a discussion of construction phase noise impacts, reference to the Town of Bethlehem's Town Code, Chapter 81 and the project will comply with this chapter.
RESPONSE: Construction noise shall comply with the Town of Bethlehem's Town Code, Chapter 81.

27. JIM CARREIRO, FROM SOMERSET DRIVE: Concerns around construction phase, where there will be potentially disturbing the coal ash on the Site. The ash has high contents of mercury and is very dangerous. Will there be sufficient protections to protect water supply since we are drawings from the Hudson not too far from this location? I bring to the Board that the construction phase needs to be viewed differently than the ongoing operation of it and I am concerned that the remediation, that may be sufficient, but I want to go into more depth about what the protections are. What if the remediation doesn't work or if there is some disaster where there is leaching into the Hudson River and would go into the water supply. So what protections are going to be for the Town's water supply?
RESPONSE: See response to comment 111. It should be noted that the comment states that the water supply is drawing from the Hudson River, but it is in fact drawing from a well adjacent to the Hudson River not directly from the river. A soil management plan will be prepared and approved by the NYSDEC as required. The NYSDEC has stated that 6 NYCRR Part 375-6.7(d) would have to be followed. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

2.6 REQUIRED APPROVALS

28. NYSDEC: Project will require the following permits:

- Protection of Waters Permits (for Hudson River work and the proposed bridge over the Normans Kill)
- Water Quality Certification
- Approval of the cap over the remediations area/site
- Sewer and Water district extensions/approvals

RESPONSE: It is understood that these approvals and permits will be required from the NYSDEC prior to construction. List of required permits have been added under the NYSDEC in Section 2.6. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

29. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section will restate the information presented in Section 1.6.3. There are discrepancies between the two section, missing permits required, or action listed under the incorrect agency.

a. Under Town of Bethlehem Planning Board, acceptance of new water and sewer mains are listed as being under their jurisdiction. This is an action subject to Town of Bethlehem Town Board approval.

RESPONSE: In Section 2.6 Required Approvals, shall read as follows: under 1. Town of Bethlehem Planning Board item c. Acceptance of dedication of new water and sewer mains (as necessary) shall be removed. That action item is currently listed as item c under 2. Town of Bethlehem Town Board. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

b. Under Town of Bethlehem Planning Board, 5-acre Waiver approval is listed as being under their jurisdiction. This is an approval considered by and issued by the Town of Bethlehem Department of Public Works.

RESPONSE: In Section 2.6 Required Approvals, under Town of Bethlehem Planning Board, "SWPPP and 5-acre waiver approval" shall be removed. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

c. Under Town of Bethlehem Department of Public Works, add issuance of MS4 SWPPP Acceptance Form and approval of 5-acre Disturbance Waiver.

RESPONSE: In Section 1.6.3 Lists of Required Permits and Approvals, under Town of Bethlehem Public Works, "MS4 SWPPP Acceptance Form" shall be added. "5-acre Disturbance Waiver Request" shall be added. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

d. Under Albany County Planning Board, b should be rewritten to state 239 M and N referral.

RESPONSE: Duly noted. In Section 2.6 Required Approvals, under Albany County Planning Board, letter b. shall read "State 239 M and N referral". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

e. Under New York State Department of Environmental Conservation, identify whether a Water Supply Application is necessary for the extension of the Town of Bethlehem's water supply area.

RESPONSE: A Town Water District extension and subsequent water supply application will be required. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

2.7 PURPOSE AND PROCESS OF SEQRA

30. MJ ENGINEERING AND LAND SURVEYING, P.C.: Expand to identify what process steps have occurred for this project and when – preparation of EAF, determination of significance, lead agency, public scoping, public hearing, public comment period, etc.

RESPONSE: The summary of process steps for the 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**
- **Completion and Acceptance of Supplemental DGEIS: December 17, 2019**
- **Public Information Meeting for Ezra Prentice Community on Supplemental DGEIS: January 6, 2020**
- **Public Review and Comment Period for SDGEIS End: January 17, 2020**
- **Completion and Acceptance of FGEIS: Pending**

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

31. MJ ENGINEERING AND LAND SURVEYING, P.C.: Include a list/table of all steps in the SEQRA process specific to this project, including dates.

RESPONSE: See bulleted list above to comment 30.

3.1 SOILS, GEOLOGY AND TOPOGRAPHY

32. JOHN SMOLINSKY: 3.1.2, pages 3-4, para 2 and 3-6, para 1 - Give examples of "further investigations" and the general circumstances when they would be required and the thresholds that trigger them.

RESPONSE: Further investigations include subsurface soil and groundwater sampling in accordance with NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation prior to site development to assess the potential for contaminants in exceedance of NYSDEC CP-51: Soil Cleanup Guidance Policy recommended soil cleanup levels. The subsurface investigations will be developed in coordination with the NYSDEC. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

33. JOHN SMOLINSKY: 3.1.3 Dynamic Compaction – What are the hours of the dynamic compaction operations? How many days/week?

    RESPONSE: It is anticipated that the Dynamic compaction operation will comply with Town of Bethlehem's Local Law No. 5-2009 and will only take place between the lesser of 7am to 7pm or dusk to dawn Monday through Friday for a period of 2 months. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

34. JOHN SMOLINSKY: Will there be off-site monitoring of noise and vibration? Where will it/they be located? How will monitoring be reported and what are the remedial actions if impacts are excessive?

    RESPONSE: As stated in the DGEIS Section 3.1.3, typical activities generate particle velocities below the damage threshold of any typical construction even at a modest and conservative setback distance of 200 feet from the densification activity. The closest building is over 330 feet from the site (property line) and over 500 feet from the proposed building making any adjacent building further than any anticipated impact on noise and or vibration. Therefore, monitoring is not necessary. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

35. JOHN SMOLINSKY: Is dynamic compaction proposed for the entire site? What methods will be used on other parts of the site?

    RESPONSE: Dynamic compaction is proposed for all load bearing (Building and parking areas) areas of the site. The balance of the site will be compacted with industry standard compaction equipment. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

36. JOHN SMOLINSKY: If off-site disposal of cut material is necessary, where is the disposal site? What is the permitting process?

    RESPONSE: as stated in the DGEIS, the earthwork is anticipated to be balanced and therefore, no off-site disposal of cut material is being proposed.

    As stated, a soil management plan approved by NYSDEC will be required. If during this permitting process the need for off-site disposal of contaminated materials is determined by the NYSDEC the material . will be disposed at a landfill permitted to accept such material.

    See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

37. JOHN SMOLINSKY: When is an underwater dredging plan submitted? What are the potential upstream and downstream impacts on the Hudson River considering currents, tides and boat traffic and wakes?

RESPONSE: Dredging is under the jurisdiction of the NYSDEC, as such a Sediment Sampling and Analysis Plan (SSAP) will need to be prepared in accordance with TOGS 5.1.9 guidelines or other site-specific requirements under a NYSDEC remedial program prior to any dredging. A dredging plan based on the results of the SSAP will be prepared as part of future NYSDEC Article 15 and USACE Section 10/ 404 permitting requirements. The dredging plan and permitting documents will address potential environmental and navigability impacts to the Hudson River in consultation with the NYSDEC and USACE.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

38. JOHN SMOLINSKY: Are there alternative site preparation and construction and disposal methods? Are they the same for all four development scenarios?
RESPONSE: Industry standard construction site preparation and disposal of construction debris will be implemented and are the same for all development scenarios. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

39. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.1.2. Soil, Geology and Topography – Potential Impacts (Terrestrial Land) The discussion presented in Section 3.1.3 in its entirely provides substantive discussion on the dynamic compaction process and that there will be no vibration that would reach damaging levels effecting adjacent structures. This discussion provides both the potential impact and a technical data that there will be no adverse impact relating to excess vibration. While the Scoping Document requests this discussion in Section 3.1.4, it may be more appropriate in Section 3.1.2.
RESPONSE: The discussion has remained in the original location to aid in information additions.

40. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.1.2. Soil, Geology and Topography – Potential Impacts (Terrestrial Land) There should also be a discussion if dynamic compaction will achieve the audible ranges for parcels in proximity to the site.
RESPONSE: See above comment and response to Comment #34 from John Smolinsky.

41. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.1.2. Soil, Geology and Topography – Potential Impacts (Terrestrial Land) 3.1.2 states"… the project will be designed to balance earthwork and therefore no on-site soil will be removed from the project site." While 3.1.3 states "It is possible that some coal ash may need to be transported off-site…" Clarify which statement is accurate.
RESPONSE: See above comment and response to Comment #36 from John Smolinsky.

42. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.1.3. Soil, Geology and Topography – Mitigation Measures (Terrestrial Land) There should be mention of the need to prepare a SWPPP that addresses both construction phase site disturbances as

well as long term stormwater management practices, then referring to the appropriate section of the DGEIS for the technical discussion of the stormwater practices.

RESPONSE: Section 3.1.3 will have the following added "A SWPPP shall be prepared to address both construction and long term land disturbances and stormwater management practices". Further discussion on the SWPPP is discussed in Section 3.8. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

43. NYSDEC: Dredging along the Hudson shoreline is under consideration in conjunction with the Wharf option. The shoreline of the property along the Hudson River is currently comprised of native rock, stone rip rap, and concrete grouted sloped banks. The slope is gentle and naturally vegetated in many locations.

    Alternatives to the impacts of dredging must be considered and presented as part of any application to dredge. Proposals must also be considered and presented as part of any application to dredge. Proposals must also be reduced to the minimum extent necessary and the need justified. Work windows (September 1 – November 30) to reduce impacts to naturals resources will likely be incorporated if a permit is issued.

    RESPONSE: See response to comment #22 to the NYSDEC regarding conditions of shoreline under Section 2.5 below.

44. NYSDEC: Any material that will be dredged from the Hudson River must be sampled and analyzed for contaminants of concern – especially PCB's. Recommended sampling methods and the list of contaminants are both contained in TOGS 5.1.9 Chapter II. Table 1 of the TOGS is outdated as far as the most applicable EPA Methods. Instead of the listed method, the applicant should choose the method with a practical quantification limit (PQL) that is sufficiently sensitive to allow a meaningful comparison to the Class A threshold for that parameter. If there is no sufficiently sensitive analytical method, then choose the method with the lowest PQL. There are additional procedures that should be followed in order to qualify for upland management of any dredge material (BUD) on the property.

    RESPONSE: The following will be added, "the applicant will comply with all applicable NYSDEC regulations. Sample results were included in Appendix F of the DGEIS within the Hudson River Dredging Report." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

45. NYSDEC: For commercial or industrial use at Brownfield Cleanup, Environmental Remediation and State Superfund sites (of which this site is not currently), the Department would typically require a cover system over remaining contaminated soil. Language for the standard remedial element of a cover system at a commercial or industrial site is as follows:

    "A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil

placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs."

RESPONSE: The following will be added, "upon application to DEC, further coordination with the NYSDEC will occur as part of future subsurface investigations and remedial actions." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

46. GIANNA AIEZZA: I know I asked them to add who would be response for the fly ash remediation and to discuss 6 NYCRR Part 375, but also on Page 3-6, it says construction would be completed under a Site Management Plan. This is not correct, construction would be completed through a Work Plan approved by DEC. A SMP is after the site is completed for future construction or maintenance once the site is "closed" with DEC. The wording in this section should be changed to say it will be completed under an approved work plan with DEC.

    RESPONSE: Section 3.1.2 states "The fly ash and bottom ash at the site has the potential to contain high levels of metals and other contaminants that may require entering into a NYSDEC remedial program under 6 NYCRR Part 375." Section 3.1.3 states "A soil management plan (SMP) prepared in accordance with the NYSDEC regulations will be required prior to construction for management of the coal ash soils and this plan will also address procedures for constructing underground utilities and the future maintenance of the below grade infrastructure." The wording in Section 3.1.3 shall be changed from "soil management plan (SMP)" to "work plan". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

47. JIM CARREIRO, FROM SOMERSET DRIVE: The second part is the ongoing remediation. Are we going to be able to monitor what is coming out of this because once you disturb these fields, will we have the ability to maintain monitoring and make sure that it, again, doesn't get into our water supply?

    RESPONSE: See response to comment 111.

48. GIANNA AIEZZA: Are you working with the DEC regarding the fly ash? Who would be the responsible party of the permittee under Part 375?

    RESPONSE: Yes, the applicant is working with the NYSDEC. The responsible party or permittee would either be the tenant or the Port of Albany. Also see response to comment 111. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.2 VEGETATION AND WILDLIFE

49. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.2.2. Vegetation and Wildlife – Mitigation Measures (Threatened and Endanger Species) List the NYSDEC and USFW conservation measures specific to the Northern Long-eared Bat, which may include but are not limited to installing barriers to identify tree clearing limits, not performing site construction activities after sunset or other identified BMPs.

    RESPONSE: Section 3.2.2 shall reference the following applicable AMMs:

    - **The project, to the extent practicable, will be designed to avoid tree removal in excess of what is required to implement the project safely.**
    - **The project will be constructed to ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field.**
    - **Temporary lighting during construction will be directed away from suitable NLEB habitat during the active season.**
    - **Permanent outdoor lighting will use downward-facing, full cut-off lens lights, or otherwise direct lighting away from suitable NLEB habitat.**

    See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

50. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.2.2. Vegetation and Wildlife – Mitigation Measures (Threatened and Endanger Species) Identify the available mitigation measures planned to protect the Small's Knotweed and Cobra Clubtail.

    RESONSE: The implementation of the SWPPP which will require the installation of a protective silt fence shall serve as mitigation against potential impacts to Small's knotweed, cobra clubtail, and umber shadowdragon.

    See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

51. NYSDEC: Several of the projects currently under consideration have the potential to impact protected sturgeon species known to occupy the area. Potential impacts must be avoided and minimized. For unavoidable impacts, mitigation may be necessary.

    RESPONSE: Avoidance and minimization measures, including any required mitigation for potential impacts to Atlantic and shortnose sturgeon, will be addressed during the future NYSDEC Article 15 permitting process. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

52. NYSDEC: Freshwater Mussel species have been documented to potentially exist within the proposed project area. Potential impacts must be avoided and minimized. Surveys and relocation efforts may be required dependent upon the selected project.

    RESPONSE: Avoidance and minimization measures, including any required surveys, relocation, and monitoring to mitigate for potential impacts to rare or protected freshwater mussels, will be addressed during future NYSDEC Article 15 permitting

process. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

53. NYSDEC: Dependent on the selected project proposal SAV surveys may be required and potential impacts avoided and minimized.
RESPONSE: Avoidance and minimization measures, including any required surveys and mitigation for potential impacts to SAV, will be addressed during future Article 15 permitting efforts.

54. NYSDEC: The Department's Threatened & Endangered Species staff confirm that eagles are no longer present on the island, and therefore, impacts to eagles is unlikely.
RESPONSE: No response needed.

55. NYSDEC: Tree removal is suggested to occur between November 1 and March 31 in order to protect potential long-eared bat habitats.
RESPONSE: As stated in the DGEIS, all trees within the project impact area will be cut between November 1 to March 31 in accordance with NYSDEC and USFWS recommended conservation measures designed to minimize the likelihood of adverse impacts to northern long-eared bats. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

56. NOAA: Endangered Species Act - Atlantic Sturgeon - Atlantic sturgeon are present in the waters of the Hudson River and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPSs) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Transient adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area to opportunistically forage. Depending on the time of year and the bottom substrate in the area, the project site could be in Atlantic sturgeon spawning habitat and early life stages could be present. Atlantic sturgeon prefer to spawn in freshwater and on hard bottom substrate. Spawning occurs from April 15 to August 31. Eggs and yolk-sac larvae could be present from April 15 to September 30. Post yolk-sac larvae could be present from April 15 to October 31. Young-of-the-year and juvenile Atlantic sturgeon could also be present in the project area.

On August 17, 2017, NOAA Fisheries published a final rule designating critical habitat for the Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon (82 FR 39160). The effective date of the rule was September 18, 2017. The action you have proposed will occur in an area that is designated as critical habitat. .
RESPONSE: Section 3.2 Vegetation and Wildlife of the DGEIS discusses both the Atlantic and shortnose sturgeon. The project proposes to complete dredging activities between September 1 and November 30 to minimize impacts to the sturgeon. In addition, a turbidity curtain will be utilized to minimize the potential impacts associated with suspended solids during dredging and shoreline disturbances.

57. NOAA: Shortnose Sturgeon - Shortnose sturgeon are present in the waters of the Hudson River and could occur in their adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. Transient juvenile and adult individuals could occur in the proposed project area to opportunistically forage. Depending on the time of year and the bottom substrate in the area, the project site could be in shortnose sturgeon spawning habitat and early life stages could be present. Shortnose sturgeon prefer to spawn in freshwater and on hard bottom substrate. Spawning occurs from March 15 to May 15. Eggs and yolk-sac larvae could be present from March 15 to June 15. Post yolk-sac larvae could be present from March 15 to July 15. Young-of-the-year and juvenile shortnose sturgeon could also be present in the project area.

    As project details develop, we recommend you consider the following effects of the project on sturgeon:
    For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work.
    For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
    Consider the related effects to water quality if any outfalls are built (i.e., will the standards still be met, will the effluent volume change, and will there be any effects to the species).
    For pile driving or other activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon.

Organism	Injury	Behavioral Modification
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS

    Depending on the amount and duration of work that takes place in the water, listed species of sturgeon and designated critical habitat may occur within the vicinity of your proposed project. The federal action agency will be responsible for determining whether the proposed action may affect listed species. If they determine that the proposed action may affect a listed species, they should submit their determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, NMFS, Greater Atlantic Regional Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 or nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See - http://www.greateratlantic.fisheries.noaa.gov/section7. After receiving a complete, accurate comprehensive request for consultation, in accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination

should be pursued. If you have any questions regarding these comments, please contact me (978-282-8490; Edith.Carson-Supino@noaa.gov).

RESPONSE: See response to NOAA comment 56 above.

58. NOAA: Magnuson-Stevens Fishery Conservation and Management Act - Essential Fish Habitat

The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with us on any action or proposed action authorized, funded, or undertaken, by such agency that may adversely affect essential fish habitat (EFH) identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905. The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. The project area has not been designated as Essential Fish Habitat for an federally managed species.

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated EFH.

The project area identified in the DGEIS has not been designated as EFH for any federally managed species. The area does provide habitat for other NOAA trust resources covered by the FWCA including American shad, alewife, blueback herring and striped bass. In addition, wetlands, submerged aquatic vegetation and shallow water habitat provide a wide range of ecological services for a wide variety of fish and wildlife. The Clean Water Act Section 404 (b)(1) Guidelines required that impacts to these aquatic habitat be avoided and minimized to the maximum extent practicable. Compensatory mitigation should then be provided for all unavoidable impacts.

If this project is authorized, funded or undertaken by a federal agency, the lead federal agency will be required to consult with us under authorities listed above.Karen.Greene@noaa.gov

RESPONSE: No response required.

3.3 REGULATED WETLANDS AND SURFACE WATERS

59. USACOE: I have no specific comments on this project to date. My office conducted a site visit to review the wetland line earlier this year. I the project will require any dredging, discharge of fill or placement of any structures over, under or within the Hudson River, then an authorization from my office pursuant to Section 10 of the Rivers and Harbors Act would be required. In addition, should the project require the placement of fill into the any other waters and/or wetlands, then an authorization pursuant to Section 404 of the Federal Clean Water would be required.

    RESPONSE: No response required.

60. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section 3.3.1. Regulated Wetlands and Surface Waters – Environmental Setting (Wetlands) Within the text of this section identify whether the USACOE has issued a Jurisdictional Determination on the delineated freshwater wetlands located on the site. If they have, correspondences from the USACOE shall be provided as an appendix.

    RESONSE: The USACE field reviewed the wetland boundaries and provided verbal acceptance of the boundaries on May 13, 2019. A Preliminary Jurisdictional Determination is pending. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.4 FLOODPLAINS AND FLOODWAYS

61. JOHN SMOLINSKY: Evaluate the range – from worst case to conservatively expected - of climate change scenarios regarding Hudson river flooding, water levels and flow. What consideration has been given to resiliency of the proposals considering the range of climate change scenarios?

    RESPONSE: Below is a table of results showing predicted sea level rise in the Mid-Hudson Region for different time horizons at different confidence levels. These results were generated from the NYSDEC's ClimAID model. Storm surge is applicable as storm surges relate to coastal locations and the Site Location is not considered a coastal location, as defined by FEMA.

Time Interval	*Low Projection*	*Low-Medium Projection*	*Medium Projection*	*High-Medium Projection*	*High Projection*
2020s	*1 inch*	*3 inches*	*5 inches*	*7 inches*	*9 inches*
2050s	*5 inches*	*9 inches*	*14 inches*	*19 inches*	*27 inches*
2080s	*10 inches*	*14 inches*	*25 inches*	*36 inches*	*54 inches*
2100	*11 inches*	*18 inches*	*32 inches*	*46 inches*	*71 inches*

Source: 6 CRR-NY 490.4(a)

Per the Draft NYS Flood Risk Management Guidance for Implementation of Climate Risk and Resiliency Act (CRRA), Section 3.3.2.5.1.2 Non-Critical Facilities, Tidal Areas the DEC recommends the following:

> **Applicants in projects involving non-critical facilities and infrastructure in tidal areas should demonstrate consideration of the following guideline elevation, as practical, considering feasibility, project costs, costs of flooding, funding eligibility, risk tolerance, environmental effects and historic preservation:**
> **The elevation and special flood-hazard area that result from adding the medium sea-level rise projection applicable for the full, expected service life of the facility, plus two feet of freeboard, to the BFE and extending this level to its intersection with the ground.**

Given the definitions in the Draft NYS Flood Risk Management Guidance for Implementation of Climate Risk and Resiliency Act (CRRA), the project is considered to be a non-critical facility; it is located within a tidal area of the Hudson River; and the project's anticipated useful life is 50 years. This would make the medium projection of sea level rise 25 inches, or 2.1 feet over the life of the project. Assuming a Base Flood Elevation (BFE) of 18, the resulting Finished Floor Elevation (FFE) of the building would be 22.1 feet (18' + medium sea level rise of the project life + 2'). The project's current FFE is 20.3 feet, which was established to keep the project safely above the BFE, account for sea level rise, and balance the earthwork of the site to the greatest extent practicable. Raising the building and associated site an additional 1.9 feet would require roughly 133,000 cubic yards of fill to be hauled onto the site. This would have a significant impact on project costs and impose additional environmental impact on the surrounding transportation system and neighboring communities by hauling a significant amount of fill. In addition, given FEMA has not released an updated Floodplain study, the historical crest of the Hudson was 14.6 in 2011 (at NOAA station 3-miles from this site), which could be considered the current peak flood level. The most recent crest is 3.4 feet lower than the FEMA reported BFL of 18. Therefore, utilizing the DEC medium projection level would require the import of an additional 133,000 cubic yards of fill is not considered practical nor cost effective. Therefore, taking into consideration the DEC guidelines, the proposed FFE of 20.3, is considered a practical, risk tolerant, cost effective, and environmentally sensitive solution .

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

62. GIANNA AIEZZA: When discussing and evaluating projected seal level rise, the DGEIS should use the medium projection for analysis, not the low projection. There are five levels of projection - low, low-medium, medium, high-medium and high. The medium projection is the amount of sea-level rise that is about as likely as not and is a more appropriate projection to be using for analysis than the low projection - it is not

conservative enough to use the low projection. Also, is the discussion on the impact to the flood plain taking into consideration the 1' cover that would be required for the fly ash? This should be clarified and should be taken into account if it is not.

RESPONSE: See response to comment 61 above.

63. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section notes the project will use floodplain design standards that meet or exceed floodplain development requirements and building codes. Provide a list of the measures that will meet or exceed the referenced standards.

RESPONSE In accordance with FEMA's National Flood Insurance Program (NFIP) the lowest floor of structures built in Special Flood Hazard Areas (SFHAs), including Zone AE, shall will be greater than 1 foot above the BFE. The project will be designed such that all building lowest floor elevations and bridge lowest surface elevation will be at a minimum elevation of 20.3 feet (NAVD 88), which is 2.3 feet above the BFE or 1.3 feet above the FEMA required floor elevation. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

64. MJ ENGINEERING AND LAND SURVEYING, P.C.: Reference should be made that a Floodplain Development Permit application pursuant to Bethlehem Town Code Chapter 69-Flood Damage Prevention will need to be provided to the Town Building Division for review and approval by the Town Building Inspector.

RESPONSE: It is duly acknowledged that when a real project is proposed, as part of the Site Plan approval process, it will be required to obtain a Floodplain Development Permit pursuant to Bethlehem Town Code Chapter 69-Flood Damage Prevention. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

65. NYSDEC: The Community Risk and Resiliency Act (CRRA) was signed on September 22, 2014. CRRA applies to all major permit application under Article 15 (Protection of Waters), and adds mitigation of sea-level rise, storm surge and flooding to Smart Growth Public Infrastructure Policy Act criteria and guidance.

CRAA requires consideration of sea-level rise, storm surge and flooding in specified facility-siting regulations, permits and funding programs. Things that should be evaluated in the DEIS relative to this project include location, design, risk analysis and operational considerations to address sea level rise and create greater resiliency for communities, infrastructure, and ecosystems.

RESPONSE: See response to comment 61 above.

3.6 CLIMATE AND AIR QUALITY

66. THOMAS GOODFELLOW: I am concerned about mitigating any negative environmental effects of the project on the disparaged communities in the South End and Pastures areas of the City of Albany. These areas already suffer great environmental and social injustice from the volume of diesel traffic in their neighborhoods, the proximity to I-787 auto emission pollution and proximity to the "bomb train" yards at and adjacent to the Port

facilities. Any project developed must consider the impact and mitigate any further deterioration of environmental justice on the neighboring communities.

RESPONSE: See new section 3.20 Environmental Justice below.

The required truck route would not add any additional trucks from the proposed Port Expansion Site onto South Pearl Street. The project could add an additional 4-5 cars on existing trains that currently pass through the rail yard and would not add any noise or diesel emissions. The project could also add 1-2 trains per month, which 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.

Additionally, there are no fuel tanks permitted by the Town and are therefore not part of the Project.

67. GIANNA AIEZZA: I will have the same comment on the air quality section. They did not discuss the results of the DEC's air quality study. It has been going on for the last few years and the data is not too old to consider. It is a comprehensive study with actual data and it is important to be considered when looking at project impacts in the Port.

    RESPONSE: Section 3.6 of the DGEIS has been updated to reflect the NYSDEC *Albany South End Community Air Quality Study* dated October 2019. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

68. GIANNA AIEZZA: Air Quality - This section did not address potential VOC emissions, potential combustion emissions (NOx, etc) or PM. In addition, it did not discuss the DEC's air quality study as requested - it said there was a study that showed no impacts but that is not accurate. There were black carbon and PM measurements related to truck traffic and this should be discussed in relation to the anticipated increase in trucks. It showed that Ezra Prentice had emissions similar to a city, yes, but it was not proportionate to the size of the city. They definitely had impacts related to traffic.

    The potential for odors should be discussed and a threshold identified for odor. Emissions from the potential tenant would be handled under an air permit with DEC with the exception of mobile sources and odors. Mobile sources are not permitted and odor is not necessarily covered in an air permit.

    Section 3.6.3 - It cannot be assumed that the emissions increases from trucks are considered to be low if a trucking facility was to be the tenant. A threshold needs to be identified for this section. Also, under Air Quality it says odors are unlikely, but this cannot be known if a tenant is unknown. A threshold for potential odor needs to be identified. What if an asphalt storage facility became the tenant? It would potentially meet the other thresholds but could create an odor problem.

    The thresholds for each section need to be added to the DGEIS so it is clear what they are. I know there was a table at the presentation but it needs to be incorporated into the Report.

RESPONSE: See response to comment 67 above.

A table of the project thresholds has been included as Table 1.0-1: Proposed Project Thresholds in the FGEIS Section 1 Introduction.

69. STATE OF NEW YORK OFFICE OF THE ATTORNEY GENERAL: Ezra Prentice is a low-income public housing project in Albany's South End. It is a potential environmental justice area because it suffers a disproportionate adverse environmental impact when compared to other communities. The Ezra Prentice community is exposed to noise and air pollution from traffic along South Pearl Street, from I-787, the adjacent rail yard, an Albany County wastewater treatment plant, and from a nearby bulk petroleum storage and marine transfer facility.

    The project has the potential to exacerbate air pollution and quality of life problems at Ezra Prentice by increasing car and truck traffic along South Pearl Street and increasing adjacent rail operations. Currently air monitoring indicates that benzene concentrations are higher than most other urban monitors in the state, as well as other concerning items including particulate matter. Current monitoring indicate that diesel trucks are large causes of the concentrations at Ezra Prentice.

    RESPONSE: See response to comment 67 above.

3.7 TRAFFIC AND TRANSPORATION

70. JOHN SMOLINSKY: Address the potential circumstances and mitigation of oversize truck loads including routing, closures, delays and frequency.

    RESPONSE: Oversized loads may be required to access to/from the proposed Port Expansion property. 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 over the roads on which the oversized load is traveling. Since a specific project or building has not yet been identified, the need for an oversized load traffic plan is not known, and therefore the specific route that an oversized truck would take is not known. However, as an example of such a traffic control plan that would be created for an oversized truck route from the GE plant in Schenectady is in development by CME Associates and is included in the FGEIS Appendix L for reference only.

71. TOWN OF BETHLEHEM POLICE DEPARTMENT: As a member of the Town's joint traffic safety committee and ex-officio member of the Town bike pedestrian committee, it should be noted that the River Road corridor is specifically one of our highest crash stretches in the Town.

    As this is a 55 MPH roadway, any additional entry/exit roads should be carefully vetted for safety recommendations and traffic impacts. As you are aware the River/Glenmont and River/Anders intersections have been approved by the state for additional safety signage. These areas are within our GTSC grant target area and require extra patrols to reduce crashes and mitigate traffic concerns.

The concept of off ramps, or specialized turning roads in these areas or as related to River Road could be extremely beneficial in maintain the safety of the state roadway.

It would be in our best interest to include any traffic changes with the plan, as opposed to formulating them after its inception. Thank you for your consideration.

RESPONSE: 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. The summary table below shows the results of the data analysis.

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 raw accident data provided, in Appendix L of the FGEIS, 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 the intersections reviewed are un-signalized 3-way

'T' intersections which typically have a low accident rate as shown by the most recent NYSDOT released statewide average rates from 2016 of 0.18 (Urban) and 0.17 (Rural). The intersections within the corridor have accident rates higher than the statewide average except for 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.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

72. BRIAN GYORY: General confusion as to the "intended route". Applicant indicated that 100% of traffic at exit 23 would be flowing through and not turning onto 9w, but the figures don't reflect that. In addition it as indicated that the Ezra Prentice neighborhood will not be experiencing any additional truck traffic, but the figures shown do not show this.
    RESPONSE: The initial base assessment utilizing industry standard acceptable procedures, included tuck traffic utilizing the roadway networks in the same patterns that the current truck access the Port. Based on the sensitivity of the truck traffic in the area, a secondary truck sensitivity analysis was conducted to determine the best single route to/from the Port. Based on the sensitivity analysis, it was concluded/recommended that truck traffic utilize Church Street and the Roadways within the existing Port to access the proposed Port Expansion Site as shown in the updated TIS Figure 17 – Required Truck Route To/From Proposed Site, included in Appendix E of the FGEIS. This section of the Updated TIS has been expanded to further detail the proposed truck route distribution and volumes.

73. BRIAN GYORY: Provide a clear concise narrative showing the number of trucks and cars expected to use the site (threshold) and the route map showing intended traffic route and how the project would enforce this.
    RESPONSE: Figures 17, 18 and 19 were added to the TIS and are shown in Appendix E of the FGEIS shows that 147 trucks will enter and exit the site during the weekday AM peak hour, 75 trucks will enter and exit the site during the weekday PM peak hour, and 151 trucks will enter the site during the weekday mid-day peak hour.

74. BRIAN GYORY: Report states no impact on pedestrian and bicycle network, please provide backup documentation as to what was looked at here and explain how this project will

not impact pedestrians and bikes both within the project site limits as well as the entire network.

RESPONSE: The truck route and associated restrictions will result in no new trucks generated from the proposed project that will travel along South Pearl Street.

The South End Bikeway Connector Trail is currently under construction and the new trail will have two roadway crossings. The Church Street crossing is within the Port Expansion project's traffic study area while the Broadway crossing is north of the traffic study area; however, both intersections are expected to experience an increase in traffic associated with the port expansion project. The improvements at the Church Street crossing (from the I-787 frontage road) are proposed as part of the South End Bikeway Connector Trail Project and includes a new pedestrian/bicycle crossing for the multi-use trail with all way stop sign control to replace the existing flashing signal. This eliminates any concern with accidents associated with right turn movements at signalized intersections. . At the Broadway Crossing near Quay Street, based on consultation with the consultant engineer for the project sponsor, the intersection will be converted to an all way stop for vehicular traffic. This option being constructed as part of the South End Bikeway Connector Trail Project will enhance the crossing by granting the right of way to the pedestrian/bicyclist on the trail.

75. GIANNA AIEZZA: I am requesting that they come prepared with maps to illustrate their assumptions and to have clearly marked the routes and residential neighborhoods including Ezra Prentice. It is clear that traffic will impact them contrary to what Steve said at the meeting when we accepted the EIS as complete. The EIS says nothing about not allowing traffic to go by that neighborhood as he stated so they need to be prepared to fully discuss the traffic section in relation to that neighborhood as well as other residential neighborhoods. Furthermore, they did not take into account and discuss the traffic study conducted by CDTC in May 2018. I specially asked during scoping that they discuss that study in the EIS. They claim in the report the data from the DEC report is too old however the CDTC report was issued in May 2018 and extremely relevant and it was not done by the DEC. Furthermore the CDTC study focuses on the exact area they are looking to increase truck traffic. A link to the report is below. I am requesting that the Port review it and be ready to discuss it at the meeting. I am also requesting that they revise their report (obviously not before Tuesday) to discuss the findings and how they relate to their findings and the proposed increases in trick traffic. I would like them to be prepared to discuss it for Tuesday. This is not a new request so they should have already reviewed it as I specifically asked during scoping that they review all of the studies done in this neighborhood and discuss them in the EIS.
https://www.cdtcmpo.org/images/freight/S-Pearl-HV-Draft-May-25-2018_rev.pdf

RESPONSE: A detailed presentation with Maps was conducted at the September 3 public hearing.

76. JOHN SMOLINSKY: Evaluate the moves required for truck traffic to access I-787 via Thruway Exit 23 or 9W ramp and to travel onto the Port Exit Ramp. Address the adequacy

and safety of the required maneuvers to accomplish the applicant's preferred truck route. Comments from NYS DOT and NYS Thruway Authority would also be useful information.

RESPONSE:

Interchange 23 Ramps to Route 9W Analysis

Traffic Data Collection:

Existing traffic volumes for this intersection were established by performing manual turning movement counts (TMC) which were recorded Thursday, August 15, 2019 from 7:30 to 9:00 AM and 4:30 to 6:00 PM, by McFarland Johnson. These timeframes were based on the peak traffic periods for intersections in the area. The TMC data shows that the weekday traffic peaks between 7:30 and 8:30 AM in the morning while the evening traffic peaked between 4:30 and 5:30 PM.

Capacity Analysis:

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 be monitored as development occurs in the area to ensure the timings are optimized for the current traffic volumes as it is operating near capacity. Therefore, no noticeable impacts are anticipated at these intersections as a result of the proposed development.

The following table illustrates the LOS analysis results:

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
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	T	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**		

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
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	180.8	F	90.3	F
	OVERALL		**81.3**	**F**	**121.7**	**F**	**127.2**	**F**	**130.6**	**F**	**132.2**	**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**

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

As requested, 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 4 total combined lanes 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. 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 2016 Highway Capacity Manual are shown in the table below.

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		

The results of the analysis show that , the average density of the merging traffic 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.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

77. JOHN SMOLINKSKY: The applicant's preferred truck route may parallel and cross the proposed bicycle path connecting the Albany County Helderberg Hudson Rail trail and the Hudson Mohawk bike trail in Corning Park. The routes and proximity of the of the Truck and bike routes should be discussed and any mitigation or other measures to ensure safe operation of both should be discussed.
RESPONSE: See response to comment 74 to Brian Gyory comment.

78. NYSDEC: The DEIS discusses potential increases in vehicle traffic utilizing the Port expansion area. A discussion of anticipated increased vessel traffic should be included in the DEIS, as well as any anticipated impacts on river traffic, sturgeon or other potential impacts.
RESPONSE: Vessel Traffic – A review of the overall increase in Vessel Traffic was provided in the FGEIS Appendix E Traffic Impact Study (TIS) Maritime Analysis (TIS Page 47). See excerpt below from the TIS:

> ***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 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.***

Potential impacts associated with increased boat traffic specific to the proposed project are discussed in Section 3.7.2 and Appendix I of the DGEIS and Appendix E of the FGEIS and conclude that given the limited increase in anticipated vessel shipments specifically associated with this project, estimated to be an additional 21 ships/barges

per year, potential impacts to Atlantic and shortnose sturgeon will not occur as a result of this project see response comment 56 and 57.

79. MJ ENGINEERING AND LAND SURVEYING, P.C.: Provide a summary of the methodologies, findings and conclusions from the Traffic Impact Study (TIS) rather than copying the TIS language.
RESPONSE: The Traffic Impact Study was prepared in accordance with NYSDOT requirements and consistent with the Institute of Transportation Engineers (ITE) Traffic Engineering Handbook which is consistent with industry standards. The capacity analysis was completed in conformance with methodologies the 2016 Highway Capacity Manual, 6th Edition. The Signal warrant analysis utilized the warrant requirements specified in the Manual of Uniform Traffic Control Devices (MUTCD), while the 2018 AASHTO Policy on Geometric Design of Highways and Streets Manual (7th Edition) was used for roadway design related reviews. The traffic impact study found that 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. A detailed breakdown of the mitigation and timing of the mitigation is included in the DGEIS as well as the FGEIS Appendix E TIS starting on page 55.

80. MJ ENGINEERING AND LAND SURVEYING, P.C.: See TIS (Appendix I) for comments pertaining to the content.
RESPONSE: No response required.

81. MJ ENGINEERING AND LAND SURVEYING, P.C.: Related to oversized load transports, provide any correspondence from NYSDOT that confirms the CHA referenced Traffic Control Plan is the preferred travel route. How are the procedures in the Plan applicable to this project? Describe the travel route for oversize load transports, origin and destination, associated with the Port of Albany project and identify roadways in the Town of Bethlehem that may be affected.
RESPONSE: See the Oversized load discussed further in the response to comment 70.

82. MJ ENGINEERING AND LAND SURVEYING, P.C.: The Feura Bush Road/Glenmont Road intersection is currently in the design phase for a roundabout, as identified in the traffic impact study, and currently under review by NYSDOT. Describe how any oversized load transport route through this intersection can be accommodated by the roundabout design. Are modifications necessary?
RESPONSE: It is our understanding through coordination with the Town's roundabout design engineering consultant firm Creighton Manning Engineers, that oversized load accommodations through the roundabout are going to made part of the project currently under design.

83. MJ ENGINEERING AND LAND SURVEYING, P.C.: River Road will serve as the major north-south route for vehicles to access the site as identified by the trip distribution figures. Describe the existing conditions/ environment along River Road, ownership, daily traffic volume, posted speed limit, 85th %-ile speed, percentage of daily truck traffic, accident patterns, etc.

RESPONSE: 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. The NYSDOT reports that 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 the Traffic Impact Study. 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 as S. Pearl Street with a 30-mph posted speed limit.

84. MJ ENGINEERING AND LAND SURVEYING, P.C.: South Port Road will serve as the major access location for traffic entering/exiting the site. Describe the existing conditions/environment of South Port Road including but not limited to pavement conditions, roadway width, travel lanes, shoulders, ownership, etc. Is the road fully owned by the Town or is it a highway by use roadway and adjacent property owners have rights to the land? What are the impacts to the current roadway condition due to the proposed increase in traffic (vehicle and truck) and what is the mitigation? Does the road need to be widened? Identify distance? What entity will own and maintain new roadway improvements?

RESPONSE: South Port Road is an 850 feet long two-lane, city-maintained urban collector that tees into Port Road South (also known as Normanskill Street). South Port Road provides access to the 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 rail on both sides and the intersection with NYS Route 32 and has enlarged shoulder radii to accommodate truck traffic. The posted speed limit is 30 mph. As described in the intersection capacity analysis on page 24 of the DGEIS Traffic Impact Study, due to the existing volume of traffic at this intersection 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.

85. MJ ENGINEERING AND LAND SURVEYING, P.C.: All concept maps identify "Proposed Access Acquisition" along a triangular shaped area along west side of Port Road South just north of the new bridge. Identify current ownership and acquisition options.
    RESPONSE: The current owner is National Grid and has expressed their desire to sell this property. The Albany Port District Commission is in negotiations to purchase this property.

86. NYSDOT: The NYSDOT acknowledges that the Town of Bethlehem will be designated as the Lead Agency for this environmental review. NYSDOT believes we are an involved agency under SEQR given that access to the proposed extension is provided by State Route 32.
    RESPONSE: No response required.

87. NYSDOT: The NYSDOT recommends an expanded discussion regarding existing Environmental Justice concerns along Route 32 (South Pearl Street) corridor north of the proposed expansion.
    RESPONSE: An Environmental Justice Review Section has been added to this FGEIS as Section 3.20. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

88. NYSDOT: A NYSDOT Highway Work Permit would be required for any work proposed within the State Row-of-Way.
    RESPONSE: No response required .

89. NYSDOT: With respect to the Region 1-Traffic comments on the Traffic Study provided and including our crash analysis of the Route 32/144 intersection:
    a. Route 32 @ Route 144: recommendation is to install a traffic signal
       RESPONSE: No response required.
    b. Signal warrant analysis is Appendix D, page 313 indicates Warrant 1B is met
       RESPONSE: No response required.
    c. Warrant 1B 70% volume is to be used, "…if the posted or statutory speed limit or 85% speed on the major street exceeds 40 MPH, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000…" Neither of these conditions apply.
       RESPONSE: The posted speed limit on NYS Route 144 at this intersection is 55 mph and data recorded this summer by Tri-State Traffic Data Inc. south of this intersection shows that the 85 percentile speed is 54-55 mph in the NB/SB direction respectively. Historic NYSDOT data north of the intersection recorded in 2006 shows the 85 percentile speeds was 40 mph in the NB/SB direction. Since both the posted speed and the 85 percentile speed exceed 40 MPH, the 70 % volume was used since the 85 percentile speed would be higher than 40 mph.
    d. The "Should Signal Be Considered" row in the "Warrants Met" table on page 313 is shown as NO.

RESPONSE: The reference analysis worksheet (PDF Page 313) was based on the existing volumes/conditions. An additional proposed conditions worksheet (PDF Page 329-337) is based on proposed volumes and is the data used that to determine signal warrants.

e. Warrant 2: Four Hour Vehicular Volume, Figure 4C-1 on page 315 plots all 4 points below "2 OR MORE LANES & 1 LANE", yet concludes 3 out of the four hours meet warrant 2. No hours meet warrant 2.

RESPONSE: For a right turn bump out we typically still consider it a 1-lane road for the signal warrant analysis. The updated signal warrant worksheets will be revised as requested to use the 2-lane minor approach scenario on the charts. In addition, below is our updated signal 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 at Glenmont Road as well as NYS Route 144 at NYS Route 32 were reviewed using 2019 existing volumes due to the volumes and operating conditions at both intersections has potential to warrant a traffic signal. These intersections were also reviewed using the 2029 Build Phase III volumes to see if the proposed development's additional traffic generation has the potential to result in a signal to be warranted.

The updated detailed signal warrant analysis worksheets for the existing and proposed conditions for both intersections are provided in Appendix L of the FGEIS . This analysis shows that the NYS Route 144 and Glenmont Road intersection meets one of the MUTCD signal warrants for the existing condition and the following three 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, it simply means that further evaluation is necessary to determine the most appropriate traffic control measure to be implemented at the intersection. Despite meeting a signal warrant using existing traffic volumes, the gap analysis on NYS Route 144 was performed (see the Gap Analysis section of the TIS for more details) shows 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 this Gap Analysis and potential delays that installing a traffic signal has on traffic progression along a corridor, a signal is not recommended at this intersection.

The NYS Route 144/NYS Route 32 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 30-mph 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 service with minor increases in delay over the 2029 Background levels. 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 each subsequent site plan application to determine if installing a signal is warranted.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

f. Warrant 3: All three items in paragraph A are not met, therefore this warrant is not met. Also, paragraph A2: volume on minor street approach exceeds 150 vph for two moving lanes. None of the minor street volumes shown in the traffic volume data table on page 313 are over 150.
RESPONSE: See response to item 4d above, the three items are met for the proposed conditions scenario.

g. Crash analysis was not completed.
RESPONSE: See response to comment 71.

h. The Department evaluated the most recently available 5 years of crash data from the intersection. Warrant 7, Crash Experience is not met.
RESOPNSE: No response required

i. Level-of-service is not a warrant for traffic signals
RESPONSE: Understood, that it is not a warrant, but often capacity analysis is utilized as an additional measure of the effectiveness for proposing a signal if any of the warrants are met.

90. NYSDOT: The Department does not concur with the consultant's recommendation for the installation of a traffic signal at the intersection of Route 32 and Route 144.
RESPONSE: The TIS does not recommend the installation of a traffic signal at NYS Route 32 and NYS Route 144 at this time. The intent of this study was to determine possible required mitigation for maximum build out of the site with the most potential impact to the roadway network. During the Full Build scenario, this intersection meets the Eight Hour Vehicular Volume Warrant 1B, and the Peak Hour Warrant 3A and B. Based on this criteria the study recommends that this intersection be monitored and require a follow up signal warrant analysis at the time of site plan application once a specific project or building is proposed.

91. BRIAN GYORY: Traffic-How is the "intended route" followed. Is this the current way the port is working with tenants. Please provide additional details on current traffic from port and how this will affect the surrounding neighborhoods (including Ezra Prentice).
RESPONSE: The Port of Albany intends on executing leases with all future tenants that will have a Truck Route clause that will clearly describe and show the route to be followed. It is anticipated that the lease document will include a figure similar to Figure 17-Required Truck Route to/From Proposed Site, included in the FGEIS Appendix E.

The current traffic to/from the port will not be affected by the project as it is assumed the same traffic patterns will be maintained by the existing tenants at the Port. However, as current leases are renewed, the Port of Albany will include the same Truck route clause as stated above in the renewed lease.

92. BRIAN GYORY: Traffic-new intersections should be looked at to the same level as original intersections identified in draft scoping document. All ramps/portions of exit 23 as well as intersection of Wemple and River Road (144).
RESPONSE: See response to comment 76 related to exit 23 and below for Wemple Road.
Existing Conditions:

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 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, except for local deliveries.

Traffic Data Collection:

Existing traffic volumes for this intersection were established by performing manual turning movement counts (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. These timeframes were based on the peak traffic periods for intersections in the area. The TMC data shows that the weekday traffic peaks between 7:00 and 8:00 AM in the morning while the evening traffic peaked between 4:45 and 5:45 PM.

Capacity Analysis:

Wemple Road has two intersections with NYS Route 144 (River Road), therefore each access drive was analyzed separately in order to more accurately model existing and future conditions. As shown in the table below, both 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. 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

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	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
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**

Study Intersection	Approach and Movement		EVENING PEAK HOUR									
			2019 EXISTING		2029 BACKGROUND		2029 BUILD-PHASE I		2029 BUILD-PHASE II		2029 BUILD-PHASE III	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
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**

proposed mitigation is recommended at this intersection as a result of the proposed development.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

93. BRIAN GYORY: Traffic-Bike network. How does this project impact the Albany South End Bikeway connector which is set to be constructed soon (along the same route as trucks are supposed to take for this project).
RESPONSE: See response to comment 74

94. BRIAN GYORY: Onramp from 787 from 9W and if the majority of truck traffic. Need to document the capacity of the truck route.
RESPONSE: See response to comment 76.

95. BRIAN GYORY: Who owns Port Road?
RESPONSE: Port Road is a City Owned Road.

96. GIANNA AIEZZA: Page 3-49 in the traffic section said it is assumed that no trucks would use Glenmont Road. This assumption is not realistic, as the Cumberland Farms is in this direction and it is likely that some trucks would go this way for fuel and the amenities. From Cumberland Farms it is easy to get back on the highway - both 787 and the Thruway. This is the closest store of this kind and there is a high volume of trucks there at any given time of day. This location was a former Tuck Stop and it is unrealistic to say no trucks will go this way.
RESPONSE: See response to comment 91 above. Along the proposed truck route through the Port there is a truck fueling station, "Plaza 23 Truck Stop" along Church Street.

97. GIANNA AIEZZA: Please add a map showing the roads being discussed to this section of the Report. It is helpful to have in this section.
RESPONSE: Roadway map is provided in the TIS included in Appendix I of the DGEIS and Appendix E of the FGEIS, as Figure 1.

98. GIANNA AIEZZA: Signal Warrant Analysis - if Glenmont Rd & 144 meets the criteria for a signal, it should be considered regardless of the gap analysis. Especially considering that it is unrealistic to think no trucks will use this route given the access to Cumberland Farms and the truck fueling station located there.
RESPONSE: Based on the previous and updated signal warrant analysis, one warrant was met, Warrant 1B – Eight Hour Volume Warrant for Interruption of Continuous Traffic. A signal warrant being met means that it should be considered for a signal and additional assessment of the intersection should be progressed to determine if a signal is an appropriate traffic control device at the location. Both roadway routes at this intersection are governed by the NYSDOT and based upon their review of the TIS, they also concurred that an installation of a traffic signal based on existing conditions is not

recommended at this intersection. The TIS does recommended that an updated signal warrant analysis be conducted at this intersection during the site plan application process when a specific project and building is proposed.

99. GIANNA AIEZZA: Please address my comments on the rail I made at the public hearing and address my comment that this is not necessarily the most conservative scenario for truck traffic. A smaller building with a trucking facility and truck storage would be a worse scenario for truck traffic.

RESPONSE: The existing rail lines behind the Ezra Prentice property are not owned by the Port of Albany and are not being impacted by the proposed expansion. 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.

The Port Expansion project is only proposing uses that are permitted by Town Code and the maximum truck trips associated with a 1.13 million square foot facility is 465 trips during AM peak hour, 529 trips during PM peak hour, and 151 truck trips during peak hour which is the maximum threshold permitted for the proposed site. If a use is identified that exceeds this maximum threshold, then a supplemental traffic impact statement would be required and reviewed by the Planning Board prior to approval.

100. GIANNA AIEZZA: As discussed at the public hearing, please revise the Report to say they will require tucks go through the Port and how they will do that including how they will check compliance with the requirement. Also discuss the Port road upgrades that will make that feasible.

RESPONSE: See response to comment 91 above.

The Port of Albany is in the design process of upgrading Smith Boulevard from Boat Street to Raft Street with construction anticipated in the Spring of 2021. Also, as part of the Port Expansion Project, Port Road South will be improved starting at the new bridge over the Normanskill extending approximately 900 linear feet north connecting to existing South Port Road.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

101. GIANNA AIEZZA: Add a discussion of the traffic study conducted by CDTC in May 2018 and discuss relevant information from that study in this section where appropriate.

RESPONSE: The CDTC Study from May 2018 assessed the heavy vehicles movements along South Pearl Street and provided information regarding the origin/destination of these heavy vehicle's trips. Based on this data the study provided some strategies on how to reduce and/or limit the amount of additional heavy vehicles traffic on South Pearl Street, specifically in front of the Ezra Prentice residential community. The following conclusions were drawn which are relevant to the Port Expansion's TIS:

- **An estimated 279 per day (both directions), or 17%, of the heavy vehicles that pass Ezra Prentice homes are traveling from/to S. Port Rd.**
- **An estimated 625 (81%) of the northbound heavy vehicles that pass Ezra Prentice Homes originate between Ezra Prentice and S. Port Rd.**
- **S. Pearl St./NY 32 acts a connector road for heavy vehicles for I-787 (northbound and southbound)**
  - **For heavy vehicles traveling northbound on S. Pearl St./NY 32, an estimated 512 (66%) go to the I-787 northbound access roadway.**
  - **For heavy vehicles traveling southbound on S. Pearl Street, an estimated 547(62%) come from I-787 southbound access roadway/Green St.**

Potential Strategies from the Study:

1. **Strategy A: Encourage Local S. Pearl St./NY 32 Heavy Vehicle Operators to Consider Using Alternate Routes**
2. **Strategy B: Supportive Programs, i.e. Enforcement, Education, and Emissions Reduction.**
3. **Strategy C: Restrict Heavy Vehicle Turning Movement Access at the S. Port Rd. & S. Pearl St./NY 32 Intersection**
4. **Strategy D: Reconstruct S. Port Rd., Normanskill St., Raft St., Smith Blvd. and Boat St. as a Bypass Route for Heavy Vehicles**

The Port Expansion TIS completed a Truck Sensitivity Analysis to determine the most appropriate truck route to access the proposed Port Expansion project . This assessment recommended utilizing the roadway system (S. Port Rd, Raft St. Smith Blvd. and Boat St.) within the existing Port of Albany to Access I-787 from Church Street. This conclusion is consistent with Strategy A, C and D for the proposed project.

102. BRIAN GYORY: Bike network south end connector, has that route been evaluated and looked at?

RESPONSE: See response to comment 93.

103. GIANNA AIEZZA: Are there any upgrades to the Port roads recommended?

RESPONSE: The Port is currently completing upgrades along Smith Boulevard, between Boat and Raft Street. The project will complete upgrades to a portion South Port Road as part to this project.

104. GIANNA AIEZZA: Can the Planning Board do more than allow the Port to recommend truck traffic be routed through lease means? Can there be something more than recommended that is enforceable?

RESPONSE: The Port of Albany has agreed to add a clause to all new tenant leases outlining the truck route from which the tenants must follow. The Port of Albany also committed to expanding their video surveillance capabilities to ensure trucks take the required route.

105. GIANNA AIEZZA:Is there a rail-staging area of tracks behind Ezra Prentice and could we have those tracks specifically addressed and any impacts of those addressed. If the Port is to have no impact on those tracks, if that can be pointed out.

RESPONSE: All rail-staging will be completed on Port property. The tracks behind the Ezra Prentice Homes are not owned or operated by the Port and are therefore not within the Port's control.

106. JEFFERY BEAL: Has a traffic circle been discussed at the main intersection to the Port? I wonder if a circle would be more appropriate at that intersection instead of a light and a turn lane to facilitate the greater flow of traffic.

RESPONSE: Turn Lanes at the existing S. Port Driveway are being proposed as mitigation when the development reaches Phase III thresholds outlined in the TIS. A roundabout alternative at the S. Port Driveway was not a proposed mitigation option at the intersection due to ROW limitations and the associated cost of a roundabout. The proposed modifications to the current existing signalized intersection is the most cost effective mitigation being proposed.

107. JEFFERY BEAL: The new proposed south entrance is very tricky. When you're travelling southbound on 144, or River Road, it is already a relatively blind turn. The speed limit is 55 miles per hour, the road does a zigzag, and you're going downhill around the Port . It will be tricky.

RESPONSE: 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 posted speed limit is 55 mph. As shown in Table 8 below, 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 for the 55-mph posted speed. However, this section of the NYS Route 144 has an advisory posted speed limit of 45 mph with a curve sign (MUTCD W1-4) due to the horizontal curves; as such, based on field measurements, 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.

Therefore, it is recommended that the advisory speed limit of 45 mph in this section become the regulatory posted speed limit, the vegetation is cut back 15 feet from the edge of travel lane and additional signage be installed (Static or Dynamic) to notify southbound drivers approaching the proposed site entrance (MUTCD W2-2 with W16-9P). Adding intersection lighting is also recommended and considered during the NYSDOT highway work permit application process to improve the visibility of the intersection.

The recommended reduction in regulatory speed and vegetation removal along the sight lines shown in the sight distance figure provided in FGEIS Appendix L would result in the proposed driveway to have adequate sight distance that meets the AASHTO and NYSDOT recommended lengths as noted below in Table 8.

Updated TIS 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.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

108. JEFFERY BEAL: Missed intersection of 144 and Wemple Road, which is already a very tricky intersection. The Town has commented on the uniqueness of that intersection and with additional workers potentially coming along 144 this intersection is critical.
RESPONSE: See response to comment 92.

109. PATTI BEELER: The amount of traffic on the 9W north merge on to 787 is a concern. Traffic flies out from the thruway and the Port merge is to the right. There are some pretty serious traffic issues at that location.
RESPONSE: See response to comment 76.

3.8 DRAINAGE

110. BRIAN GYORY: Commented earlier about green infrastructure. No mention of these comments-in terms of viability of it. It is mentioned in the report, but due to fly ash the system would need to be lined. This should be mentioned and considered as to whether this type of stormwater management is practicable on site. General threshold information should be provided here, for the design at hand how much stormwater will be managed and how would it be managed (size of practices, etc.).

RESPONSE: Green Infrastructure is practicable on this site; the practices provided will prevent stormwater from infiltrating through the fly ash via an impermeable layer, and an underdrain will be used to drain the practices as needed. The DGEIS has used the bioretention practice (Manual practice F-5), the volumes of RRv required and provided are included below.

Practice	Manual ID	Application	Application	Required Volume (cf)	Provided Volume (cf)
Bioretention	F-5	Green Infrastructure	RRv	41,076	41,220
Wet Pond	P-2	Water Quality	WQv	208,176	215,943

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

111. JOHN SMOLINSKY: What is the potential for leachate or run-off from the site during soil compaction, land disturbance, construction, and post-construction? Fully describe the measures necessary to monitor and evaluate any discharges during each phase of site development.

RESPONSE: When an actual project is proposed, a Site Management Plan (SMP) will be prepared in accordance with 6 NYCRR Part 375 and DER Technical Guidance for Site Investigation and Remediation and submitted to the NYSDEC, Division of Environmental Remediation and the NYSDOH for their review and approval. The SMP will include at a minimum a: Health and Safety Plan (HASP), to inform and protect the contractor and their work force; a Community Air Monitoring Plan (CAMP), to monitor and protect the surrounding communities; and Excavation Work Plan (EWP), to direct the activities of the contractor during construction. The EWP will include a detailed description of the work to be performed, the anticipated environmental conditions, and engineering controls to mitigate the movement of fly ash. Specific Sections and recommendations of the EWP will include at a minimum the following:

- ***Soil Staging Methods:***
  - ***Stockpiles will be continuously encircled with a berm or silt fence***
  - ***Stockpiles will be kept covered at all times with anchored tarps***
- ***Material Transport:***
  - ***Loaded vehicles will be appropriately lined, tarped, and securely covered***
  - ***All outbound trucks will be washed at a truck wash before leaving the site***

- *Truck wash sediment will be collected and disposed of off-site in a legal and appropriate manner*

- *Material Reuse On-Site*
  - *Material will be placed below a demarcation layer or impervious surface*
  - *Material will not be reused within a cover soil layer or as backfill for subsurface utilities*
- *Cover System*
  - *A cover (or cap) of a minimum of 12 inches of clean soil, asphalt, concrete, or building will be installed*
  - *A demarcation layer of orange snow fence, white geotextile, or equivalent material will be installed below the cap*
- *Stormwater Pollution Prevention Plan (SWPPP)*
  - *Sediment controls will be inspected at least once a week and after every storm event*
  - *All necessary repairs will be made immediately*
  - *In addition to internal practices, silt fence or hay bales will be installed around the entire perimeter of the construction area*
  - *A double row of erosion control such as a silt fence & straw bale barrier along the River shoreline will be installed.*
  - *In addition, a turbidity curtain could be installed at the Rivers edge to protect material from entering the water.*
- *Dust Control Plan*
  - *A dedicated on-site water truck with a canon capable of spreading water directly onto all off-road areas will be required*
  - *Clearing and grubbing will be done in stages to limit exposure to dust*
  - *On-site gravel roads will be used to create a dust-free road surface*

The material to be dredged from the Hudson River will be dewatered to minimize the potential for runoff in one of two ways. One option for dewatering is by use of a cofferdam, where the material would be dewatered in place and excavated once dewatering is complete. A second option is to dredge the material and stockpile on land to dewater. All runoff from the dredged material would be collected, stored, and treated on site as required. The specific Dredging and dewatering method will be determined at the time of site plan application and NYSDEC permit application.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

112. MJ ENGINEERING AND LAND SURVEYING, P.C.: In the first paragraph, fourth sentence states “and a full State Pollution Discharge Elimination System…”. The term “full” is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project’s proximity to a 5th order water body / tidal marsh.

RESPONSE: The paragraph shall read as follows: The proposed development is a 1,130,000 square foot industrial building that will contain industrial uses permitted by site plan and special use permit per the Town Code. The ancillary impervious areas including parking for automobiles and trucks, a roadway, railroad, and a maritime wharf. There will also be pervious areas of grass and unaltered brush and trees. The site will consist of approximately 49.63 acres of impervious cover and approximately 31.99 acres of pervious cover. Since the subject site will have land disturbance of more than 1-acre, a State Pollutant Discharge Elimination System (SPDES) permit (General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002) will be required for the project. In accordance with then SPDES the project will not be required to provide water quantity controls as it will discharge directly to a tidal water.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

113. MJ ENGINEERING AND LAND SURVEYING, P.C.: Within this section, following the first paragraph, mitigate measures are listed. Further explanation of how the project will mitigate increased peak runoff rate during and after construction is necessary. The Existing and Proposed Hydrology tables do not support this statement as Drainage Area 3 and 4 have substantial increases in runoff for all storm events under the developed site condition.
RESPONSE: : See response to comment 112 above.

114. MJ ENGINEERING AND LAND SURVEYING, P.C.: The DGEIS notes the water quality practices being proposed including bioretention and stormwater ponds. Provide the NYSDEC designation for each practice proposed. (e.g. Bioretention is a F-5 designation).
RESPONSE: See response to comment 110 above.

115. BRIAN GYORY: Green Infrastructure-It is mentioned that the site is contaminated with Fly Ash. Please elaborate on factors/considerations for stormwater management on site (no infiltration, just filtration)
RESPONSE: See response to comment 111 above.

3.9 WATER SERVICE (POTABLE AND FIRE PROTECTION)

116. JOHN SMOLINSKY: Address the age and condition of existing water infrastructure that is projected to be used and necessary to support the proposal. As appropriate discuss mitigation.
RESPONSE: The Town of Bethlehem DPW has been contacted regarding the age and state of the existing waterlines within River Road. The existing 8-inch DIP waterline on the Corning Hill pressure zone (to the north) was installed in 1980 and has no know issues. The existing 16-inch DIP waterline on the Glenmont pressure zone (to the south) was installed in 1977 and has no know issues.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

117. MJ ENGINEERING AND LAND SURVEYING, P.C.: The section provides discrete discussion of work the Town DPW did to evaluate the technical feasibility of providing water to the project. The section needs to be expanded to talk about the Town's overall water system including source, treatment, storage, distribution, permitted and/or design capacities (storage, treatment), amount supplied, and system demands. Much of this information may be obtained from a recent Town of Bethlehem Water Quality Report.

RESPONSE: The Annual Drinking Water Quality Report for 2018 Town of Bethlehem Water District No.1 (Public Water Supply Identification Number NY0100191) from which this project would be supplied is included within the FGEIS as Appendix F and excerpts are provided below:

"Town of Bethlehem Water District No.1 has 2 water purification plants, the New Salem Plant and the Clapper Road Plant. The New Salem Water Purification Plant draws its water from the Vly Creek Reservoir, which has a storage capacity of 1.25 billion gallons. The New Salem Water Purification Plant has a peak capacity for purifying 6 million gallons of water per day. The treatment process consists of chlorination for disinfection; taste and odor control with the use of activated carbon; coagulation with aluminum sulfate; filtration with rapid sand filter, and corrosion control. There is no fluoride added to the Bethlehem Water Supply. Algae growth in the Vly Creek Reservoir is controlled by adding copper sulfate to the water and by mechanically mixing the water during the summer months. Water is pumped from the purification plant to a 5,750,000-gallon steel water storage tank. From that point, water is delivered by gravity through a network of water mains…

There are also two deep wells to supplement the capacity of the New Salem Water Plant permitted by NYS Department of Environmental Conservation to withdraw 1,130,000 gallons per day, or 1.13 million gallons per day (MGD), from the two wells combined.

The Clapper Road Water Purification Plant is supplied by facilities including a groundwater infiltration system and a well field that consist of 11 drilled wells which is adjacent to the Hudson River, south of Henry Hudson Park. The Water Purification Plant has the ability to treat 6 million gallon per day. The plant uses 4 Trident filter units for water purification with chlorine as the primary disinfection agent. Chemicals used include coagulation with Polyaluminum Chloride (PAC) and a non-ionic polymer and a corrosion inhibitor.

The Bethlehem Water District serves approximately 35,000 people through 11,712 service connections. In 2018, the District provided 527,488,000 gallons of water from the New Salem Plant, 160,170,000 gallons from Well #1 and Well #2, and 453,212,000 gallons of water from the Clapper Road Plant. Supplemental water purchased from Albany was 474,125,000 gallons. The total volume of water produced from all sources

in 2018 was 1,614,995,000 gallons. Approximately 1,488,850,280 gallons of water were billed to customers of Water District #1."

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

118. MJ ENGINEERING AND LAND SURVEYING, P.C.: It should be stated that the project site is not fully within an existing Town of Bethlehem approved water service area and a district extension would be required to service the project site.
RESPONSE: Duly noted. The site is not entirely within a water service area, therefore a district extension to the Town of Bethlehem Water District No. 1 will be required. A map, plan, and report will be prepared and submitted for review and approval by the Town Board.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

119. MJ ENGINEERING AND LAND SURVEYING, P.C.: There should be discussion of the source of water during construction, not just source during operation.
RESPONSE: Water during construction would be supplied temporarily by the contractor(s). Typical water sources would be used such as water trucks delivering water as needed. One of the first infrastructure improvements would be the extension of the watermain(s) to the property from one or both of the routes shown in the DGEIS.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

120. MJ ENGINEERING AND LAND SURVEYING, P.C.: The fire flow demand is stated as being 2,300 gpm at 20 psi. State whether this is a needed fire flow at on-site hydrants or demands associated with an automatic fire sprinkler system.
RESPONSE: This demand is associated with an automatic fire sprinkler system.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

121. MJ ENGINEERING AND LAND SURVEYING, P.C.: Option 1 identifies the need for a tank to supply the buildings fire suppression system. Confirm Option 2 and 3 do not also require this tank. If not required, state as such. Further, the general geometry of this tank should be discussed, most importantly its height and whether it triggers any special approvals not already identified for that height or if it will be visible from identified vantage points.
RESPONSE: The tank identified in Option 1 is not required in any other options. The tank would be designed to have a maximum height of 60 feet as allowed by code and

would be located along the western portion of the site as to not be visible from any visually sensitive areas.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

122. MJ ENGINEERING AND LAND SURVEYING, P.C.: Option 2 discusses two points of connection to the Town's water system and looping of a water main through the project site. The looped water main would be dedicated to the Town as part of their distribution system. The Town does not desire to take this dedication due to the water mains location and complications of access for potential maintenance. As such, it shall be revised to state all on-site water mains shall be owned and operated by the project sponsor. The 2 points of connection shall require a hot box with metering and backflow prevention. Additionally, pressure reducing valves will need to be installed for both Options 2 and 3.

RESPONSE: It is duly noted that the Town of Bethlehem does not desire to own any water distribution infrastructure within the site. Therefore, in both Options 2 and 3, where waterlines enter the site a hot box with required metering and backflow will be installed; and the waterline within the site will be privately constructed, owned, and maintained.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

123. MJ ENGINEERING AND LAND SURVEYING, P.C.: It should be identified which of the two offsite water distribution system improvement options is preferred by the Town and that provides the least impact to its system. In discussions with the Town, they prefer Option 3 as it provides the benefit of town system redundancy. However, the 1,200 feet of 12" water line shall be considered to be run down Old River Road instead of River Road. The second to last paragraph identifies the water demands for the alternatives being evaluated. Clarify if each demand by phase is average day, maximum day or peak hourly demands. A table presenting this data may be more appropriate covering all demand conditions for each development option being considered.

RESPONSE: It is duly noted that the Town of Bethlehem prefers Option 3 to supply the project with water.

The final routing of the waterline will be determined during the site plan approval process when a real project is proposed in coordination with the Town of Bethlehem DPW.

The water demands considered for the project were as depicted below:

Phase	*Building (sf)*	*Avg Daily Demand (gal/day)*	*Avg Daily Demand (gal/min)*	*Max Daily Demand (gal/min)*	*Peak Hour Demand (gal/min)*
1	*300,000*	*5,650*	*4*	*8*	*16*

2	*600,000*	*11,300*	*8*	*16*	*31*
3 (full build)	*1,130,000*	*16,950*	*12*	*22*	*47*

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

124. MJ ENGINEERING AND LAND SURVEYING, P.C.: State that all off-site water distribution system improvements will be completed by the project sponsor, entirely at their expense and will be offered to the Town of Bethlehem following installation at no cost to the Town of Bethlehem. This paragraph should also state that water system infrastructure after the master meters and/or hot boxes shall be privately owned and operated.

RESPONSE: It is duly noted that all off-site water distribution system improvements will be completed by the project sponsor, entirely at their expense and will be offered to the Town of Bethlehem following their installation at no cost to the Town of Bethlehem. Where watermains enter the site a hot box with required master metering and backflow will be installed; and the watermain within the site will be privately constructed, owned, and maintained. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.10 SANITARY SEWER

125. JOHN SMOLINSKY: Address the age and condition of existing sewer infrastructure that is projected to be used and necessary to support the proposal and, as appropriate, discuss mitigation. In the discussion of Albany County vs. Bethlehem sanitary sewer options, discuss and compare the potential of sanitary sewage overflow into the Hudson because of inadequate separation of storm water and sanitary waste. Also discuss mitigation of impacts, if any.

RESPONSE: After further consideration of the sanitary sewer alternatives, the project is proposing only one solution for sanitary sewer service; a private on-site "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 discharge directly to the Hudson River (not to a subsurface system); as such the system 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. We have 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.

Table B-4A, Typical Effluent Limits for Non-Intermittent Streams

Parameter	*Type*	*Limitation*	*Units*
BOD_5	*30 day arithmetic mean*	*30*	*mg/L*

BOD_5	*7 day arithmetic mean*	*45*	*mg/L*
TSS	*30 day arithmetic mean*	*30*	*mg/L*
TSS	*7 day arithmetic mean*	*45*	*mg/L*
Settleable Solids	*Daily Maximum*	*0.3/0.1*	*ml/L*
pH	*Range*	*6.0-9.0*	*SU*
*Fecal Coliform**	*30 day geometric mean*	*200*	*No. colonies /100 ml*
*Fecal Coliform**	*7 consecutive day geometric mean*	*400*	*No. colonies /100 ml*
*Total Residual Chlorine**	*Daily Maximum*	*2*	*mg/L*

** Parameter only required from May 1 through October 31*

The Delta Extended Aeration Waste Treatment Plan Model B-17.0 manufactured by Delta Process Equipment Incorporated owned by Infiltrator Water Technologies of Old Saybrook, CT is a system that meets the project's requirements. More information on this product including specs and typical details are included within the FGEIS as Appendix G. The system will be privately constructed, owned, operated, and maintained in accordance with 6NYCRR Part 650 and all NYSDEC requirements. The proposed private on-site system will maintain required separation from the stormwater collection system in accordance with the 10-state standards so that storm and sanitary combining is avoided. The on-site package treatment system can meet all the requirements of the project's sanitary sewer demands and no mitigation measures are proposed.

The on-site soil conditions are not suitable for a ground-based disposal system. Therefore, the package treatment system will treat the effluent to meet requirements to discharge directly into the Hudson River. The package treatment system is designed to be placed, installed, and used in multiple environments and will be installed at the site to provide suitable treatment for the Project sanitary demands. The package treatment system is shown on UT-01 Utility Layout within Appendix Q of the DGEIS.

As the project will not connect to either the Town of Bethlehem's sanitary sewer system or the County of Albany's SWTP no upgrades or improvements to either system is necessary. Furthermore, no analysis of either existing system is required and therefore, a will serve letter, a district extension, or an intermunicipal agreement will not necessary.

Since the project will service its own wastewater on-site, there is no wastewater impact associated with the project.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

126. BRIAN GYORY: Additional information what the maximum threshold for daily flow from the facility will be as well as what the capacity at the Albany County facility and Town of Bethlehem facility are. In addition, it was mentioned that onsite treatment was also an option. Additional detail should be included to indicate the size of this and whether it would work with existing site subsurface conditions.
RESPONSE: See response to comment 125 above.

127. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section identifies the connection to the Albany County Water Purification District as he preferred option and further indicates that the Port of Albany is coordinating with the Albany County Sewer District to determine the capacity to treat waste form the project. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis. This would include a hydraulic analysis of existing infrastructure and determination if the alignment would need to cross private property not under control by the project sponsor. If this is the preferred option, appropriate analysis shall be included in the DGEIS. Further, a "will serve" letter should be obtained from the Albany County Sewer District indicating their ability and willingness to serve the project. This section also needs to discuss the possible need for out of district use by Albany County. This may require a municipal agreement.
RESPONSE: See response to comment 125 above.

128. MJ ENGINEERING AND LAND SURVEYING, P.C.: The section identifies two potential options for connecting to the Town of Bethlehem's sewer system. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis. This would include a hydraulic analysis of existing infrastructure and determination if the alignment would need to cross private property not under control by the project sponsor. This option will also require the analysis of the existing Glenmont Road pump station and the elevated pipe crossing at the thruway.
RESPONSE: See response to comment 125 above.

129. MJ ENGINEERING AND LAND SURVEYING, P.C.: There is an on-site option presented for a soil based septic system. The DGEIS appears to suggest this option may be technically infeasible due to poor soil conditions. If in fact this option is not technically feasible, the DGEIS should state as such, rather than stating it is "not considered favorable".
RESPONSE: The following will be added, "An on-site soil based septic system is not technically feasible." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

130. MJ ENGINEERING AND LAND SURVEYING, P.C.: There is a second on-site option presented for an on-site package treatment plant. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis.

RESPONSE: See response to comment 125 above.

131. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section only discusses the potential impacts from the preferred connection to the Albany County Sewer District. All options discussed in Section 3.10.1, if considered technically feasible, also need to be discussed in Section 3.10.2.
RESPONSE: See response to comment 125 above.

132. MJ ENGINEERING AND LAND SURVEYING, P.C.: Since the preferred option is stated as being the connection to the Albany County Sewer District, until an appropriate technical analysis is completed, the potential impacts can not be fully defined. When a "will serve" letter is received from the Albany County Sewer District, it should be referenced in this section.
RESPONSE: See response to comment 125 above.

133. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section only discusses the mitigation measures for the preferred connection to the Albany County Sewer District. All options discussed in Section 3.10.1, if considered technically feasible, also need to be discussed in Section 3.10.3. The port should have the same language about the project sponsor installing the sewer infrastructure to town standards at no cost to the town. Same language should be added in the water mitigation measures.
RESPONSE: See response to comment 125 above.

134. MJ ENGINEERING AND LAND SURVEYING, P.C.: Since the preferred option is stated as being the connection to the Albany County Sewer District, until an appropriate technical analysis is completed, the mitigation measures cannot be fully defined. When a "will serve" letter is received from the Albany County Sewer District, it should be referenced in this section.
RESPONSE: See response to comment 125 above.

3.12 AESTHETIC AND VISUAL RESOURCES

135. JOHN SMOLINSKY: Illustrate the difference between the compliant 60' building height vs. 85 height which requires a variance. Discuss the applicable criteria necessary to justify a variance.
RESPONSE: Additional photo-simulations showing a 60-foot building have been created and are included within the FGEIS as Appendix H. As stated in DGEIS Section 3.12.3: Aesthetic and Visual Resources, Mitigation Measures and in the Visual Impact Assessment, a building height variance will be requested from the Zoning Board or Appeals to allow a 85' high building once the specific need arises. We offer the following justification to grant such a variance pursuant to NYS Area variance law:

- ***Undesirable Change in the neighborhood: Both properties immediately adjacent the project site contain heavy industrial buildings higher than 85 feet. To the south is the PS&G Power Plant that contains buildings that are 145 feet and the Port of Albany to the north has silos that are 95 feet high. Therefore, the proposed heavy***

industrial building with a maximum 85 foot building height is not creating an undesirable change in the neighborhood.

- ***Alternative to the variance: The building height of 85 feet is a functional requirement for assembly and manufacturing companies who supply components to the off-shore wind industry. The 85 foot height is the minimum necessary to allow for the efficient maneuvering and assembly of the components and therefore, there is no feasible alternative to the building height.***
- ***Substantiality: As stated above both neighboring properties have existing buildings that exceed the 85 foot height, and therefore the request is not substantial.***
- ***Impact on the Environment: As the request height variance does not effect drainage, traffic, dust, noise, odor, or emergency services, and the surrounding area is a heavy industrial zone with existing buildings that exceed the requested 85 foot height, there will be no visual impact and therefore there is no substantial environmental impact.***
- ***Self-created difficulty: Since the 85 foot height is the minimum necessary for the entire off-shore wind industry, the requested variance can be considered as not self-created.***

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

136. MJ ENGINEERING AND LAND SURVEYING, P.C.: In the first paragraph, correct the issue date of the NYSDEC Program Policy - Assessing and Mitigating Visual Impacts.

RESPONSE: Replace the first paragraph of Section 3.12.1: Aesthetic and Visual Resources, Environmental Setting with the following:

The purpose of this section is to assess the qualitative and quantitative visual impacts of the proposed development in accordance SEQR. To that end a Visual Impact Assessment Report was conducted using 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. The report identified the project site's existing visual characteristics; identified any changes that may occur due to the project; identified the visual resources and receptors (particularly sensitive receptor) of any changes; assessed the impacts of the changes on those receptors; and finally, recommended mitigation, if necessary, to minimize or eliminate the impact of the changes on the receptors. The report is included as Appendix M to the DGEIS.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.13 LAND USE AND ZONING

137. MJ ENGINEERING AND LAND SURVEYING, P.C.: The first sentence, the term "natural" is unclear. If this is intended to mean "undeveloped" state as such.

RESPONSE: The sentence has been revised as shown below to include the term undeveloped to better accurately describe the property.

The site lies within 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 site plan and special use permit per the Town Code.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

138. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section mentions the potential subdivision of the parcel. It should be noted that if there is a subdivision, it may present future regulatory approvals specific to the on-site water and sewer systems. When two parcels are serviced by a water and/or sewer main, these mains need to be listed under Section 1.6.3 and 2.6 of the DGEIS as potential additional permits/approvals being necessary.

RESPONSE: As market conditions and future tenant demands change, subdividing the property may become necessary. As such, the watermain would need to be extended to each subdivided lot and would require approval from the Town and County Health Department. Since the sanitary sewer system and treatment plant is proposed to be private, the necessary easements and across each subdivided property and NYSDEC approval would be required. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

139. MJ ENGINEERING AND LAND SURVEYING, P.C.: Table 3.13-1 identifies 2,140 feet of proposed highway frontage. Where is this highway frontage located on the parcel? If this area is the linear strip of land along existing Port Road South, it does not meet the definition of both highway frontage and lot depth. It appears the parcel may be considered a pre-existing non-conforming lot due to its irregular shaped nature along Port Road South.

RESPONSE: See the additional Figure 3.13-3 "Proposed Area, Yard, and Bulk Requirements for Concept A". The Parcel reflects a pre-existing nonconforming lot per the zoning law. Highway frontage is not met since land along Port Road South does not meet lot depth requirements. Nonconforming lots are permitted for development as long as there are no changes in the lot dimensions that would increase in the nonconformity. This project does not include a proposed change in the lot dimensions that would increase nonconformity. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

140. MJ ENGINEERING AND LAND SURVEYING, P.C.: Provide a plan sheet showing the existing property front, side and rear yard setbacks. This will establish the existing condition of the site related to area and yard requirements.

RESPONSE: See the additional Figure 3.13-4 "Existing Yard Requirements" for existing property front, side, and rear yard setbacks. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

141. MJ ENGINEERING AND LAND SURVEYING, P.C.: Concept plans should show the location of the proposed Town roadway right-of-way terminus along Port Road South. Identify any change in highway frontage of the parcel.

RESPONSE: The end of Port Road South has been identified on Figure 3.13-3.

142. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section mentions if the project site were to be subdivided, the on-site roadway would become a public roadway owned by the Town or County. The Town Highway Superintendent has indicated he does not wish to own and maintain the road within the Port site. Provide any correspondence from the County indicating their acceptance of a future roadway. Should the roadway be owned and maintained by the Port of Albany as a private street address if the Town Zoning Law and Subdivision Regulations permit lots to be created with frontage on private streets serving as the minimum highway frontage.

RESPONSE: After further consideration, the preferred option is to create a privately owned roadway constructed, owned, and maintained by the Albany Port District Commission. As such under Town Law Section 280-a. "Permits for Buildings Not on Improved Mapped Streets", states that "The Town Board may, by resolution, establish an open development area or areas within the Town, wherein permits may be issued for the erection of structures to which access is given by right of way or easement, upon such conditions and subject to such limitations as may be prescribed by general or special rule of the planning board, if one exists, or of the Town Board if a planning board does not exist." See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

143. MJ ENGINEERING AND LAND SURVEYING, P.C.: Should a private street travel through the site, identify on plan sheet any subdivided lots would meet the front, side, rear setbacks and all area, yard, and bulk requirements.

RESPONSE: See Figure 3.13-5 "Concept C Yard Requirements" for proposed setbacks for potential subdivision. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

144. MJ ENGINEERING AND LAND SURVEYING, P.C.: Add text explaining the proposed building height of 85', which exceeds the maximum allowable height of 60 feet in the zoning district as a potential impact.

RESPONSE: The building height could potentially be as tall as 85 feet based on building requirements for manufacturing facilities. As stated in DGEIS Section 3.13.1, this would still be in character with the surrounding properties in the area, including the PSE&G

Property, located in the Town of Bethlehem. Also see response 135. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

145. MJ ENGINEERING AND LAND SURVEYING, P.C.: Clearly identify proposed mitigation (if any) and any necessary permits, approvals or variances required should the height of a proposed structure exceed the maximum allowable height. Include any required permits or approvals under Section 1.6.3 and 2.6 as potential additional permits/ approvals being necessary.

RESPONSE: Should the proposed building exceed the 60 foot building height regulation, the project would request a variance from the Zoning Board of Appeals during the Site Plan Review process. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.15 EMERGENCY SERVICES

146. BRIAN GYORY: Emergency Services-Can the fire department handle a 85' building with current equipment?

RESPONSE: On October 8, 2019 the Selkirk Fire Department confirmed they can serve an 85 foot building utilizing their existing mutual aid agreements with other agencies including the City of Albany via a conference call. A summary of the conference call is included in this FGEIS Appendix I. The Selkirk Fire Department confirmed they understand the project thresholds for building size, building height, and project location. The Fire Department stated they can serve the facility and provided a will serve letter. Will serve letter is included in this FGEIS in Appendix I. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

147. JOHN SMOLINKSY: Describe the adequacy of emergency equipment, and adequacy of stations and their proximity, the expected and desired response times, and availability of on-site emergency services.

RESPONSE: See response 146 above. All on site emergency services will be provided as part of the site plan application, once a specific project and building tenant is known. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

148. BRIAN GYORY: Additional information needed on staffing equipment and how the proposed project would potentially impact these services. Camoin appendix starts to answer these questions, but they are not in the report body and should be referenced and discussed in further detail.

RESPONSE: See response to comment 146 above.

149. MJ ENGINEERING AND LAND SURVEYING, P.C.: The DGEIS notes that the responding fire department has been notified of the project. Considering the planned height of the building, it will be important that the District provide input regarding their ability to appropriately respond to an event at the site.

RESPONSE: See response to comment 146 above.

3.16 SCHOOL DISTRICT

150. JOHN SMOLINKSY: These sections should include a discussion of potential IDA applications of tenants and "PILOT" agreements which may provide alternative fiscal/benefit scenarios.

RESPONSE: Since there is no PILOT agreement in place, the fiscal impact analysis do not assume any potential Payment-in-lieu-of-Taxes (PILOT) agreements that future tenants of the property might receive. If new businesses receive a PILOT, it would decrease the amount of property tax revenue paid by future users of the property. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.17 FISCAL AND ECONOMIC IMPACT

151. JOHN SMOLINKSY: These sections should include a discussion of potential IDA applications of tenants and "PILOT" agreements which may provide alternative fiscal/benefit scenarios.

RESPONSE: See response 150 above.

152. JOHN SMOLINKSY: Page 3-87 – Provide a breakdown of the total jobs for each concept; for example: managers, professional, skilled workers, and laborers, etc.

RESPONSE: The following tables detail the number and type of jobs that are expected to be created for each development concept, for both the construction phase and ongoing operations.

Operations Job Impact: Concept A	
Job Type	# of Jobs
Transportation and Material Moving Occupations	521
Office and Administrative Support Occupations	251
Production Occupations	210
Sales and Related Occupations	154
Management Occupations	92
Installation, Maintenance, and Repair Occupations	76
Business and Financial Operations Occupations	66
Arts, Design, Entertainment, Sports, and Media Occupations	55
Food Preparation and Serving Related Occupations	42
Building and Grounds Cleaning and Maintenance Occupations	40
Architecture and Engineering Occupations	27
Computer and Mathematical Occupations	26
Healthcare Practitioners and Technical Occupations	24
Construction and Extraction Occupations	22
Personal Care and Service Occupations	20
Other	43

Source: EMSI; Camoin 310

Operations Job Impact: Concept A	
Job Type	# of Jobs
Business and Financial Operations Occupations	46
Arts, Design, Entertainment, Sports, and Media Occupations	38
Food Preparation and Serving Related Occupations	29
Building and Grounds Cleaning and Maintenance Occupations	28
Architecture and Engineering Occupations	19
Computer and Mathematical Occupations	18
Healthcare Practitioners and Technical Occupations	17
Construction and Extraction Occupations	16
Personal Care and Service Occupations	14
Other	30

Source: EMSI; Camoin 310

Construction Job Impact: Concept A	
Job Type	# of Jobs
Construction and Extraction Occupations	653
Management Occupations	102
Office and Administrative Support Occupations	84
Transportation and Material Moving Occupations	48
Sales and Related Occupations	42
Business and Financial Operations Occupations	42
Installation, Maintenance, and Repair Occupations	30
Architecture and Engineering Occupations	27
Production Occupations	22
Building and Grounds Cleaning and Maintenance Occupations	15
Food Preparation and Serving Related Occupations	13
Healthcare Practitioners and Technical Occupations	13
Computer and Mathematical Occupations	9
Personal Care and Service Occupations	7
Arts, Design, Entertainment, Sports, and Media Occupations	5
Other	15

Source: EMSI; Camoin 310

Construction Job Impact: Concept A	
Job Type	# of Jobs
Installation, Maintenance, and Repair Occupations	21
Architecture and Engineering Occupations	19
Production Occupations	15
Building and Grounds Cleaning and Maintenance Occupations	11
Food Preparation and Serving Related Occupations	9
Healthcare Practitioners and Technical Occupations	9
Computer and Mathematical Occupations	6
Personal Care and Service Occupations	5
Arts, Design, Entertainment, Sports, and Media Occupations	4
Other	11

Source: EMSI; Camoin 310

Operations Job Impact: Concept C	
Job Type	# of Jobs
Transportation and Material Moving Occupations	339
Office and Administrative Support Occupations	163
Production Occupations	137
Sales and Related Occupations	100
Management Occupations	60
Installation, Maintenance, and Repair Occupations	50
Business and Financial Operations Occupations	43
Arts, Design, Entertainment, Sports, and Media Occupations	36
Food Preparation and Serving Related Occupations	27
Building and Grounds Cleaning and Maintenance Occupations	26
Architecture and Engineering Occupations	17
Computer and Mathematical Occupations	17
Healthcare Practitioners and Technical Occupations	16
Construction and Extraction Occupations	15
Personal Care and Service Occupations	13
Other	28

Source: EMSI; Camoin 310

Construction Job Impact: Concept C	
Job Type	# of Jobs
Construction and Extraction Occupations	425
Management Occupations	66
Office and Administrative Support Occupations	55
Transportation and Material Moving Occupations	31
Sales and Related Occupations	27
Business and Financial Operations Occupations	27
Installation, Maintenance, and Repair Occupations	19
Architecture and Engineering Occupations	18
Production Occupations	14
Building and Grounds Cleaning and Maintenance Occupations	10
Food Preparation and Serving Related Occupations	8
Healthcare Practitioners and Technical Occupations	8
Computer and Mathematical Occupations	6
Personal Care and Service Occupations	5
Arts, Design, Entertainment, Sports, and Media Occupations	4
Other	10

Source: EMSI; Camoin 310

Operations Job Impact: Concept D	
Job Type	# of Jobs
Production Occupations	155
Office and Administrative Support Occupations	74
Sales and Related Occupations	44
Management Occupations	36
Transportation and Material Moving Occupations	33
Arts, Design, Entertainment, Sports, and Media Occupations	32
Business and Financial Operations Occupations	24
Installation, Maintenance, and Repair Occupations	18
Architecture and Engineering Occupations	18
Food Preparation and Serving Related Occupations	15
Computer and Mathematical Occupations	12
Building and Grounds Cleaning and Maintenance Occupations	11
Healthcare Practitioners and Technical Occupations	10
Construction and Extraction Occupations	8
Personal Care and Service Occupations	8
Healthcare Support Occupations	4
Other	19

Source: EMSI; Camoin 310

Construction Job Impact: Concept D	
Job Type	# of Jobs
Construction and Extraction Occupations	278
Management Occupations	43
Office and Administrative Support Occupations	36
Transportation and Material Moving Occupations	20
Sales and Related Occupations	18
Business and Financial Operations Occupations	18
Installation, Maintenance, and Repair Occupations	13
Architecture and Engineering Occupations	12
Production Occupations	9
Building and Grounds Cleaning and Maintenance Occupations	6
Food Preparation and Serving Related Occupations	5
Healthcare Practitioners and Technical Occupations	5
Computer and Mathematical Occupations	4
Personal Care and Service Occupations	3
Arts, Design, Entertainment, Sports, and Media Occupations	2
Other	6

Source: EMSI; Camoin 310

Operations Job Impact: Concept D.1	
Job Type	# of Jobs
Production Occupations	492
Office and Administrative Support Occupations	236
Sales and Related Occupations	140
Management Occupations	115
Transportation and Material Moving Occupations	105
Arts, Design, Entertainment, Sports, and Media Occupations	103
Business and Financial Operations Occupations	77
Installation, Maintenance, and Repair Occupations	57
Architecture and Engineering Occupations	57
Food Preparation and Serving Related Occupations	48
Computer and Mathematical Occupations	38
Building and Grounds Cleaning and Maintenance Occupations	35
Healthcare Practitioners and Technical Occupations	33
Construction and Extraction Occupations	26
Personal Care and Service Occupations	25
Healthcare Support Occupations	14
Other	60

Source: EMSI; Camoin 310

Construction Job Impact: Concept D.1	
Job Type	# of Jobs
Construction and Extraction Occupations	359
Management Occupations	56
Office and Administrative Support Occupations	46
Transportation and Material Moving Occupations	26
Sales and Related Occupations	23
Business and Financial Operations Occupations	23
Installation, Maintenance, and Repair Occupations	16
Architecture and Engineering Occupations	15
Production Occupations	12
Building and Grounds Cleaning and Maintenance Occupations	8
Food Preparation and Serving Related Occupations	7
Healthcare Practitioners and Technical Occupations	7
Computer and Mathematical Occupations	5
Personal Care and Service Occupations	4
Arts, Design, Entertainment, Sports, and Media Occupations	3
Other	8

Source: EMSI; Camoin 310

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

153. GIANNA AIEZZA: As discussed at the public hearing, I requested they add a discussion of the possible tax implications of different type of lease agreements. They need to discuss all the possible tax outcomes and how each affect the financial benefit to the Town.

RESPONSE: See response to comment 154 below.

154. MJ ENGINEERING AND LAND SURVEYING, P.C.: The analysis should also examine the local impact under a scenario where the Port of Albany constructs and owns the building(s). As the property owner, the Port of Albany land is exempt from local property taxes (County, School, Town) and this comparison should be provided. Further, privately owned building(s) would be eligible for tax abatements through the Town of Bethlehem Industrial Development Agency. A comparison of fiscal impacts for local property taxes (County, School, Town) associated with applying the IDA's Standard and Enhanced abatements should be provided.

RESPONSE: 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 the Town of Bethlehem. The estimated fiscal benefit to the Town of Bethlehem Taxing Jurisdictions is approximately $2.5 million to $8.1 million annually. This revenue would occur even if the entire project remains tax-exempt. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

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

3.18 RECREATION AND OPEN SPACE

155. JOHN SMOLINSKY: The environmental setting discussion needs an introductory description of the recreation in the area of the site; this discussion then provides the basis for evaluating changes and impacts that might occur as a result of the proposal(s). The introductory description should include biking (Inc. Albany County Helderberg Hudson Rail Trail), pedestrian, and water sports and evaluate the impact on them.

RESPONSE: The Environmental Setting DGEIS Section (3.18.1) shall read as follows:

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 1 miles 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 to 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 are both approximately 4 miles from the Site.

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.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

156. JOHN SMOLINSKY: Recreation is addressed in various sections of the DGEIS: Section 3.18 should describe the existing condition of the impacts resulting from this proposal – even though there is discussion in several other sections it is preferable to also address the topic in this section. A second-best option is the provide cross references to the other sections where recreation is discussed.

RESPONSE: Cross referencing is duly noted, and we offer the following: Recreational boat activities, including kayaks, are discussed in DGEIS Section 3.7.2 Maritime. As stated above, the project will not alter or impact any recreational boat access points, nor would it change the river use or add restrictions to the Hudson River or the Normans Kill, therefore would have no impacts on the existing recreational boat traffic. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

157. BRIAN GYORY: I believe this topic has been discussed enough at our meeting on 8/6, but to clarify the Recreation chapter should reference all of the other sections to tie in information about the recreational impacts within a one mile radius. This should include: traffic, visual analysis, maritime, etc.

RESPONSE: See response to comment 156 and updated Table 3.18-1 below which has been modified to include all facilities within a one (1) mile radius of the Project Site, which included the Papscanee Island Nature Preserve, Albany County Helderberg-Hudson Rail Trail, and Albany Victory Gardens. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

Table 3.18-1: Existing Town Owned Parks and Parks within One (1) mile of Project Site

Recreational Facility	Location	Acres / Area	Description	Located within 1 mile of Project Site
Elm Avenue Park	Elm Avenue, ¼ mile south of Delmar Bypass	160 ac	Pool complex, tennis and basketball courts, pavilions, fitness trail, playing fields, volleyball courts, shuffleboard, dog park, and playground	No
Henry Hudson Park	Off Route 144 in Cedar Hill along Hudson River	56 ac	Boat launch, picnic areas, softball field, playground, volleyball court, horseshoes, gazebo, pavilion, and fishing area	No
Moh-He-Con-Nuck Nature Preserve	Between Simmons Road and the Glenmont Job Corps	55 ac	Walking trails	No
Maple Ridge Park	Elm Avenue East	7 ac	Large grass areas, playground, basketball court, walking path, picnic areas, and sledding hill	No
North Bethlehem Park	Near North Bethlehem Fire House off Russell Road	22 ac	Playground, basketball court, picnic area, walking trails, and mountain bike trails.	No
Selkirk Park	Off Thatcher Street	4 ac	Playground, youth-sized softball field, tennis court, and basketball court	No
South Bethlehem Park	On shores of the Onesquethaw Creek, off South Albany Road at Wylie Lane	11 ac	Playground, softball field, volleyball court, basketball court, picnic area, and fishing access	No
Firefighters Memorial Park	Next to Slingerlands Fire House on New Scotland Road	3 ac	Pocket park	No
Papscanee Island Nature Preserve	East Greenbush / Schodack	156 ac	Tribute to Mohican Tribe 2 miles of Hudson River Shoreline, Hiking trails, picnic	Yes
Albany County Helderberg-Hudson Rail Trail	City of Albany to Village of Voorheesville	9 mi	Paved trail along old Delaware & Hudson (D&H) railroad tracks stretches 9 miles between City of Albany and Village of Voorheesville	Yes

Albany Gardens	Victory	Route 9w, Glenmont	Unknown	Community partnership organic sustainable food system to create food access and increase community unity and self-sufficiency.	Yes

Source: Town of Bethlehem Parks and Recreation Department and Bethlehem's Parks and Recreation Comprehensive Master Plan, November 2015. AllTrails Papscanee Island Nature Preserve. Albany County Welcome to the Rail Trail. Albany.Garden

158. MJ ENGINEERING AND LAND SURVEYING, P.C.: Table 3-18-1: Existing Town Owned Parks and the Town of Bethlehem Recreational and Cultural Resources map should be included in Section 3.18.1 – Environmental Setting as an overview of existing conditions, not in Section 3.18.3 – Mitigation Measures.

RESPONSE: Table 3.18-1 and Figure 3.18-1 have been relocated to immediately follow 3.18.1. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

159. MJ ENGINEERING AND LAND SURVEYING, P.C.: Provide discussion on the expected increase in ships to the site and impacts to recreational boaters, kayakers, etc. who utilize the adjacent recreational lands and the Hudson River. Henry Hudson Park serves as a put-in location for boats and kayaks. Other City of Albany recreation areas that serve as put-ins that may also be impacted by increased ship volume (21/day).

RESPONSE: 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. The additional ships/barges will cause no significant impact on existing Hudson River maritime commercial or recreational traffic. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.19 SOLID WASTE DISPOSAL

160. JOHN SMOLINSKY: Will C& D waste be disposed at the Dunn C&D site in Rensselaer? If disposal is not prohibited at that site then impacts should be discussed and evaluated.

RESPONSE: As discussed in DGEIS Section 3.19 , both the Rapp Road Landfill and Town of Colonie Landfill have adequate capacity to serve the Project and accept C&D. Should waste go to another facility, such as the Dunn C&D site, no waste would be sent there without prior approval and with all required permits and practices. All C& D waste will be disposed of in a legal manor and an approved and permitted disposal location. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.20 ENVIRONMENTAL JUSTICE

161. GIANNA AIEZZA: As discussed at the public hearing, please address the location of Ezra Prentice and the potential need to follow the DEC's Environmental Justice Policy.

RESPONSE: See Section 3.20 Environmental Justice Review.

162. NEW YORK STATE ATTORNEY GENERAL:S OFFICE: Ezra Prentice is a low-income public housing project in Albany's South End. It is a potential environmental justice area because it suffers a disproportionate adverse environmental impact when compared to other communities. The Ezra Prentice community is exposed to noise and air pollution from traffic along South Pearl Street, from I-787, the adjacent rail yard, an Albany County wastewater treatment plant, and from a nearby bulk petroleum storage and marine transfer facility.

At the Public Hearing on September 3, 2019 it does not appear that any affirmative efforts were made to secure the involvement or participation of Ezra Prentice or other nearby South End communities in the hearing or project development.

RESPONSE: See below Section 3.20 Environmental Justice Review (EJ Process) and Public Participation Plan. A SDGEIS was prepared and a public information meeting was held for the Ezra Prentice community. See SDGEIS for additional information. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.20. ENVIRONMENTAL JUSTICE

3.20.1. Environmental Setting

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

3.20.2. Potential Impacts

Ezra Prentice Homes is a nearby community occupied by low-income predominately minority public housing. Some residents of Ezra Prentice Homes 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 DGEIS **Section 3.6 Climate and Air Quality** and **Section 3.7 Traffic and Transportation** for a detailed analysis, the same sections of this FGEIS for the responses to public comments. Where truck traffic is anticipated, all truck traffic will be routed through the existing Port, utilizing the Church Street entrance, and as such would not be traveling through the Ezra Prentice Homes.

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 required truck routes to avoid further impact on the Ezra Prentiss 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 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. With trucks using this route, there will be no added truck traffic to South Pearl Street 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.

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

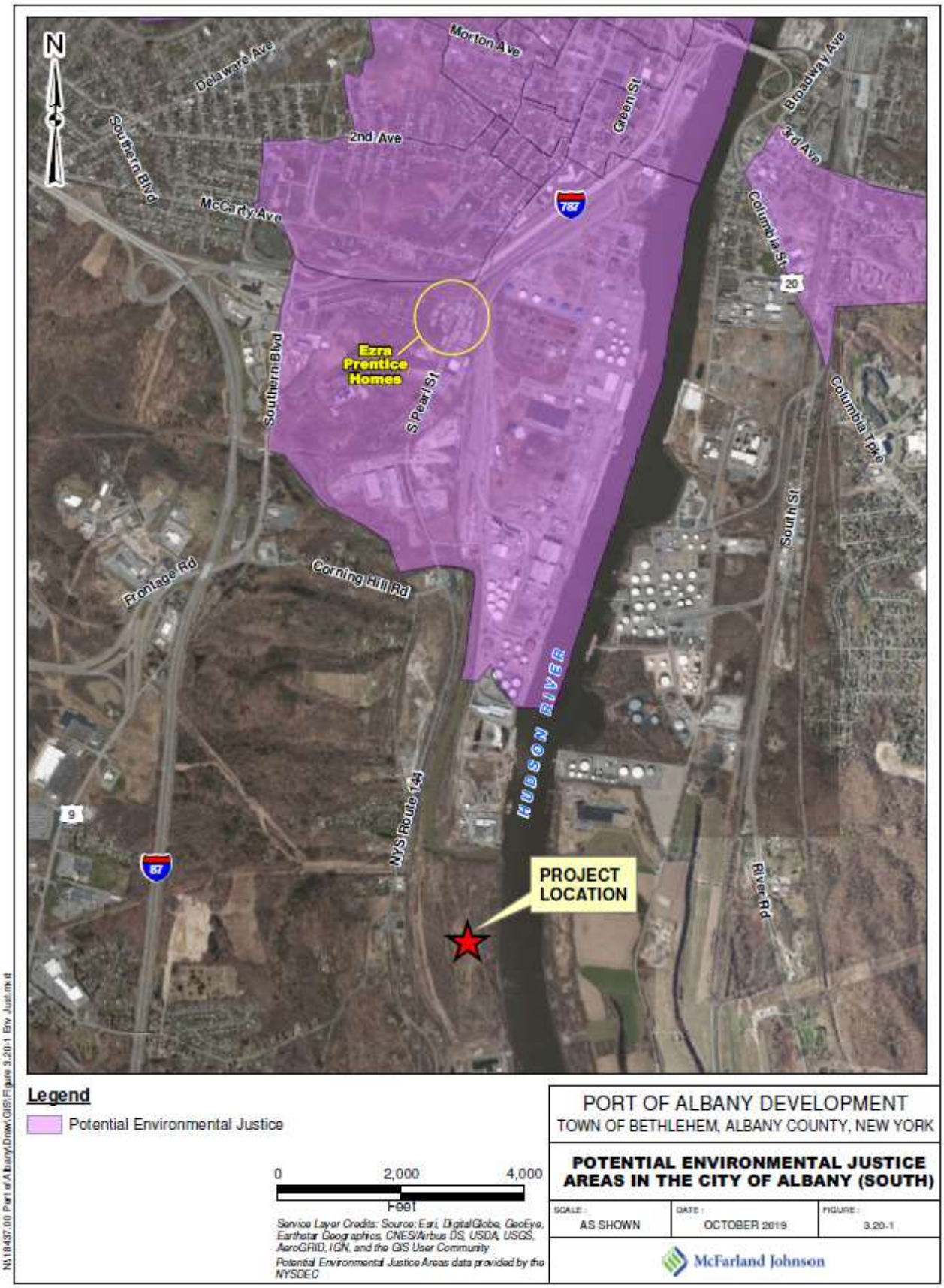
the applicant of all completed activities and submitted to the NYSDEC prior to a final decision being made on the permit application.

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

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

As mentioned above, 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.


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

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

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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 of the Public Participation Plan) 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 the Public Participation Plan) 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 of the Public Participation Plan. 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 in the Public Participation Plan) 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

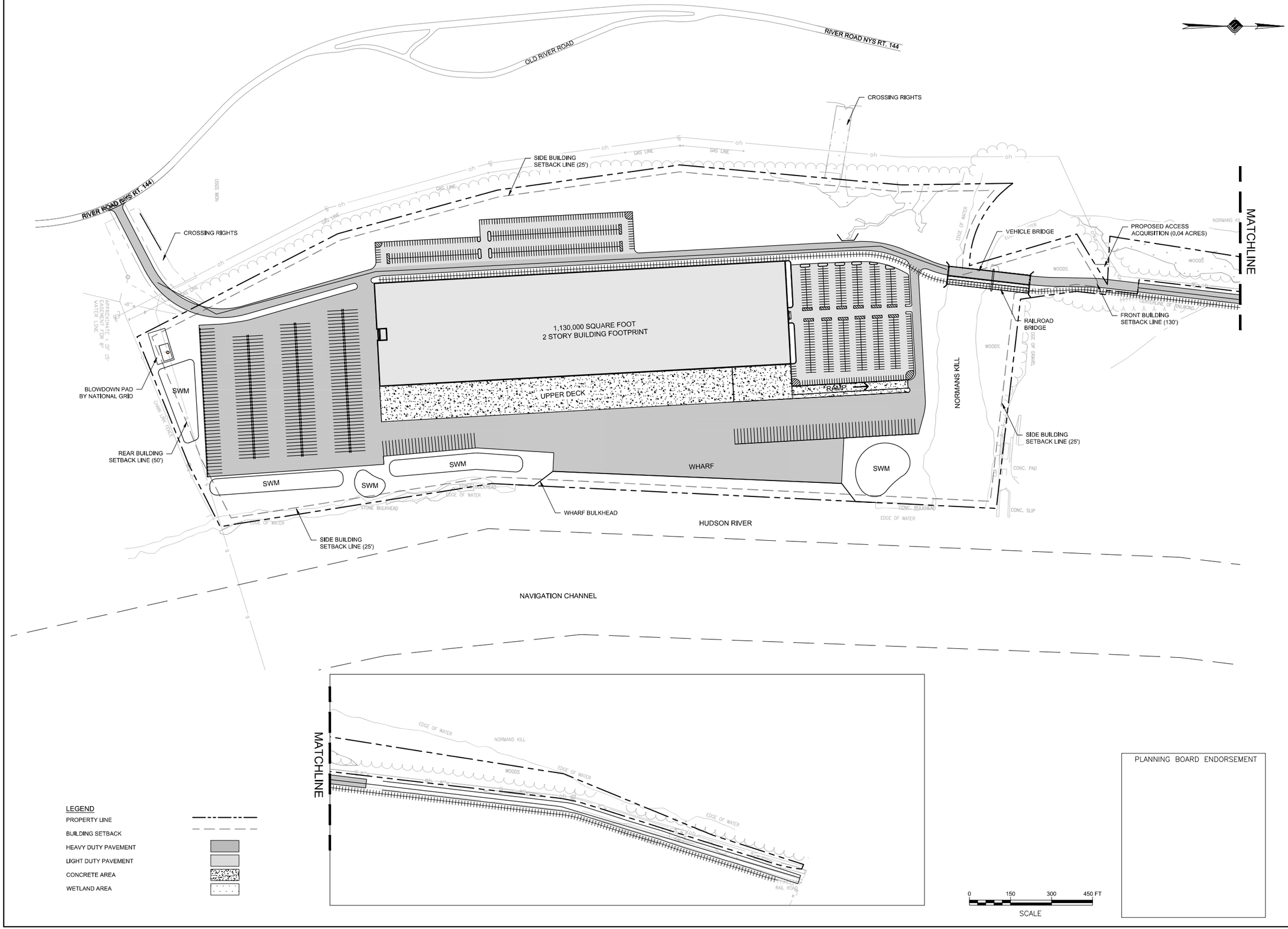
4.0 SUBMITTALS

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.

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

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:

The Albany Port District Commission (APDC) is proposing to develop the property formerly known as Beacon Island located just east of River Road along the Hudson River. The project is known as the Port Expansion Project and would develop the site with uses permitted by right pursuant to the Town's heavy industrial zoning regulations. Several hypothetical concept plans have been developed for the Project Site. The concept analyzed maximizes the amount of development permitted under current zoning, and therefore will represent the greatest potential for impacts. This concept includes an approximately 1.13 million square feet two-story Industrial use facility, with the associated access roads, employee parking, trailer parking, refurbished rail access from the north over Normans Kill, and a bulkhead/wharf along the Hudson River.

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

4.0 REASONABLE ALTERNATIVES TO BE CONSIDERED

163. JOHN SMOLINSKY: Meeting code for a 60-foot height requirement should be discussed. The requirement for an 85 feet height should be justified and discussed relative to each of the four potential development scenarios.

RESPONSE: See response 135 above.

164. MJ ENGINEERING AND LAND SURVEYING, P.C.: For each of the alternatives presented, there needs to be a discussion of the independent impacts each creates and what level of mitigation is needed to offset those impacts. This serves the purpose of establishing specific thresholds.

RESPONSE: The 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. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

165. MJ ENGINEERING AND LAND SURVEYING, P.C.: It may be beneficial to present an alternatives development scenario such as the prior Beacon Harbor project that also had an Environmental Impact Statement. This will illustrate the impacts associated with a project that sought to develop the site in a way that did not conform to the existing zoning district.

RESPONSE: The project sponsor is not proposing to develop the site that does not conform to existing zoning, therefore illustrating non-conforming alternatives is not necessary. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

5.0 ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED

166. JOHN SMOLINSKY: Discuss the 85-foot height requirement. This section may need further revision depending on final impact analysis and mitigation measures.

RESPONSE: See response 135 above.

167. MJ ENGINEERING AND LAND SURVEYING, P.C.: There needs to be a discussion of environmental impacts that will be temporary from construction activities (e.g. noise, dust, traffic).

RESPONSE: Section 2.5 of the DGEIS discusses construction activities and includes discussions of erosion and sedimentation control, dust control, noise control, and stormwater management. Section 3.6, 3.7, and 3.8 of the DGEIS discusses construction impacts related to their specific topic area: Climate and Air, Traffic and Transportation, and Drainage accordingly.

168. MJ ENGINEERING AND LAND SURVEYING, P.C.: This section needs to be further expanded to discuss long-term unavoidable impacts associated with operation of the project which may include localized and intermittent increases in traffic on local roadways, loss of existing terrestrial and forested habitat, increase demands on municipal

water and sanitary sewer service, consumption of petroleum hydrocarbon fuels and the subsequent release of air pollutants and GHGs. All of these impacts relate to the increased intensity of use of the site that translates to additional population arriving to and departing from the site both during the construction phase and operational phase. It should be stated whether these impacts are anticipated to be significant and if significant whether they can be minimized through various general or site-specific avoidance and mitigation measures. It should also be stated that if the identified mitigation measures are implements, the project is expected to result in a positive, long term overall impact that will be offset the adverse effects that cannot otherwise be avoided.

RESPONSE: Project will result in unavoidable impacts, all of which are summarized in the FGEIS Table 1.3-1: Potential Impacts and Proposed Mitigation Measures. These impacts include: change in surface coverage such as increasing imperviousness and increasing peak discharge rates for stormwater runoff; changes in landscape including removal of trees; dredging of the Hudson River; small wetland impacts; temporary air and GHG impacts due to construction activities; increased in vehicle and truck trips; increased water demand; potential increased sewer demand; and impact on adjacent communities. All impacts have proposed mitigation measures that would reduce or eliminate the impacts within each discussion area. If the identified mitigation measures are implemented, the Project is expected to result in a positive, long term impact that will offset the adverse effects that cannot be avoided. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

169. MJ ENGINEERING AND LAND SURVEYING, P.C.: A discussion of general mitigation measures should be provided. This may include but is not limited to:

i. Discussing how agency and public input is solicited and appropriately addressed as part of the environmental review process.

ii. That response to comments and preparation of a GFEIS will provide the information necessary for the lead agency to draw conclusions (Findings Statement) regarding the project's overall environmental impact, and impose conditions on SEQRA approval, if necessary.

iii. Discussion that compliance with other applicable federal, state and local regulations/guidelines governing the construction and design of the proposed project will serve to minimize adverse impacts.

iv. Discussion of local experts being engaged for the preparation of critical plans as well as to provide third party technical reviews to assure impacts are avoided to the maximum extent possible.

RESPONSE: In summary, the implementation of all mitigation measures will be subject to many agency and additional public review to ensure all compliance with the DGEIS.

The subsequent process is as follows:

Once a specific project of building is identified, as part of the site plan application a SEQR compliance document will be included as part of the application materials for

review by the Planning Board. The Project will also comply with all applicable federal, state, and local rules and regulations during the design, construction, and operation process. As such, all application materials, engineering reports, detailed site and building plans will be prepared by Professional Engineers and Architects duly licensed in the State of New York.

The environmental review or environmental justice review process is discussed in Section 3.20, included within this FGEIS. Section 3.20 specifically discusses how agency and public correspondence and input would be included in the Project development during permit process. All comments received during the public comment period for the DGEIS have been included and responded to in the FGEIS. Those responses aim to add clarification or additional information as required to ensure the commenter sees their concern addressed.

As a result, mitigation measures will be implemented with the necessary regulatory oversight.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

170. MJ ENGINEERING AND LAND SURVEYING, P.C.: A discussion of site-specific mitigation measures should be provided. This would be restating of any mitigation measures already identified in Section 3, by topic.
RESPONSE: See Table 1.3-1: Potential Impacts and Proposed Mitigation Measures under executive summary response to comment 4.

APPENDIX I - TRAFFIC IMPACT STUDY

171. MJ ENGINEERING AND LAND SURVEYING, P.C.: List of Tables and Figures; Update titles and page numbers per the report. There are numerous errors in these tables.
RESPONSE: The TIS has been modified accordingly.

172. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 2, Figure 1; This is referenced as Project Location Map in the text of the report.
RESPONSE: The figure has been labeled as Project Location Map.

173. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 11, No-Build Conditions, Paragraph 1; Provide backup documentation/support that CDTC was consulted to confirm the 0.5% growth rate is consistent with the regional travel demand STEP model.
RESPONSE: CDTC provided via an email on September 27, 2019 that their CDTC STEP Model for the 2029 background year ranged from 0.6% to 1.2% for the roadways in the study area. The 0.1 % to 0.7 % difference in background volume will have a negligible impact on the result and conclusions of the traffic impact study.

174. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 11, No-Build Conditions, Paragraph 2; The last sentence contains "study competed". Competed should be changed to completed.

RESPONSE: The TIS has been modified accordingly.

175. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 11, No-Build Conditions, Paragraph 3; Include the trip generation rates from the CME study in the appendix.

RESPONSE: The referenced Gateway Commerce Center project's trip generation figures and table from the Traffic Impact Study completed by CME are included in Appendix L of this FGEIS.

176. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 13, Build Conditions, Trip Distribution; Provide backup documentation/support that CDTC was consulted to see if the distributions are consistent with the regional travel demand STEP model.

RESPONSE: CDTC was provided the TIS and concurred with the proposed traffic distributions.

177. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 13, Build Conditions, Trip Generation, Paragraph 1; Explain how the trip generation rate was calculated. I.E. were the calculations performed utilizing the turning movement counts, ATR counts or other data?

RESPONSE: The methodology for establishing the proposed trip generation rates is outlined on Page 13 of the TIS. A traffic generation rate was calculated for the existing Port based on the Turn movement counts during the peak hour to determine the number of trips per building square footage. The truck mid-day peak hour trip generation was based on the existing truck volume data from the South Albany Truck Memo prepared by CME dated January 16, 2017, which used field collected count data. The site-specific rates for overall vehicles and trucks was applied to the proposed build-out of the site for Phase I, II and III scenarios based on the proposed building square footage. 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.

178. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 13, Build Conditions, Trip Generation, Paragraph 1; The conclusion that "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." was made. This is a single site within the Port and should be analyzed as such. If a single large manufacturer is the future tenant, the trip generation has the potential to almost double. Explain why the current trip generation for the Port is most appropriate.

RESPONSE: The TIS analyzed the conceptual development alternatives with the highest potential trip generation and thus the highest potential impact to the transportation network. This was Concept A that consists of a 1.13 million square foot 2-story distribution center. 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. Manufacturing was considered in Concept D.1, but this alternative is not anticipated to generate more traffic than Concept A. A comparison of the project specific trip generation rate to the similar ITE generic nationwide trip generation rates was completed in the TIS (Page 13) and DGEIS. This showed that the project specific calculated trip generation rate fell within the various rates for the different ITE specified land uses that might be considered at the proposed site, confirming that the project specific rate is consistent with the nationwide averages for similar sites with a combination of industrial based uses.

179. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 14, Paragraph 2; The trip generation rate calculations are not included in Appendix B. Please provide.
RESPONSE: The trip generation rate calculations are provided as Appendix L to this FGEIS.

180. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 23, Traffic Operations; Reference is made to the 2010 Highway Capacity Manual (HCM). A new 6th Edition of the HCM was issued in 2016. Why was this edition not utilized?
RESPONSE: The document inadvertently printed the incorrect to reference. manual. We utilized the 6th edition issued in 2016 for both signalized and unsignalized intersections.

181. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 24, Intersection No. 1; The applicant is responsible for the coordination of any monitoring of traffic signal timing with the agency responsible for the signal. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.
RESPONSE: Once a specific project or building is identified, a site plan application will be made to the Planning Board that will contain a SEQR compliance document will include a traffic trip generation analysis and a traffic signal timing analysis for review and approval from the NYSDOT.

182. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 24, Intersection No. 2; The applicant is responsible for the coordination of any monitoring of traffic signal timing with the NYSDOT. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.
RESPONSE: See response to comment 181 above.

183. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 24, Intersection No. 3; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the

applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.

RESPONSE: See response to comment 181 above.

184. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 24, Intersection No. 3; Reference the guidelines utilized to determine "adequate levels of service".

RESPONSE: The NYSDOT Highway Design Manual Chapter 5 Appendix 5D and the NYSDOT highway design report guidelines were utilized to determine "adequate levels of service" .

185. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 25, Intersection No. 3; The applicant is responsible for the follow up traffic study. Explain how the applicant will perform this study and any mechanisms or procedures that would be utilized or implemented.

RESPONSE: See response to comment 181 above. Once a specific project or building is identified, a site plan application will be made to the Planning Board that will contain a SEQR compliance document will include a traffic trip generation analysis and a traffic signal timing analysis for review and approval from the NYSDOT.

186. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 25, Intersection No. 5; Include discussion that signal warrant analysis will need to be revised and submitted as part of the site plan review process with the Town of Bethlehem.

RESPONSE: See response to comment 181 above. Once a specific project or building is identified, a site plan application will be made to the Planning Board that will contain a SEQR compliance document will include a traffic trip generation analysis and a traffic signal warrant analysis for review and approval from the NYSDOT.

187. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 25, Intersection No. 6; Include type of existing control at this intersection.

RESPONSE: Existing control at this intersection is provided in the "Existing Conditions" section of the DGEIS TIS on pages 5-6. An excerpt from this section is provided below:

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.

188. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 25, Intersection No. 6; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.

RESPONSE: See response to comment 181 above. Once a specific project or building is identified, a site plan application will be made to the Planning Board that will contain a SEQR compliance document will include a traffic trip generation analysis and a traffic signal timing analysis for review and approval from the NYSDOT.

189. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 25, Intersection No. 6; The analysis on this page concludes a traffic signal is recommended and provides direction that the signal should be installed prior to Phase II. However, page 43 states "Consider installation of a traffic signal…" Clarify when consideration of this signal will occur. During Site Plan Review through Town of Bethlehem, etc.?

RESPONSE: See response 181 above.

190. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 26, Intersection No. 8; Include the LOS from the CME report for the proposed roundabout.

RESPONSE: The level of service table from the Traffic Assessment Memo prepared by Creighton Manning Engineers for the alternatives reviewed for the US Route 9W/Glenmont Road/Feura Bush Road intersection project are included in Appendix L to this FGEIS.

191. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 26, Intersection No. 9; Reference the guidelines utilized to determine "acceptable level of service".

RESPONSE: See response 184 above.

192. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 26, Intersection No. 10; Expand on why no quantitative analysis was performed.

RESPONSE: See response to comment 76.

193. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 26, Intersection No. 10; Include the year the NYSDOT data was collected that was utilized to evaluate this interchange.

RESPONSE: The count data previously used was from 2010 through 2015. Updated analysis was completed with new traffic turn movement count data, see response to comment 76.

194. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 26, Intersection No. 10; Provide reference for the "typical daily fluctuation at this type of urban high-volume intersection which will typically be around ±10%".

RESPONSE: This was based on NYSDOT historic directional traffic count data in the area. Updated analysis was completed with new traffic turn movement count data, see response to comment 76.

195. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 26, Intersection No. 11; Provide more detail as to how the access to NYS Route 144 will be restricted.

RESPONSE: The driveway will be restricted to car traffic only. All truck traffic will be prohibited with the construction of an overhead sign that will span the roadway at a height of 8 +/- feet to create a physical barrier prohibiting trucks to pass through. Signage along River road will also indicate that "no trucks" at this entrance On site signage will direct trucks to travel through the Port property to exist via South Port Road, Raft Street, Smith Blvd, Boat Street and to Church Street.

196. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 27, Table 4; Check LOS letter designation and delays for all. Specifically, for the NYS Route 144/Glenmont Road intersection overall LOS for 2029 Build Phase III.

RESPONSE: There was a typo in the table and the NYS Route 144/Glenmont Road overall intersection LOS for Phase III Build should be LOS B, it was incorrectly shown as LOS F.

197. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 29, Truck Impact Analysis, Paragraph 4; Provide a proposed conclusion regarding whether or not trucks should be allowed to use the NYS Route 144 access.

RESPONSE: See response 181 above. Trucks will not be permitted to use the NYS Route 144 access.

198. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 29, Truck Impact Analysis, Paragraph 3; Figure 14a and 15a are not in Appendix B. Please provide.

RESPONSE: Figures 14a and 15a have been included in the FGEIS Appendix E TIS Report in the TIS Appendix B.

199. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 29, Truck Impact Analysis, Truck Volume Assessment, Paragraph 1; Explain why the data from the other studies is not relevant.

RESPONSE: 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 in the TIS as they did not provide truck volumes for the study area.

200. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 29, Truck Impact Analysis, Truck Volume Assessment, Paragraph 2; Explain how the trip generation rate was calculated. I.E. were the calculations performed utilizing the turning movement counts, ATR counts or other data?

RESPONSE: The trip generation rate was calculated utilizing the turning movement counts collected as part of the data collection portion of the TIS. For the peak midday truck generation rates, the existing truck volume data from the South Albany Truck Traffic memo completed by Creighton Manning dated January 16, 2017 was used. Automatic Traffic Recorders and Manual Traffic Counts over several days were used BY CME to determine the existing truck volumes and traffic patterns.

201. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Table 5; It appears that a note associated with the ITE Code in the title is missing (if not missing, remove the asterisks).

RESPONSE: The TIS has been updated accordingly.

202. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Table 5; Are the AM and PM peak hours for the trucks and passenger vehicles the same? If yes, then include in discussion for clarification.

RESPONSE: The passenger peak hour (7:00-9:00 AM & 4:00-6:00 PM) and the truck peak hour (9:00AM -1:00PM) do not occur at the same timeframes. This is detailed in the Truck Impact Analysis section of the TIS (TIS Page 29).

203. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Paragraph 3; Explain why was data from the South Albany Traffic Report utilized instead of data collected as part of the TIS for this project.

RESPONSE: The South Albany Truck Traffic report was used as it provided the required information, was thorough, was previously reviewed and accepted by DOT, CDTC, City of Albany and less than 3 years old. Typical industry and NYSDOT standards allow traffic data up to 5 years old can be utilized if the area has not seen significant development and/or roadway modifications within the study area.

204. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Paragraph 3; Quantify how significantly less the overall traffic volumes are during the midday hours.

RESPONSE: The peak truck traffic for the midday hours (340 vehicles) are approximately 45% less than the morning peak hour (625 vehicles) and 42% less than the evening peak hours (594 vehicles), based on 24-hour tube count data on NYS Route 144; as shown in the DGEIS TIS Appendix A.

205. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Table 6; Check the math for the % increase. Calculation should be:
(proposed – existing) / existing.

RESPONSE: Table 6 from the TIS has been updated below to clarify the truck direction and to comply with the calculation comments regarding the % increase. These modifications did not have an effect on the overall conclusions and recommendations from the Truck Impact Analysis section of the TIS.

Updated TIS Table 6 – Project Truck Volume 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%

206. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Table 6; Identify what the two columns under Existing Truck Volume and Proposed Truck Volume represent.

RESPONSE: See response 205 above.

207. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 30, Paragraph 5; The third sentence is confusing. It appears that trucks will be using the southern driveway although it is stated this will be restricted to passenger vehicles only.

RESPONSE: See response 195 above. All truck traffic will be prohibited from using the southern driveway.

208. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 31, Paragraph 1; It should be noted that the traffic control plan will need to be coordinated and approved by any other agencies with jurisdiction of the roadways traveled.

RESPONSE: The TIS has been modified accordingly.

209. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 31, Truck Sensitivity Analysis, Paragraph 1; A reference is made to the Synchro printouts included in Appendix B. While they are located there, per the table of contents and appendix covers, these should be included in Appendix C.

RESPONSE: The TIS has been modified accordingly.

NORTHBOUND / EASTBOUND SINGLE DESTINATION - RECOMMENDED TRUCK ROUTE

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**

210. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 31, Truck Sensitivity Analysis, Paragraph 1; The results table is not included in Appendix B. Please provide.

RESPONSE: The truck sensitivity analysis LOS table was provided in the TIS Appendix B. A copy of that is provided below:

211. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 31, Truck Sensitivity Analysis, Paragraph 3; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include

discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.

RESPONSE: See response 195 above. The southbound approach to the site is not the recommended truck access to the site. The recommendation is for all truck traffic to enter/existing the site from the north via the existing roadway system through the Port to Church Street .

212. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 31, Truck Sensitivity Analysis, Paragraph 4; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.

RESPONSE: See response 181 above.

213. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 35, Figure 16; This figure does not match the figure presented at the public hearing. Public Hearing reflected the Northbound/Eastbound route along I787/Exit 2 and I787/I87 Exit 23. Explain why and revise figure and analysis if necessary.

RESPONSE: Figure 16 – was revised for the public hearing to clarify the required truck route. The traffic analysis was based upon the required truck route and therefore no revision to the analysis is necessary. The updated Figure 16 is included in the TIS in FGEIS Appendix E.

214. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 35, Figure 16; Legend representation of "( )", "[ ]" should be consistent with symbol on routes.

RESPONSE: Figure 16 has been revised accordingly and is located in the updated TIS as FGEIS Appendix E.

215. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 35, Figure 16; There is no text reference to this Figure. What is the Figure intended to show? Provide discussion.

RESPONSE: Figure 16 is included in the updated TIS as FGEIS Appendix E and has been labeled and is a graphical representation of the three truck routes assessed as part of the sensitivity analysis.

216. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 36, Signal Warrant Analysis, Paragraph 2; Provide a conclusion whether a signal is recommended. The signal warrant worksheet says a signal should be considered for both scenarios analyzed.

RESPONSE: In conclusion, although a signal warrant was met, a gap analysis was performed (see Gap Analysis Section of the TIS) and indicates that there are adequate safe gaps available for vehicles to turn onto NYS Route 144 from Glenmont Road during the morning peak hour which is the governing timeframe for this intersection. Therefore, the installation of a traffic signal is not recommended at this time, this is further detailed in the updated signal warrant analysis in the response above and within the Signal Warrant Worksheets attached in Appendix L.

217. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 37, Paragraph 2; Change "elevate" to alleviate.

RESPONSE: The TIS has been modified accordingly.

218. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 37, Site Distance Analysis; Site should be Sight.

RESPONSE: The TIS has been modified accordingly.

219. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 37, Site Distance Analysis, Paragraph 1; Table 7 is wrong table reference.

RESPONSE: The text shall reference table 8.

220. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 37, Table 8; Confirm that EB 17-007 was reviewed for modified perception reaction time used in calculating standard distance.

RESPONSE: EB 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. See response to comment 107.

221. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 37, Table 8; Provide a figure that shows the available distances from the proposed access driveway.

RESPONSE: See response to comment 107.

222. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 37, Table 8; It appears the available intersection sight distances are overestimated. There is a vertical curve on the Route 144 bridge over the railroad tracks to the north and the vegetation on the west side of NY Route 144 to the south appear to restrict available intersection sight distances to values below what was reported. Intersection sight distances should be provided for AASHTO Cases B1 and B2 for passenger vehicles only based on the restriction of no heavy vehicles using this access. Verify the standard intersection sight distances and ensure any adjustments for grade of the roadway are included. Discussion should include a description of the cases and any adjustments including references to design standards and other publications. Include discussion on standard versus available stopping sight distance for both passenger vehicles and trucks that are traveling on NY Route 144 approaching the proposed access.

RESPONSE: See response to comment 107.

223. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 39, Public Transportation Analysis; Figure 16 is the wrong figure reference.

RESPONSE: The correct figure number is 17. The TIS has been modified accordingly.

224. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 39, Public Transportation Analysis; What are the impacts to public transportation travel in the study area if the mitigation measures previously noted are not implemented.

RESPONSE: It is not recommended. nor would the Town Planning Board allow this project to be completed and operational until all mitigation measures agreed upon by all parties is implemented.

However, the build scenarios without mitigation are provided in the Future Conditions section of the DGEIS TIS in Table 4 in the "2029 Build" columns. The public transportation serving the site (Glenmont #7 Bus) would experience the capacity impacts noted in the capacity analysis section of the TIS (Pages 23-28).

225. MJ ENGINEERING AND LAND SURVEYING, P.C.: Page 42, Conclusions and Recommendations; Summarize who is responsible for mitigation measures and any mechanisms or procedures that would be utilized or implemented to complete the mitigation.

RESPONSE: See response 181. The project sponsor / owner is responsible for the implementing the mitigation measures.

Once a specific project or building is identified, a site plan application will be made to the Planning Board that will contain a SEQR compliance document will include a traffic trip generation analysis and a traffic signal timing analysis that indicate any mitigation measures that are required for the specific project. The SEQR compliance document will be submitted for review and approval by the NYSDOT, and subsequent approval by the NYSDOT and Planning Board will require the associated mitigation measures to be implemented as part of the specific project.

226. MJ ENGINEERING AND LAND SURVEYING, P.C.: Appendix B; Review volume inputs to ensure they match the figures in the report and modify either as required.

RESPONSE: All figures have been reviewed and no modifications were needed to the Synchro files.

227. MJ ENGINEERING AND LAND SURVEYING, P.C.: Appendix C; No data included. This was included in Appendix B.

RESPONSE: The Appendix C of the TIS cover page was inserted in the wrong location and has been updated.

228. MJ ENGINEERING AND LAND SURVEYING, P.C.: Appendix D; Include NYS Route 32 with Corning Hill Road.

RESPONSE: Updated signal warrant analysis worksheets are included as Appendix L to this FGEIS which includes the requested intersection.

229. MJ ENGINEERING AND LAND SURVEYING, P.C.: Appendix D; Include scenario on page 1 for which the warrants were performed.

RESPONSE: Appendix D of the TIS has been updated as requested and are included in Appendix L of this FGEIS.

230. MJ ENGINEERING AND LAND SURVEYING, P.C.: Appendix D; MUTCD Section 4C.01, paragraph 17 states data analyzed should be for 12 hours and contain the greatest percentage of the 24-hour data. Identify why only 4 hours is provided for the last four warrant evaluations.

RESPONSE: See response 216. Updated signal warrant analysis has been provided.

231. MJ ENGINEERING AND LAND SURVEYING, P.C.: Appendix D; It appears the 8-hour warrant was not analyzed. Please identify how the determination of if a signal is or is not recommended was made.

RESPONSE: See response 216.

232. MJ ENGINEERING AND LAND SURVEYING, P.C.: Provide an assessment of overall accident types (rear end, right-angle, etc.) occurring on River Road. According to the Bethlehem Police Department, the River Road corridor is one of the Town's highest crash stretches. Identify the reasons for not providing a separate southbound left-turn lane or northbound right-turn lane along River Road that would allow turning vehicles to move out of the through travel lane to access the site.

RESPONSE: See response to comment 71.

APPENDIX J – STORMWATER REPORT

233. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section I.B shall also reference the extensive soil investigation completed and their findings as it may relate to stormwater management.

RESPONSE: Section I.B: General Information, Soil Classification shall read as follows: For additional soil information see the TOWN OF BETHLEHEM PLANNING BOARD, DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT For ALBANY PORT DISTRICT COMMISSION PORT OF ALBANY EXPANSION PROJECT, Section 3.1: Soils, Geology, and Topography, specifically Section 3.1.3: Soils, Geology, and Topography, Mitigation Measures. The report has been updated accordingly.

234. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section III, In the first paragraph, first sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.

RESPONSE: See response to comment 112 above.

235. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section III indicates that the SWPPP will be prepared meeting various objectives. Further explanation of how the project will mitigate increased peak runoff rate during and after construction is necessary. The Existing and Proposed Hydrology tables found in the Section 3.8.3 of the DGEIS do not support this statement as Drainage Area 3 and 4 have substantial increases in runoff for all storm events under the developed site condition.

RESPONSE: See response to comment 112 above.

236. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section III.B shall list all available green infrastructure practices available and then identify why each has not been selected.

RESPONSE: The Drainage Design Report, has been prepared for the DGEIS as a worst-case alternative. It is not meant to be the final Storm Water Pollution Prevention Plan (SWPPP) for the project. Once a specific project or building is proposed for the site, the site plan application materials will include a detailed SWPPP and list all green infrastructure practices available, identifying why each one has not been selected.

237. MJ ENGINEERING AND LAND SURVEYING, P.C.: Section III.B identifies the water quality practices being proposed including bioretention and stormwater ponds. Provide the NYSDEC designation for each practice proposed. (e.g. Bioretention is a F-5 designation).

RESPONSE: See response to comment 110 above.

APPENDIX O - SITE LAYOUT CONCEPTS

238. MJ ENGINEERING AND LAND SURVEYING, P.C.: On Boundary Survey - Label metes and bounds in darker font.

RESPONSE: The Boundary Survey was completed by a subconsultant and was not available for alteration.

239. MJ ENGINEERING AND LAND SURVEYING, P.C.: On all concepts, the property line that parallels the Normans Kill should reflect a front yard setback of 130-ft.

RESPONSE: The property line that parallels the Normans Kill has been updated to show a front yard setback of 130 feet. See updated Figures 3.13-3, 3.13-4, and 3.13-5.

GENERAL APPLICABILITY FOR DGEIS DOCUMENT

240. MJ ENGINEERING AND LAND SURVEYING, P.C.: For clarity purposes, all tables and maps should be located immediately after reference in the text.

RESPONSE: Tables and maps have been relocated when appropriate to immediately after reference in the text.

241. MJ ENGINEERING AND LAND SURVEYING, P.C.: Create bookmarks for each section in the pdf for ease of viewing.

RESPONSE Bookmarks have been added to the pdf.

GENERAL

242. THOMAS GOODFELLOW: I love the idea of the Port being used to support the wind farms off of Long Island, and elsewhere. The looming catastrophe of climate change demands that any new facility be prohibited from any activity supporting the fossil fuel industry including any manufacture, production, storage or shipping of supplies or materials for fracking, fossil fuel pipelines, refineries, power plants, or storage facilities, etc, except as a temporary response to a temporary declared exception related to a declared emergency, with the approval of the Town Board. Such a provision needs to be included in the scope of this and any other new project.

RESPONSE No response required.

243. LISA A. FORD: As a property owner in Bethlehem, I oppose the Port of Albany Expansion Project.

I think it unwise to continue to expand fossil fuel transportation routes when humans should be doing the exact opposite, for a number of reasons including health, safety, the environment, and future generations. The rail industry has yet to upgrade to the more safe tanker cars. When there is a catastrophic incident, and there most assuredly will be, our community will bare the brunt of damages and require a huge effort to attempt to control the damage. Emissions will certainly increase. Those with, or the potential for, air quality related health issues will suffer and/or perhaps increase their rate of expiration. The health of the riverfront, in the event of a catastrophic incident, may never recover. The fact that the Hudson is a tidal water body essentially means allowing bomb trains to unload oil onto ships means that inevitable spills poison the ocean. All fish and water fowl become targets. Perhaps drinking water, for who truly knows how many, is impacted? There will be increased traffic in town due to this project. Have the proper and necessary traffic analyses been completed This also increases greenhouse gas emissions as well as all of the health and safety issues mentioned previously. Noise and light pollution will increase. None of this is welcomed news nor good for the environment. People want to own property and live in this town, it is a very desirable area for so many wonderful reasons. We should do nothing to jeopardize that uniqueness in the Capital Region.

If Bethlehem property owners are the last line of defense, and this email is the only recourse to let my feelings on the matter be known, I am against the project. I do not feel that the benefits will outweigh all of the actual and potential risks. I am not a gambling person. The risks are too grave and innumerable to specifically mention them all.

Thank you for the opportunity to comment.

RESPONSE No response required.

244. BETHLEHEM CHAMBER OF COMMERCE: On behalf of the Bethlehem Chamber and its 430 member businesses that employ 11,000 people I write to express the Chamber's support of the Albany Port Commission District's Expansion Project.

The expansion of the Port of Albany in the town of Bethlehem would allow Bethlehem to play a major role in the offshore wind industry. This clean, renewable form of energy will

be a significant source of affordable power for New Yorkers in the next decade. This industry is poised to bring a substantial number of jobs to our community creating a robust long term economic impact.

The Port Commission is a government entity that works on a daily basis ensuring state and federal rules and regulations are followed. The leadership of the Port Commission are recognized for their expertise around the country. We are confident this project will be done with integrity. It is also important to note that the Port of Albany was the first port in New York State to be certified in the Green Marine Program. This is another indication of the importance environmental stewardship is to Port leadership.

As other communities are vying for this industry let's do what we can to make Bethlehem an important part of the wind energy supply chain.

RESPONSE No response required.

SUPPLEMENTAL DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT COMMENTS

3.6 CLIMATE AND AIR QUALITY

1. Charlotte Buchanan: People at the public hearing on January 6th properly raised the issue that air pollution does not remain with the trucks and trains producing it, but disperses, and in the case of the Port would increase air pollution inhaled by the nearby residents.

   To my knowledge, however, no attention has been paid to the impact to residents living on the banks of the Hudson River, just south of the Port.

   I respectfully request that in any of the scenarios for the use of the expansion, potential additional noise, pollution, and odors be determined and mitigated.
   RESPONSE: Regarding the air pollution, please see response to comment #2 below.

   All potential impacts to the Hudson River and all areas within the Town of Bethlehem have been described, evaluated, and recommended mitigation measures described in the Draft Generic Environmental Impact Statement (DGEIS) Dated August 6, 2019. As outlined in the DGEIS, upon determination of a specific tenant all impacts, including air, noise and odors, will be evaluated and compared to the threshold limits established by the Generic Environmental Impact Statements.

2. MR. MAIR: What about air monitoring? Trucks are basically a proxy for PM 2.5 diesel particulate emissions. So, while you may alter your route, the emissions are still within this area and they may rise. Air, as a medium - it doesn't stay on any street. It goes up and it can spread and adds to the air shed and it has already burned PM 2.5. So, has there been an analysis of on one of your worst-case scenarios you have for tenants and they are having an increased volume traffic and you may alleviate the road burden and the risk of kids being hit by traffic, but you still have added to the poor quality – poor air quality obtained in one area etcetera. Has that been modeled in your analysis? Transportation road hazards and safety are one issue. The other trucks in additional train traffic is idling diesel engines and that emission is going to add to the already polluted air cloud that already sits over the south end during peak ozone days during the summer which will make it significantly worse. So, you're actually doing a lot of PM 2.5 loading as well as sulfur dioxide as well as aromatic hydrocarbons that will be emitted from these tracks. Has that been added to your modeling, in essence, of air pollution contaminants? That's a driving problem. This is a science of physics. And again thermodynamics of heat during

the summer with self rising particulates and polyaromatic hydrocarbons are known as a contributor. That's why they have the laws that regard buses and what have you. So, even though the trucks are off-site, they are. The point of the matter is what is the wind direction for southerly winds? What does that mean? That means the wins come out of the south and they blow north. So, if you've got a wind pattern that's going south and blowing north – peak emissions where kids are off during the summer. Their playgrounds are right here. So, what you have is increasing the potential for again PM 2.5 that will increase, irrespective of the fact that more trucks, irregardless of their route, are still adding to the PM 2.5 particulates right now. So, the issue you're having is cumulative and it can add to impacts. Even though the traffic may be mitigated, the point of the matter is you're still loading significant air pollutants which is a huge issue. It's a huge issue with the trains. The issue is pollution loading through the air. So, that study is an impact and that's a question that the community needs to have taken into consideration.

RESPONSE: The NYSDEC completed an extensive air monitoring study; the results of which are summarized in the October 2019 Albany South End Community Air Quality Study Report. The study included monitoring of various air pollutants including particulate matter, PM2.5. The study showed that predominant winds come from the south, as shown on the NYSDEC Figure 22 "Wind Rose Plots for Ezra Prentice and ACHD". The study also concluded on Page 44 that "Mobile source pollutants disperse quickly moving from the edge of an active roadway. Typically, the concentrations drop to background levels within a few hundred feet from the edge of the roadway. This is an important consideration because the distance to the roadway has a bigger impact on local pollutant concentrations than the number of vehicles on that roadway." In addition, an objective of the study was to "develop an understanding of how far particulate matter travels from the road into the neighborhood." The report concluded that there is a rapid decline in concentration of UFP and other pollutants emitted by vehicles with distance from the road. UFP concentrations may decrease by at least 50% at distances greater than 500 feet. The Project Site is located approximately 1.7 miles southeast from the Ezra Prentice community and therefore the impact from new tenant operations and traffic located on the Project Site will not have a significant impact on the Ezra Prentice community. In addition, any proposed tenant will be required to apply for any appropriate air permits and comply with all local, state, and federal regulations.

The proposed truck route that is closest to the Ezra Prentice Community is through the existing Port District along Smith Boulevard. A truck on Smith Boulevard would be approximately 0.35 miles (1,848 feet) to the east of Ezra Prentice. Based on the analysis performed by the NYSDEC, due to the distance from Ezra Prentice and the predominant prevailing winds (from the south) it can be concluded that the proposed truck routes will not have a significant impact on the Ezra Prentice community relative to the PM2.5 concentrations or other air pollutants summarized in the report.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3. 6th Legislative District: But Ezra Prentice has been declared an "environmental justice community," which has legal implications for all of the industrial development nearby. Remediation efforts have been offered, but strike us as woefully short of the mark. Moving the truck traffic to the Port's interior road system – an expensive and time consuming enterprise at best – is moving the diesel fumes further from front doors to roads that are still as close as several football fields away. And more than doubling the truck traffic once the wind turbine facility is built strikes us as a poor bargain.

   Diverting traffic several hundred feet away from residences, as well as the other mitigation steps offered so far, are halfway measures that would insult any other community. Yet because Ezra Prentice is a public housing site, with residents who are low income and predominately people of color, this is seen as acceptable.

   RESPONSE: The NYSDEC October 2019 "Albany South End Community Air Quality Study" did conclude that high emitting vehicles (HEVs) on South Pearl Street cause higher Traffic-related air pollution (TRAP) levels than at other monitors in the South end. From that the NYSDEC, with the Mayor's Office, determined an action to reduce air pollution and exposure for the Ezra Prentice community through the voluntary rerouting of truck traffic from South Pearl Street. This Project is following the NYSDEC findings and action items by rerouting the truck traffic away from South Pearl Street as described in the SDGEIS Section 3.7.

4. MR. BURGESS: I am writing to support efforts by the residents of the South End in Albany who live in the Ezra Prentice Homes related to the development plans of the Port of Albany on 80 acres in the Town of Bethlehem. Residents want to meet and express their concerns about environmental and health issues to the Port of Albany's board and officials about plans to assemble and ship wind turbines.

   Air pollution is a concern to the residents of the Ezra Prentice Homes and further truck traffic could make the situation worse. Residents have suffered from being in an industrial area and already have oil trains sitting on tracks within feet of their homes.

   I urge the Town of Bethlehem Planning Board to delay approval of the Port of Albany's plans until the relevant parties especially the board of the Port meet with residents of Ezra Prentice to come up with mutually agreed mitigation plan.

   The effort to build, assemble and ship new wind turbines is a sound and welcome global environmental policy but we need to consider the local environment and the impact on low income residents who will be effected by the increased development and traffic.

   RESPONSE: Officials from the Albany Port District Commission held a public information meeting for the residence of Ezra Prentice on January 6, 2020. At this meeting the Port officials presented an overview of the proposed project and solicited comments from the residents of Ezra Prentice. Residents and the general public were encouraged to submit comments to the Port officials until January 17, 2020. As discussed at this meeting, the current proposed project is generic in nature, with no

specific tenant in place. Once a specific tenant is identified, the Albany Port District Commission will hold an additional meeting with the residents of Ezra Prentice and solicit input on the specific project. The Port has met with residents, local stakeholders and elected officials since the inception of this proposed expansion project to keep all parties informed. See list of meetings that the Port has participated in within the DGEIS and SDGEIS Section 3.20.

The Port of Albany prepared a Supplemental Generic Environmental Impact Statement (SDGEIS) that evaluated the potential impacts of the project including truck traffic and air quality impacts. The analysis as reported in the SDGEIS determined that the project will not have an impact on truck traffic and air quality, as discussed in SDGEIS Section 3.6 and 3.7 respectively.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

3.7 TRAFFIC AND TRANSPORATION

5. MS. ALCANTAR: To your last point saying that trucks and rail would be decreased – is that as of now or what is currently happening, or is that a worst-case scenario?
   RESPONSE: If the project is developed with an offshore wind supply chain company (tenant), the traffic generation numbers that are in the Traffic Impact Study report will be lower because the supplies needed for the off-shore wind components will be transported to and from the project site via ships and therefore, need for trucks is diminished.

6. MS. SMITH: So, if you are creating 1,600 jobs, how do you only have four or five cars coming in?
   RESPONSE: The 4-5 referenced cars refers to Train cars not passenger cars.

7. MS. SMITH: So, you may have 1,600 passenger cars in regards to 1,600 extra jobs being created. If there are 1,600 people coming to work in there are 1,600 people going home during peak hours - So, in other words there could be 1,600 extra vehicles in a 24-hour period going one way which in a 24-hour period could mean 32-something extra cars in a 24-hour period passing. It would be 3,200 extra vehicles going through South Pearl Street every day because it is shiftwork.
   RESPONSE: The job creation number was generated by industry standards and there is has no relation whatsoever to the traffic generated by the proposed project. The traffic impact study analyzes the traffic during the peak hour which equates to be the maximum one hour time period when the traffic is at its maximum (peak) during the AM and PM commuter times.

   Note that the projected 1,600 jobs are being created throughout the County from which 1,100 are anticipated to located on the project site. Most of these types of

manufacturers have three shifts, from which employees will travel to and from the facility throughout the roadway network.

As described in the TIS, 11 intersections were studied with traffic being distributed throughout the surrounding roadway network. The traffic impact study was prepared pursuant to the New York State DOT and industry standards. Employees that work on the property will travel to and from the property on a route with the shortest distance to their homes. It is anticipated that few cars will travel down South Pearl Street outside of individuals that may live in the South End that work at the project site.

8. MS. DWYER: I do have a question. Is this going to be on some type of bus route? That leads into my second question because – how are you going to be reaching out to different organizations to help people get employment? I think there should be a study to go through your ledgers to figure out who lives where and how many people are already employed from the south end in the City of Albany. How is this going to be properly distributed – the community that is being impacted.
   RESPONSE: Currently there is no Bus stop proposed for this project, however the Port of Albany will work with CDTC and determine if a Bus route can be extended to serve this property once a specific company and site plan has been developed to determine potential employee bus ridership volumes.

   Regard advertising for potential jobs on the property. Once a project is identified with a specific company, the Port of Albany will share that particular company's new local job opportunities that will be a result of the project.

9. MJ Engineering and Land Surveying, P.C.: Page 3-10, Paragraph 1: Clarify build out phases. It is not clear if they are total areas or additional areas for Phase II.
   RESPONSE: The areas noted are the total square footage per phase.

10. MJ Engineering and Land Surveying, P.C.: Page 3-10: states that "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…" It further says: "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." What physical restrictions will be in place to prohibit truck access at the southern entrance? One option is an overhead height bar that physically restricts a truck.
    RESPONSE: As described in the SDGEIS, an overhead height bar similar to an entrance to a parking garage will be installed across the exit lane of the southern driveway. See sample provided to address FGEIS comment No. 64 in Appendix B.

11. MJ Engineering and Land Surveying, P.C.: Page 3-17: Regarding Appendix G – is the clause language to be used for both a tenant occupying a building owned/built by the Port, AND a building that is privately built with the Port leasing the land. It should be applicable to both scenarios. Please confirm. It is expected the clause language will be applicable to

building that is privately built. If so, how will the Port enforce the clause language on a building it does not own?

RESPONSE: The clause is applicable to both a building lease or land lease scenario.

12. MJ Engineering and Land Surveying, P.C.: Regarding future improvements to City streets – the FGEIS would benefit from an overall map of the preferred truck route that identifies:

i. the improvements that are undertaken by McLaren (based on their map).

RESPONSE: See aerial image that illustrates the truck route showing the proposed improvements to Smith Boulevard (designed by McLaren) within the FGEIS Appendix L.

ii. Current condition of Church Street and Boat Street (what is pavement condition, why no improvements needed?)

RESPONSE: The current condition is described in response to FGEIS comment No. 38 in Appendix B is as follows. As documented in the City of Albany – S. Pearl St. Heavy Vehicles Travel Pattern Study completed by CDTC dated May 2018, the current roadway condition (Normanskill Street, Raft Street, Smith Boulevard, and Boat Street) "is in a poor state of repair. The pavements are in poor condition, there are multiple railroad crossings, it lacks adequate pavement markings and signage, and there are tight turning radii at several intersections". The study also confirms that the roadway network consist of Town of Bethlehem (Normanskill Street) and City of Albany owned streets. Based upon a cursory visual inspection, currently Church Street is in fair to good condition, and is not in need of repair.

McFarland Johnson, Inc. completed a Pavement Evaluation Report for the required truck route on City Streets that lie within the Port of Albany District that are not currently planned for upgrades. The evaluation included a portion of Raft Street, Port Street/Normanskill Street, and the entire length of South Port Road. The field inspection and evaluation was completed following the NYSDOT Pavement Distress Condition Survey procedures. The inspection determined that based on the type, severity, and extent of cracking the pavement has section that in fair condition while the balance is in poor condition. See Appendix L for the Pavement Evaluation Report.

iii. Future improvement plans for the remaining Raft Street, and Normanskill St/Port St. What is current condition of these roadways? Current condition of rail crossings, how many? What funding sources are available? Timeframe for improvements?

RESPONSE: The current condition of the roadways is described above in response to comment No. 12. There are 16 railroad crossings along the truck route that will be improved at the time each respective street improvement project is undertaken.

A pavement condition assessment was completed by McFarland Johnson, Inc. and is included in Appendix L of this FGEIS. As reported , the condition of Raft Street,

Normanskill Street and Port Road South is in poor condition. The railroad crossings are in good condition.

As described in the SDGEIS Section 3.7 the roadways along the Truck route have been designated to be Federal – Aid eligible which will allow for the City to apply for Federal and NYSDOT funding. The responsibility to apply for funding resides with City of Albany. The Port of Albany will cooperate with the City on an annual basis to seek funding opportunities. See letter from the Mayor of the City of Albany stating their desire to initiate seeking funding sources.

iv. Regarding Step 4 – responsibility is identify as Albany, FHWA, NYSDOT, CDTC…but this would have to be prompted by POA. Reference should be made to POA involvement.

RESPONSE: The last sentence shall be updated to read "The responsibility to complete step 4 resides with City of Albany, FHWA, NYSDOT and CDTC. The Port of Albany will fully cooperate with and support the City to apply for and secure funding. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

13. MJ Engineering and Land Surveying, P.C.: Page 3-22: Pedestrian and Bicycle: the assessment of impacts should be related to the users of the Bikeway Connector along South Pearl Street, the Exit 2 Ramp, and at the Exit 2 intersection with Church Street. No trucks using South Pearl Street will have a positive impact on the bike/ped users along the South Pearl St. section of Bikeway Connector. If this is correct, state as such. What are impacts to peds/bikes crossing Church St intersection with the increase in trucks traffic at intersection? Will there be conflicts? What is mitigation?

RESPONSE: The truck route and associated restrictions will result in no new trucks generated from the proposed project that will travel along South Pearl Street.

The South End Bikeway Connector Trail is currently under construction and the new trail will have two roadway crossings. The Church Street crossing is within the Port Expansion project's traffic study area while the Broadway crossing is north of the traffic study area; however, both intersections are expected to experience an increase in traffic associated with the port expansion project. The improvements at the Church Street crossing (from the I-787 frontage road) are proposed as part of the South End Bikeway Connector Trail Project to include a new pedestrian/bicycle crossing for the multi-use trail with all way stop sign control to replace the existing flashing signal. This eliminates any concern with accidents associated with right turn movements at signalized intersections. At the Broadway Crossing near Quay Street, based on consultation with the consultant engineer for the project sponsor, the intersection will be converted to an all way stop for vehicular traffic. This option being constructed as part of the South End Bikeway Connector Trail Project will enhance the crossing by granting the right of way to the pedestrian/bicyclist on the trail.

14. New York State Attorney General's Office.: The Supplemental EIS could be enhanced by further discussion of the Port's plans for upgrading the City of Albany roads within the Port to facilitate the additional traffic during construction and operation. This discussion should include the scope and timeline of such road improvement plans, including the extension of the road and construction of the new bridge over Normanskill Creek.

    RESPONSE: See response to comment No. 12 above. As discussed in the DGEIS, the bridge over Normanskill will be built as part of phase 1 at the time the first tenant / building is identified. A portion of Smith Boulevard to be improved will be designed in 2020 and construction to begin in late 2020 and/or 2021.

15. New York State Attorney General's Office.: Improved road signage can help ensure that trucks avoid Ezra Prentice. Current signage along Interstates 87 and 787, Routes 32 and 144, and nearby streets is not sufficiently informative to direct heavy-duty vehicles to the Port and can be confusing. The enhanced signage (see attachment), created for illustrative purposes, is intended to help direct drivers to access and egress from the Port of Albany on routes that avoid South Pearl Street where Ezra Prentice is located. The proposed signage directs drivers to use the Northern Port entrance via Church Street when traveling along Interstate 787 in any direction and when utilizing Interstate 87 west. It also directs drivers to the Southern Port entrance when travelling from the South (or if they miss their exits off the interstates needed to access the Northern Port Entrance), also avoiding Ezra Prentice.

    RESPONSE: The Port has committed to displaying signage within the Port District identifying the truck route that will utilize the interior roadways of the Port District. The language that will be part of the lease terms with new tenants on the proposed 80-acre site will require them to use the truck route through the Port and out the north end of the District or if they are utilizing the South Port Road exit to only make left hand turns. They will be restricted from turning right onto S. Pearl St. Those instruction will be part of the leases, not on signage. That is the only intent of the additional language that will be put into future leases based on the Planning Boards instructions.

    The Port will install signage as instructed by the Board in consultation with the City of Albany within the Port District and if the Board requires signage outside of the District the Port will work with the municipal entity that owns and controls the particular roadway.

16. Robert F. Leslie: Based on the AG letter and sign package recommendation, the EIS should include an assessment of potential truck rerouting impacts associated with the no-right turn restriction at South Pearl Street and Port Road South (signalized intersection to southern Port entrance). See sign image on page 9 of the signage document. Concern is that the truck turn restriction while intended for newly generated trucks from the Port Expansion will restrict all trucks (existing Port related trucks and non-Port related trucks) from making a right turn. What is the potential impact to Corning Hill Road/River Road intersection if the sign package mitigation measure was to be in place?

Corning Hill Road (while a state owned roadway) is mainly residential in nature. Slide 33 in the public meeting presentation illustrates the truck route along River Road, roads within the Port, I787, and I87. Corning Hill Road is not identified as the recommended truck route.

Unintended impacts from a mitigation measure (sign package/turn restrictions) need to be considered.

RESPONSE: The Port does not intend to put a "no right turn" sign at the intersection of S. Port Road and S. Pearl Street as it could have unintended impacts. The Port of Albany's responsibility under SEQRA is to mitigate newly generated traffic, not existing traffic. See response to comment #15 above. At the time a specific tenant is identified, a specific signage plan will be reviewed by all involved parties.

3.13 LAND USE AND ZONING

17. MR. FREEMAN: Nowhere in this have I seen staying ahead of the curve and greening the Port of Albany. All these buildings – will there be solar panels on these buildings? Will there be alternative energy with a much cleaner process? The Port is completely antiquated and there are all these opportunities that I am not seeing addressed at all. So, can you explain that at all?

No place in these conceptual drawings are there solar panels. Seriously, the whole place is antiquated. You have an opportunity here in the Port of Albany to really modernize it and make a big difference including possibly electrifying the south end with renewable energy. Instead of the pollution you're putting out daily that kills people, you can have state-of-the-art and have a model for the whole United States. You have that opportunity.

RESPONSE: The Supplemental DGEIS states the following: . In addition, tenants will be encouraged to promote green vehicle purchases and not allow truck idling to prevent over exhaust. The tenant(s) will also be encouraged to use the following building materials and construction 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**

The DGEIS Section 3.14 states the following: The APDC will encourage the tenant(s) of the facility to use alternative and or renewable energy sources for the final buildings. The APDC will recommend the project follow Leadership in Energy and Environmental Design (LEED) standards as applicable such as bicycle facilities, protection or restoration of habitats on-site, water metering, optimizing energy performance,

renewable energy production (solar energy), daylight and other applicable options outlined by LEED. The APDC will recommend the tenant use green infrastructure and other applicable options outlined by the NYSDEC Stormwater Design Manual. The Port of Albany is a Green Marine certified facility and is in sync with the Green Marine Environmental Program.

3.17 FISCAL AND ECONOMIC IMPACT

18. MR. FREEMAN: How many of those jobs will be on the south end?
    RESPONSE: The Economic Impact Assessment report attached to the Supplemental GEIS states that the project anticipates generating approximately 1,600 jobs within Albany County from which 1,100 are projected to be generated from the businesses located on the project site.

    Moving forward, the Port of Albany will work with new businesses and the local communities to communicate all new job opportunities for the south end of the City of Albany, Albany County, and the region.

19. MS. SMITH: How many jobs did you say earlier you are hoping to create with this?
    RESPONSE: See response no. 18 above. The most potential for job creation is for the off-shore wind supply chain concept, with up to 1,100 jobs.

20. MS. DWYER: So, is there some type of requisite for them in order for them to obtain that job to employ the people from the community? So let's say there's a construction company and in order for us to give you this job, you have to have an X-amount of people from the community to build. Afterwards, what's going to be the standard? Are you then going to reach out? What type of job training will you be providing? What type of professional development can actually happen within the community? Will you be reaching out to the community colleges, the high schools and things of that sort?
    RESPONSE: The Port of Albany has already talked with some of the employment centers and the local community colleges to establish outreach communication regarding hiring for jobs that are posted at a workforce investment board or job center or locations in the south end that includes training opportunities. The types of job opportunities include construction, maritime as well as jobs associated with each tenants needs. The Port of Albany will orchestrate a comprehensive outreach jobs opportunity program once a tenant has been identified.

APPENDIX I - TRAFFIC IMPACT STUDY

21. MJ Engineering and Land Surveying, P.C.: Page 1, Paragraph 2: Clarify build out phases. It is not clear if they are total areas or additional areas for Phase II.
    RESPONSE: The areas noted are the total square footage for each phase of the development.

22. MJ Engineering and Land Surveying, P.C.: Page 3, Figure 2: This concept plan differs from the plan for Concept A shown in the SDGEIS as it does not show a connection from the truck parking area to the access road leading to NYS Route 144 at the southeast corner of the proposed building. Please explain why the concept plans are different.
    RESPONSE: The concept plan shown on Page 3 of the TIS has been superseded since the study was first submitted and has been changed to match Concept A as shown in the SDGEIS.

23. MJ Engineering and Land Surveying, P.C.: Page 4, Paragraph 4: It is stated that South Port Road is an urban major collector. The roads within the port are classified Urban Local Roads (FC 19) per the most recent Region 1 highway inventory available on the NYSDOT website. Please confirm the roadway classification.
    RESPONSE: Per the New York State Department of Transportation Functional Class Viewer and the published 2018 Traffic Volume Report, South Port Road is classified as an Urban Major Collector (FC 17).

24. MJ Engineering and Land Surveying, P.C.: Page 13, Paragraph 1: Section 3.7.1 states the background growth rate was accepted by NYSDOT and this paragraph states it was submitted. Identify which state is correct.
    RESPONSE: The TIS has been updated to reflect that NYSDOT has accepted the background growth rate used in the study.

25. MJ Engineering and Land Surveying, P.C.: Page 13, Paragraph 2: It should be noted that the Kenwood Commons project is no longer active.
    RESPONSE: Language has been added in the TIS that clarifies this project's status.

26. MJ Engineering and Land Surveying, P.C.: Page 30, Paragraph 2: Explain how enforcement by local law enforcement be coordinated/implemented.
    RESPONSE: During the highway work permit approval process with NYSDOT it will be determined how the NYSDOT will allow regulatory signage to restrict trucks from utilizing the proposed access driveway. Should this signage be approved by NYSDOT then law enforcement would have the right to enforce the roadway regulatory signage.

27. MJ Engineering and Land Surveying, P.C.: Pages 31 & 32, Table 4: The Northbound and Southbound approaches to the I-787/I-87 Exit 23 Off Ramp are not correctly noted in the table.
    RESPONSE: Table 4 of the TIS has been changed accordingly.

28. MJ Engineering and Land Surveying, P.C.: Page 34, Table 6: The largest increase of ±30% in truck volumes is along the stretch of South Pearl St (NYS Route 32) in front of the Ezra Prentice community. Any new tenants should use the Church Street/Broadway intersection for ingress and egress from the Port when their destination is west, north or east and South Port Road for destinations to the South. This will mitigate any additional truck traffic in front of Ezra Prentice in the future beyond existing volumes. Any increase in truck volumes will increase delays and emissions in this area. Provide an additional

table that shows the increase in truck volumes as a result of the restricted use of South Pearl Street. This tables should include all roadway segments included in Table 6.
RESPONSE: An additional Table 6A in the TIS has been created showing the increase in truck volumes as a result of the restricted use of South Pearl Street.

29. MJ Engineering and Land Surveying, P.C.: Page 35, Paragraph 1: Percent trucks in the narrative does not match Figure 14. The first 40% should be 45% and second 40% should be 35%. The 60% should be 55%.
RESPONSE: Language in the TIS has been corrected to reflect the requested change.

30. MJ Engineering and Land Surveying, P.C.: Page 41, Paragraph 1: Reference to Table 6 should be Table 7.
RESPONSE: Language in the TIS has been corrected to reference Table 7.

31. MJ Engineering and Land Surveying, P.C.: Page 41, Table 7: Were the increase in through traffic volumes considered when determining available turn movement gaps?
RESPONSE: Future through traffic volumes were not included in the gap analysis due to the large number of gaps available today and the behavior of traffic on NYS Route 144, which causes cars to come in waves, allowing any queue of cars on Glenmont Road to clear. It is anticipated that this behavior will continue, regardless of the estimated increase in through traffic on NYS Route 144 resulting for the proposed development.

32. MJ Engineering and Land Surveying, P.C.: Page 43, Paragraph 1: The report recommends lowering the posted speed limit to 45 mph in the vicinity of the proposed driveway. Posted speed limits are based on the 85th percentile speed, which is 55 mph as stated in this paragraph. Is there any data that supports changing the speed limit in proximity to the proposed NYS Route 144 access drive to 45 mph?
RESPONSE: During the highway work permit approval process for the new driveway, the request will be made to NYSDOT to change the 45 mph advisory speed limit that already exist along route 144 near the intersection to a regulatory speed due to the proposed driveway. Given that the advisory speed set by NYSDOT is already 45 mph our understanding is that the current 85th percentile speed along route 144 near the driveway is 45 mph and therefore should be approved.

33. MJ Engineering and Land Surveying, P.C.: Page 43, Table 8: Explain the increase in sight distance when looking right. It is understood that the increase is obtained by clearing vegetation, but the sight lines shown in Figure SD-01 in Appendix B do not extend beyond the west edge of pavement. How does vegetation removal allow for more sight distance from 345 to 450' for the proposed driveway and 385 to 500' for the shifted driveway?
RESPONSE: Existing sight distance is limited to 385' by the encroachment of vegetation out onto/over the NYS Route 144 pavement and the horizontal curve that occurs just north of the proposed site entrance. Clearing this vegetation allows cars exiting the site to view oncoming traffic beyond this horizontal curve, as shown by the solid sight distance lines on Figure SD-01, which currently extends past the west edge of pavement along NYS Route 144. It should be noted that NYSDOT will also require a

detailed review of the intersection sight distance as part of the PERM33-COM application process prior to issuance of the highway work permit for the new driveway.

34. MJ Engineering and Land Surveying, P.C.: Page 44, Table 9: The waterway is the Normans Kill, not Normanskill Creek.
RESPONSE: References in the TIS to Normanskill Creek have been changed to Normans Kill.

35. MJ Engineering and Land Surveying, P.C.: Page 50, Table 12 and Paragraph 1: The text references an analysis of the merging highway but the LOS reported in the text is for the weaving areas from Table 12. The two LOS C with 29.9 and 31.1 pc/mi/ln should be LOS D per the merge areas section of Table 12.
RESPONSE: The Level of Service (LOS) that the HCS7 Freeway Merge Report displays is determined by the "Density in Ramp Influence Area" field of the report, and not "Average Density". This information is provided in the HCS7 report printouts in the TIS appendix. The density results noted in the body of the TIS were incorrectly referencing "Average Density" results. The Level of Service noted in the TIS for the Existing AM conditions was correctly provided as LOS 'C', based on a "Density in Ramp Influence Area" value of 27.0 pc/mi/ln (Existing) and 27.9 pc/mi/ln (Proposed).

36. MJ Engineering and Land Surveying, P.C.: Page 51, Third Bullet: Same comments as Page 43, Paragraph 1.
RESPONSE: See response to comment #31. The request to NYSDOT to lower the regulatory speed limit will be made as part of the PERM33-COM highway work permit application process.

37. MJ Engineering and Land Surveying, P.C.: Appendix D Figure 16 is different than the "Recommended Truck Routes To/From Proposed Site" Figure shown in the presentation at January 6 public meeting. Appendix D Figure 16 shows truck route on Corning Hill Road, while Figure presented at the meeting (slide 33) does not show truck route on Corning Hill Road. Update the SGEIS to reflect the figure presented at the meeting since this addresses the goal of minimizing truck travel impacts on residential areas.
RESPONSE: Figure 16 represents the Truck Sensitivity Analysis route that were analyzed to determine the worst case scenario impacts should all the truck enter/exit the site via a single route. The "Recommended Truck Routes To/From Proposed Site" that was presented at the January 6th meeting will be included as a new figure (Figure 17). This represents a combination of the routes shown in Figure 16. The updated TIS will also include two other new figures (Figure 18 and Figure 19) that will provide additional information regarding the required truck routes (Truck Distribution and Truck volumes).

38. MJ Engineering and Land Surveying, P.C.: Please address public comments at the January 6 public meeting (supported by the Planning Board) related to assessing potential air

quality impacts on the Ezra Prentice community (as a result of site generated truck traffic) based on the following:

a. Additional truck traffic on Church Street/Boat St/Smith Blvd and River Road.

RESPONSE: See response to comment #2.

b. Additional truck traffic on I-787

RESPONSE: See response to comment #2. Prevailing winds are from the south heading north, meaning that Ezra Prentice would be up wind of I-787 and therefore would not be significantly affected by additional truck traffic on I-787.

c. Site generated emissions related to potential warehouse, manufacturing, assembly, industrial park, distribution centers, packaging facilities, business office, and commercial storage uses identified in Section 1.1. What are potential emissions and could they impact Ezra Prentice community?

RESPONSE: See response to comment No. 2 above.

GENERAL

39. Mr. Mair: There are no handouts for the community. Are there handouts or documentation for this meeting? In order for people to meaningfully participate, do we have something beyond what we have heard?

For the record for tonight, residents here in Albany north of the project do not have any documents and we will have to go to website in order to be informed to comment at this meeting.

RESPONSE: All documents including the Draft GEIS and Supplemental EIS that have been presented to the Town of Bethlehem Planning Board had been made available for review at the following locations: Albany Housing Authority, Town of Bethlehem, Town Hall. All documents are also posted on the Town of Bethlehem website.

The public meeting notice that was hand delivered to each resident provided where the documents were located for review, as well as a description of the project.

As mentioned in the SDGEIS, once a tenant is identified, the Port of Albany will hold a public information meeting to present the actual project and solicit input from the Ezra Prentice Community. As part of the public outreach for this future meeting, the Port of Albany will provide additional project specific information to be included as part of the meeting notification that will be delivered door to door.

40. MS. SMITH: I think the issue is that you continue to act as if you don't understand what the concern is. To say that this is just a generic piece or whatever - the bottom line is people that will be affected need to be in it from day one. It's not fair that you bring us something after the fact and say oh, we have done this, this and this and this is what we are proposing. That's the issue. You can go back and forth all night as to what you plan on doing, but the issue wasn't done from the jump. It's just out of respect. People are asking

to always be conscious and cognitive of the fact that – look in the room. Are they all here? Are the people that live in this community, people that are present in this room – how are they going to get the information other than when you feel like it? I think you should just keep that in mind as you go forward.

RESPONSE: As mentioned in the SDGEIS, once a tenant is identified, the Port of Albany will hold a public information meeting to present the actual project and solicit input from the Ezra Prentice Community. As part of the public outreach for this future meeting, the Port of Albany will provide additional project specific information to be included as part of the meeting notification that will be delivered door to door.

41. MR. MCPHEETERS: I do have a couple of quick questions. What is the anticipated cost of connecting the Beacon island and fixing all the roads up? Where's the funding coming from for that? Where's the timeline on that? What do you do about all those railroad crossings? How does that work? Are some of the trucks going to stop? These are all questions that I would like to see inserted in the response. You don't necessarily have to do it now. Thank you.

    RESPONSE: As reported in the City of Albany – S. Pearl St. Heavy Vehicles Travel Pattern Study completed by CDTC dated May 2018, the cost of the street improvements ranged between $ 12 million to $19 million in addition to the $4 million dollar bridge cost.
    See response No. 12 iii regarding the timeline for the improvements. All railroad crossings will be equipped with standard railroad crossing signage, signals and barricade as deem appropriate by the City of Albany who own the roadways.

42. Albany Housing Authority: This letter is to offer wholehearted support of the Port of Albany's application to develop 80 acres of land in the Town of Bethlehem in a manner that will provide positive economic development while being sensitive to the environmental justice community of Ezra Prentice Homes in the South End of Albany.

    The Port's proposal to create new investment and substantial jobs dovetails nicely with the Albany Housing Authority's mission to develop housing and support economic development initiatives in the surrounding communities. Attracting new jobs and investments will support nearby housing, small businesses and an overall community feel that will continue to make people want to call the South End home. We need jobs to support our communities and this proposal has demonstrated it can create as many as 1,600 new well-paying jobs.

    I am pleased to see that the Port's proposal and ensuring updates have offered important mitigation efforts to offer no negative impacts to the Ezra Prentice community, which sits 1.7 miles away from the proposed expansion site. The Port's efforts to engage local civil stakeholders, hold a public meeting in the community, commitment to work on an alternative truck route and coordinate and install signage are all major safeguards for South Pearl Street and the residents of Ezra Prentice.

My staff and I are in constant contact with the residents of the Ezra Prentice Homes, as well as the public and private funding partners supporting this residential community and well continue to work with all relevant partners.

We look forward to continuing to work together as this project moves forward.
RESPONSE: No response required.

43. Paul Tick/MR. WHITE/MS. HAGGRAY/MR. MAIR/South End Neighborhood Association/Westminster Presbyterian Church/Radix Ecological Sustainability Center/Greater St. Johns COGIC/AVillage/Susan Schell Ezra Prentice Tenants Association/Walls Temple A. M. E. Zion Church: Delay approval of Port of Albany's application to allow residents an opportunity to meet with Port officials. Consider moving the complex to a more suitable location.

RESPONSE: Officials from the Albany Port District Commission held a public information meeting for the residents of Ezra Prentice on January 6, 2020. The meeting was noticed in multiple locations, including hand delivering notifications door to door to all residents of Ezra Prentice. At this meeting the Port officials presented an overview of the proposed project and solicited comments from the residents of Ezra Prentice. Residents and the general public were encouraged to submit comments to the Port officials until January 17, 2020. As discussed at this meeting, the current proposed project is generic in nature, with no specific tenant in place. Once a specific tenant is identified, the Albany Port District Commission will hold an additional meeting with the residents of Ezra Prentice and solicit input on the specific project, along with related and specific studies and impact assessment. Permit review and approval will be required for each additional step.

The Port of Albany prepared a Supplemental Draft Generic Environmental Impact Statement (SDGEIS) that evaluated the potential impacts of the project including truck traffic and air quality impacts as well as economic impacts including investment and new job opportunities. The analysis as reported in the SDGEIS reiterates that the Port Expansion project is 1.7 miles southeast of Ezra Prentice and determined that the project will not have an impact on truck traffic and air quality, as discussed in SDGEIS Section 3.6 and 3.7 respectively.

As you are aware the Ezra Prentice Community is owned by the Albany Housing Authority and therefore the Port of Albany does not have the authority to discuss moving the Ezra Prentice Community. As noted in the SDGEIS submission, the Port of Albany regularly partners and collaborates with neighborhood associations, groups and stakeholders. The Port will continue to collaborate with the Albany Housing Authority, the City of Albany, and the Ezra Prentice community.

4. UPDATED DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT TEXT REFLECTING PUBLIC COMMENT

This section has been prepared to include the text from the Draft Generic Environmental Impact Statement (DGEIS) that has been updated to reflect addressing public comments from both the Draft and Supplemental. The section formatting and numbering have remained the same from the DGEIS for ease of information location. All responses match those individually listed in **Section 3. Response to Comments**.

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1. EXECUTIVE SUMMARY

1.1. Summary Description of Project

The Albany Port District Commission (APDC) is proposing to develop the 81.62-acre property (Project Site) 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 Port of Albany Expansion Project and would include the development of the site with uses permitted by site plan and special use permit 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 DGEIS, 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 the construction of an approximately 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, bridge, 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 offices
- Commercial storage

Proposed private improvements include:

- All structures, buildings and roadways on the Port expansion property
- Watermains within the Port expansion property
- Vehicle and Railway bridge over Normans Kill
- Package wastewater treatment plant
- Wharf
- Parking areas

Proposed public improvements include:

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

This 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 Concept A is attached hereto as **Appendix O in the DGEIS.**

1.2. Proposed Action

The proposed action involves a site plan approval for an industrial development on 81.62 acres of vacant land at the Beacon Island site (Project 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 these vacant parcels of land (tax parcels 98.00-2-10.23 and 98.01-2-1.0) with a 1.13 million square foot building in the Town of Bethlehem, Albany County, New York, collectively to be known as the APDC 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 January 15, 2019 pursuant to the requirements of 6 NYCRR Part 617 State Environmental Quality Review (SEQR). The Town of Bethlehem Planning Board adopted a Positive Declaration on January 15, 2019 requiring that the APDC prepare a Draft Generic Environmental Impact Statement (DGEIS) for the proposed action. This document and attachments serve as the DGEIS for the Proposed Project.

1.3. Potential Significant Beneficial and Adverse Impacts

Table 1.3-1: Potential Impacts and Proposed Mitigation Measures

DGEIS Section	Potential Impact	Proposed Mitigation
3.1 Soils, Geology, and Topography	Terrestrial Lands – Proposed Project will change surface coverage, increasing imperviousness which create a water quality impact due to stormwater runoff.	Dynamic compaction will be performed a minimum of 60 feet away from property line to meet Town noise ordinance at the property line. Dynamic compaction will be limited to occur between the lesser of 7am and 7pm or dusk to dawn as daylight permits.

	Lands Under Water – Dredging will impact lands under water.	A SWPPP will be prepared that will implement Erosion and Sediment Control and bioretention ponds will improve the quality of stormwater run-off. A SSAP will be completed prior to dredging as part of permitting requirements. A SMP will be prepared that will require implementation of Engineering controls, such as cap/cover, using a close bucket, or similar method and installing a turbidity curtain will mitigate potential effects on environment.
3.2 Vegetation and Wildlife	Degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths in Normans Kill would impair habitat for Significant Coastal Fish and Wildlife Habitat. Removal of trees that could be Northern Long-eared Bat roosting habitat. Dredging could result in direct mortality of Atlantic Sturgeon, Shortnose Sturgeon, and Alewife Floater.	A SWPPP will be prepared that will outline the Erosion and sediment control measures to be implemented mitigate water quality impacts and to maintain river and Normans Kill bank cover, soil stabilization, and providing adequate riparian buffer areas for significant coastal fish and wildlife habitat. Removal of trees will only be performed between November 1 and March 31 to mitigate the Northern Long-wared Bat. Dredging activities will be conducted between September 1 and November 30 and use of a turbidity curtain will mitigate Atlantic Sturgeon and shortnose sturgeon impacts. Freshwater muscle survey will be completed to confirm presence or absence of freshwater mussels. An AMMP will be developed if necessary.
3.3 Regulated Wetlands and Surface Waters	Surface waters – Dredging within Hudson River. Wetlands – Construction of bridge crossing of the Normans Kill will impact 0.04 ac of emergent freshwater wetland.	Surface waters – All NYSDEC and ACOE permits will be requested that will outline water quality improvement plantings and enhancement and/or preservation of riparian areas along the Project Site shoreline of the Hudson River and Normans Kill. Permits include NYSDEC Article 15 Protection of Water Permit and USACE Section 404/Section 10 Individual Permit. Wetlands –USACE Section 404/ Section 10 Individual Permit or Section 404 Nationwide Permit will be obtained as required.
3.4 Floodplains and Floodways	The buildings and majority of the site improvements will be within the 100-year floodplain. Construction of wharf will require work within the floodway,	Building and bridges lowest floor and roadway elevation respectively will be at elevation 20.3 feet above sea level. Which is 2 feet above the 100 yr. flood elevation and 1.3 feet above the projected sea level rise for year 2100.

	including removal of material from the river.	
3.5 Groundwater	Potential impacts from chemicals, toxins, or other pollutants released during construction and post construction activities.	A SWPPP will be prepared per NYSDEC regulations that will outline appropriate erosion and sediment controls, stormwater management. Fuel/chemical storage will be stored in compliance with NYSDEC SPDES or EPA SPCC permit regulations as required.
3.6 Climate and Air Quality	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. Construction and traffic will result in air emissions and odor impacts. Increased transportation will impact emissions. Potential spray paint booth could cause odor impacts.	Tenant will be encouraged to implement LEED practices to reduce GHG emissions. Construction impacts will be mitigated with dust suppression and air monitoring by the NYSDEC at the perimeter of the property. A CAMP will be completed during construction. Spray paint booth would have air permit in accordance with 6 NYCRR Part 201 and will be permitted and constructed with appropriate filtration and monitoring systems. Vegetative buffers will remain to mitigate potential odors from vehicles or equipment. A hydrogen sulfide limit of 0.01ppm for one hour period will be used as an odor threshold. Air emissions for Ezra Prentice community will be mitigated by the establishment and enforcement of truck routes through existing City of Albany Streets through the Port District and State Routes to eliminate new trucks traveling on South Pearl Street. See **Section 3.7** for further details on the required truck route. See **Section 3.20** for additional mitigation measures relating to truck route.
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	Vehicle – Signal improvements including traffic signal timing change, construction of left turn lane, construction of right turn lane. Proposed access drive is stop sign controlled and requires clearing of existing vegetation and signage/lighting installation. See Proposed Threshold / Mitigation Table in **Section 3.7.6** for further details on mitigation proposed in each phase (by square footage of building and vehicle trips). At each site plan application a traffic analysis will be completed.

	Public Transportation – No impacts Pedestrian and Bicycle - No noticeable impacts	
3.8 Drainage	Proposed Project will change the surface coverage of the site, increasing impervious cover to 49.63 ac.	A full SPDES permit will be required. A SWPPP will be developed that will implement water quality bio-retention ponds and erosion and Sediment Control measures. All measures will be designed per the NYSDEC requirements and enforced during construction activities. A Site Management Plan (SMP) will be prepared to include a HASP, CAMP, and EWP.
3.9 Water Service (Potable and Fire Protection)	16,950 GPD water demand. 2,300 gpm fire demand. Connection to and extension of Town's water main.	Town existing watermain system will have a 6 MGD capacity once the Town completes upgrades to the current system in 2020. The new proposed project watermain will have adequate water to supply both the domestic and fire demand. The new watermain design will be completed in accordance with AWWA Standard C600, Town of Bethlehem Water District No. 1, Albany County Department of Health, and NYSDOH regulations. The new watermain extension to the project site will be at expense of Project Sponsor.
3.10 Sanitary Sewer	16,950 GPD sanitary demand treated with a private on-site package treatment system.	Package treatment system will be designed and permitted per the NYSDEC regulations. A SPDES permit from NYSDEC will be obtained.
3.11 Historic, Cultural, and Archeological Resources	No impact	None.
3.12 Aesthetic and Visual Resources	85' tall building can be seen or partially seen from 5 locations.	Variance for height of building will be pursued as needed. Height is the minimum necessary for the anticipated use. Building Architectural design will be in keeping with the aesthetic nature of the surrounding buildings in the area. Justification for variance has been provided. Buffer of on-site existing vegetation maintained along western edge of Project Site. Building colors will blend in with existing surroundings. Lighting will be full cut off, dark sky compliant.

3.13 Land Use and Zoning	Potential building height of 85' exceed the 60' maximum allowed per town code.	Variance for height of building will be pursued as needed. Justification for variance has been provided.
3.14 Community Character and Compatibility with Comprehensive Plan	No impact since the Project Site will be developed in accordance with Town's Comprehensive Plan and Draft LWRP.	None
3.15 Emergency Services	No Impact	Will serve letters from the emergency service providers have been provided. Buildings will be built according to current standards of the NYS Uniform Code for fire prevention. Roads will be designed and built to meet or exceed Town requirements including ability to accommodate emergency service vehicles. Should building be owned by APDC, an agreement to reimburse the Town of actual costs for emergency services would be established. See **Section 3.17** for further discussion of tax benefits for emergency services.
3.16 School District	No impact	None.
3.17 Fiscal and Economic Impact	Minimal added cost expected for Bethlehem Police Department ant Delmar-Bethlehem EMS.	Minimal added cost will be off-set by the taxes generated by the Proposed Project. Should building be owned by APDC, an agreement to reimburse the Town of actual costs for emergency services would be established.
3.18 Recreation and Open Space	No impacts. Proposed Project is consistent with Town's Comprehensive Plan and Zoning Ordinances.	None.
3.19 Solid Waste Disposal	No Impact, existing facilities have capacity for solid waste during construction and operation.	APDC will encourage future tenants to comply with Town's recycling policy.
3.20 Environmental Justice	Increased truck and rail traffic near the Ezra Prentice neighborhood and potential air toxin increased from truck traffic.	All truck traffic will be routed through the existing Port District and will avoid the Ezra Prentice neighborhood. Additional Environmental justice review and public outreach process will be followed at time of site plan application by implementing the NYSDEC

		CP-29 at time of NYSDEC permit application concurrently with the Town of Bethlehem Site Plan application.

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 Proposed Project is estimated to generate between $800,000 and $4.2 million for the Town of Bethlehem and other local property tax revenue.

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 $113 million to the local economy.

The development of the property will result in new taxable valuation that will be subject to the Bethlehem Central School District property tax. As of the 2019-2020 School Year, the property tax rate for the school district is $21.25. Based on this rate, future industrial port development of the property will result in between approximately $303,000 and $1.6 million in annual property tax revenue for the School District. Over ten years, beginning with the first year of full taxation, the Proposed Project is estimated to generate between $3.1 million and $16.1 million for the School District, depending on the development concept.

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 Proposed 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 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 are provided above in **Table 1.3-1** and further detailed in the following subsections.

1.4.1. Soils, Geology, and Topography

During construction and dynamic compaction, particle velocities will be monitored, and techniques modified as required to achieve the desired densification and maintain particle velocities below the residential threshold at the project's property limits or sensitive facilities within the Project Site.

Engineering and institutional controls developed in coordination with the NYSDEC to mitigate handling of the coal ash will be sufficient to avoid potential effects to the environment and human health. It is anticipated that the engineering controls may include a cover system consisting of 1 to 2 feet of soil or engineered fill to be placed over a demarcation marker overlying the coal ash. The cover system (cap), may consist of impervious pavement, concrete building slab or a 1'-2' thick earthen berm.

A closed bucket or similar method of sediment removal will be utilized to reduce suspended solids and translocation of materials during dredging operations. In addition, a turbidity curtain will be utilized to minimize potential downstream impacts associated with suspended solids during dredging and shoreline disturbances to the Hudson River. The suspended solids within the work area will be allowed to settle prior to turbidity curtain removal.

Additional mitigation measures are summarized below in **Section 1.4.8.**

1.4.2. Vegetation and Wildlife

Appropriate erosion and sediment controls measures will be implemented to mitigate potential water quality impacts to the Normans Kill and Hudson River. All trees within the Proposed Project impact area will be cut between November 1 to March 31 in accordance with New York State Department of Environmental Conservation (NYSDEC) and United States Fish and Wildlife Service (USFWS) recommended conservation measures designed to minimize the likelihood of adverse impacts to northern long-eared bats (NLEB). Dredging activities associated with the Proposed Project will be conducted September 1 to November 30 to minimize potential impacts to Atlantic sturgeon and shortnose sturgeon. Prior to any disturbances to the beds of the Hudson River or Normans Kill a freshwater mussel survey will be conducted to confirm the presence or absence of rare, threatened, or endangered freshwater mussels. If rare, threatened, or endangered freshwater mussels are discovered, an Avoidance, Minimization, and Mitigation Plan (AMMP) will be developed in close coordination with the NYSDEC.

1.4.3. Regulated Wetlands and Surface Waters

Mitigation for impacts to regulated wetlands and surfaces waters, will be conducted in accordance with NYSDEC and United States Corps of Engineers (USACE) requirements during future permitting efforts for the Proposed Project. Mitigation will be conducted such that there is a net benefit to the local watershed.

1.4.4. Floodplains and Floodways

The Proposed Project will be designed such that all buildings lowest floor and bridge elevations are at the lowest possible engineered elevation of 20.3 feet (NAVD 88). This will provide for a minimum elevation of 1.3-feet above the NYSDEC "Low Projection" of climate related sea-level rise to year 2100. The "Low Projection" amount of sea-level rise is that is likely (the 10th percentile of ClimAID model outputs) to be exceeded by the specified time interval and is based upon historical data.

1.4.5. Groundwater

The NYSDEC Pollutant Discharge Elimination System (SPDES) program controls point source discharges to groundwater, as well as surface waters, during and post construction. Compliance with the SPDES design and permitting requirements, as well other applicable local, state, and federal rules and regulations such as Spill Prevention, Control, and Countermeasure (SPCC) regarding petroleum and chemical storage, will be required for this Proposed Project and will effectively prevent potential groundwater impacts.

1.4.6. 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, not allow truck idling to prevent over exhaust, 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 Project 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.

1.4.7. Traffic and Transportation

A detailed Traffic Impact Study has been completed as part of this 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 (Corning Hill Road) at US Route 9W:
  - Traffic signal timing changes (Monitor for all Phases, timing changes assumed for Phase III)
- NYS Route 32 (S. Pearl Street) 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 (S. Pearl Street) 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 (Corning Hill Road) intersection. (Prior to Phase III)
- NYS Route 144 at NYS Route 32 (Corning Hill Road):
  - Consider installation of a traffic signal based on site distances (Initial project approval)
  - Signal should be installed and be coordinated with the traffic signal at South Port Road. (Prior to Phase II)
- I-787/ I-87/ Exit 23 Interchange at US Route 9W:
  - Traffic signal timing changes (Monitor for all Phases, timing changes assumed for Phase III)
- NYS Route 910A (Glenmont Road)/NYS Route 144
  - Conduct traffic signal warrant analysis

1.4.8. Drainage

The Proposed Project will have land disturbance of more than 1-acre and will require a full Stormwater Pollution Prevention Plan (SWPPP) that conforms to Part III A through C of the General Permit. A full SWPPP will be developed in accordance with permit GP-0-15-002, or the active latest edition, regulations. The SWPPP will be reviewed and approved by the Town of Bethlehem as an MS4. The SWPPP will be prepared in compliance accordance with the NYSDEC Manual and meet the following criteria as the principle objectives contained in an approved SWPPP.

- Reduction or elimination of erosion and sediment loading to water-bodies during construction activities. Controls will be designed in accordance with the NYSDEC's New York State Standards and Specifications for Erosion and Sediment Control.
- Mitigate the impact of stormwater runoff on the water quality of the receiving waters.

- Mitigate the increased peak runoff rate of runoff during and after construction.
- Maintenance of stormwater controls during and after completion of construction.

1.4.9. Aesthetic and Visual Resources

A buffer of existing vegetation is being maintained along the western edge of the Project Site with a minimum width of 25 feet. The northern access easement to NYS Route 144 was not be expanded to be utilized for vehicle access, so as not to create a larger visual opening in this area. The building colors have been chosen to blend into the existing surroundings. All lighting on the Proposed Project will be full cut off, dark sky compliant and will not spill onto neighboring properties. In addition, the proposed uses and visibility are compatible with the surrounding heavy industrial businesses in the area and therefore will blend with the existing industrial community.

1.4.10. Land Use and Zoning

The Proposed Project is in compliance with the Town's Comprehensive Plan and will be developed with permitted uses in accordance with the Town's zoning code. As proposed, the industrial development will comply with the area, yard and bulk regulations with one exception. The Proposed Project includes a maximum building height threshold of 85 feet which exceeds the maximum allowable height of 60 feet; however, as stated in the Visual Impact Assessment (**Section 3.12**) the adjacent buildings to the south and north are higher than the proposed 85 height.

1.4.11. Emergency Services

New York State Uniform Fire Prevention and Building Code (Uniform Code) provides minimum requirements to safeguard the public safety, health, and general welfare. The Uniform Code has requirements for many aspects of built environments, such as: structural strength, means of egress, stability, adequate light and ventilation, stability, and safety to life and property from fire, and other hazards associated with building. All buildings will be built in accordance the current standards of the Uniform Code.

Construction considerations to mitigate emergency services will include items to follow the Uniform Code and subsequent regulations. All commercially occupied buildings will be sprinklered in accordance with the most current National Fire Prevention Association (NFPA) Code 13: Standard for the Installation of Sprinkler Systems requirements. All buildings will have standpipes in accordance with the most current NFPA Code 14: Standard for the Installation of Standpipe and Hose Systems. All buildings will be provided with an Underwriters Laboratories (UL) listed backflow prevention device, and a UL listed fire pump will be provided if needed to ensure necessary pressure and flow at the buildings.

All roads constructed in the development will be designed and built to meet local codes and Town requirements, including the ability to accommodate the emergency service vehicles. Landscaping will be completed to not inhibit access to the buildings where necessary for emergency services.

Fire code compliance and uses of private security and monitoring systems will be determined and finalized during the site plan review and approval process, as well as the building permit process.

The local Fire Department, Police Department and EMS Ambulance Service providers have been contracted and they have indicated that they have the capability to service this Proposed Project.

1.4.12. Solid Waste Disposal

The County landfill has the capacity to handle waste from this Proposed Project. Town of Bethlehem has a mandatory residential and commercial recycling policy in place for certain streams of paper, cardboard, plastic, glass, metal, electronics, rechargeable batteries, household hazardous wastes, mercury thermostats, fluorescent bulbs, and yard wastes. The APDC will encourage future tenant(s) compliance with the Town's recycling policy to reduce landfilled solid wastes.

1.4.13. Environmental Justice

The Ezra Prentice community is located approximately 1.7 miles from the Project Site and is 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 APDC 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

Table 1.5-1: 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,	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.

	Total of 810,000 SF		
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.

Note all concepts include a north / south access road with associated employee parking, truck parking, loading docks, a wharf and rail facilities for transport of products and materials.

1.5.1. No Build

The "No Build" alternative would consist of the continued use of the property in its current vacant condition. The Project Site **is** zoned heavy industrial, and if it remained undeveloped it would not be consistent 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 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.

1.5.2. Site Development as Allowed by Existing Zoning

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

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 Project 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 Project Site, in order to make space for buildings, circulation and parking on both sides of the rail, and crosses the Normans Kill inside the Project Site. 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 includes the development of 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 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.

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. 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 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.

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 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)

National Oceanic and Atmospheric and Administration (NOAA)

United State Environmental Protection Agency (EPA)

United States Fish and Wildlife Service (USFWS)

United States Coast Guard

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 Proposed Project:

USACE- Section 404/ Section 10 Individual Permit

USFWS – Section 7 Consultation, Endangered Species Act

NOAA –Endangered Species Act

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 under applicable General Permit GP-0-15-002, latest edition, Sediment Sampling and Analysis Plan Approval, and Site Management Plan Approval, relevant air permits.

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, and 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, Acceptance of Map, Plan & Report for Sewer District Extension, and Acceptance of Sewer System Infrastructure Improvements

Town of Bethlehem Floodplain Administrator: Permit for construction within a FEMA regulated floodplain per Town Code 69 – Flood Damage Prevention

Albany County Planning Board- Recommendation under 239 M and N referral

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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 consists of 81.62 acres. 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. The Project Site has 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 acres 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, which would be privately owned. 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 existing Port of Albany (Port). The existing Port is a year-round, 24-hour facility that spans over 400 acres on the Albany and Rensselaer sides of the Hudson River. This Project Site is located approximately one mile to the south of the existing Port District.

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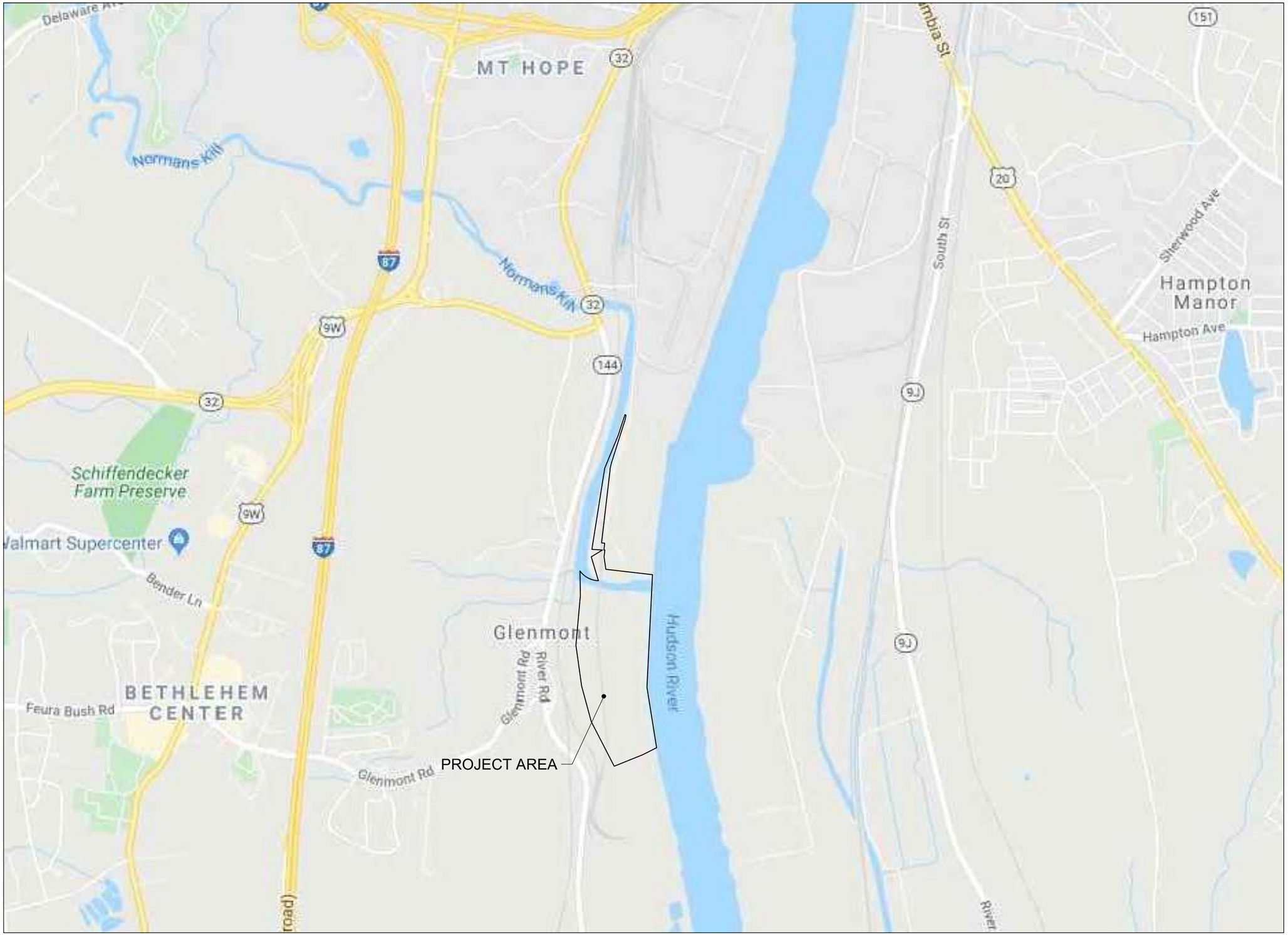

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

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	NOVEMBER 2019
PROJECT	18437.00

DRAWING TITLE
SITE LOCATION MAP

DRAWING NUMBER
FIGURE 2.1-1

1 OF 1

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2.2. Site Description

The Project Site lies within an undeveloped, industrial, and rural/suburban context with limited access. The site's natural features are generally forested coverage throughout. The neighboring land uses to the north and south are industrial. The Project Site at one time was used for fly ash and bottom ash disposal. Further to the west of River Road, the area is generally rural in character with sparse minor roads and with low-density residential housing. 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. 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. 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.

The Project Site is currently vacant and consists primarily of successional forest. The history of property was such that at one time a rail line that was operated by Canadian Pacific Railroad transported coal to the power plant currently owned by PSEG. 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. Remnants of the track, ballast and bridge abutments exist on the property. In addition, several vintage locomotives 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 has since been abandoned.

A detailed American Land Title Association (ALTA) boundary and topographic survey has been prepared and is provided in **Appendix D of the DGEIS** and **Appendix O of the DGEIS.** As shown on the survey, both the watermain and rail easements has been abandoned and no longer exist. Crossing rights easements from National Grid have been granted that provide access from the south and west.

Various 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 Project includes the development of the Project Site with uses permitted by site plan and special use permit 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 DGEIS, only the full build out and corresponding phases of Concept A are being evaluated. 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. See **Figure 2.3-1 Concept A.**

However, the Proposed Project could be built in phases with various building layouts and site configurations. For the purposes of this DGEIS, Phase 1 consists of the construction of the Project 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 DGEIS. It should be noted that since Phase 1 includes site, utility and roadway infrastructure, these impacts are evaluated throughout all sections. Approximately 128,000 CY of material will be dredged from the Hudson River to raise a portion of the Project Site above the 100-year floodplain elevation.

The 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 include the following:

Concept Plan A – Largest, Two-Level Warehouse

The detailed description for this concept and the corresponding phasing plan is provided above for the 1,130,000 square feet of industrial space.

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

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.

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.

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.

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.

Other concept Site Plans are provided in **Appendix C of the DGEIS.**

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.

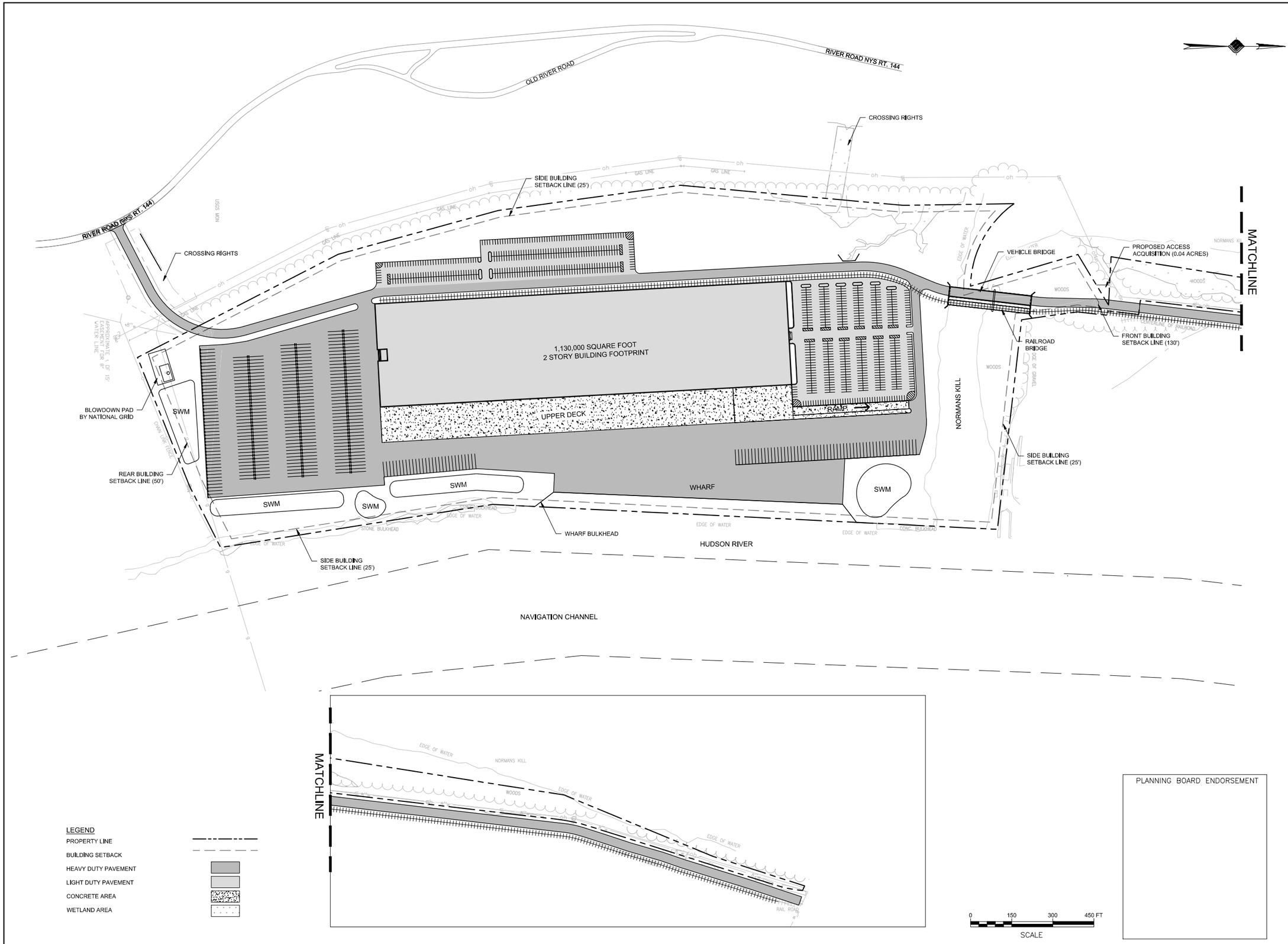
For SEQRA purposes, the proposed APDC Port of Albany Expansion Project that represents full build out is being evaluated. This full build out represents the maximum amount of development permitted under current zoning, and therefore will represent the greatest potential for ecological and environmental 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 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 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

This 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 for the Proposed Project is attached hereto as **Appendix O in the DGEIS**.

The existing 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 chose 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 all 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 intends on owning the land and 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 property, however all buildings would be privately constructed and owned to meet their specific requirements.



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 2.3-1

1 OF 1

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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 validates and confirms that the market conditions continue to be positive for additional Port facilities. The analysis identifies 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 region. The specific benefits to the socio-economic condition of the Town of Bethlehem can be found in the **Section 3.17**.

The Town of Bethlehem and Albany County holds 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 grown 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 in close proximity to the existing Port of Albany property. The Port of Albany Expansion Project will provide existing industrial users within the Port of Albany or new users opportunities to have space for their businesses. This project will allow for growth and expansion of waterfront industrial users and would be consistent with the current industrial uses located on the Port District 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 managed 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 sewer infrastructure extensions. The final bridge design will be in accordance with NYSDEC and USACOE permitting requirements, including consideration of navigation requirements. Phase one on-site construction is anticipated to include all mass grading and stormwater improvement facilities for the overall Project Site, as well as the parking, utility services associated with the 300,000 SF building.

Site ingress and egress during construction and for emergency response would be via the proposed southern project driveway, connecting the Project Site to River Road, and via South Port Road. Prior to construction, the applicant will need to apply for a permit from the NYSDOT to allow the southern driveway to operate as a full access ingress/egress driveway to be used for construction and emergency access. The construction access permit will include a detailed Maintenance and Protection of Traffic Plan (MP&T) that will include work zone speed limit (reduction) signage, truck entrance signage, traffic calming barriers (cones, barrels), and advance traffic control warning features (signage with beacons, etc.). The duration of construction for phase one is anticipated to take 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 site characteristics. Approximately 67 acres will be disturbed during construction. The development of the Project Site will require that some 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 exists 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. In order to construct the building slab, foundation, roadway, and parking approximately 54,000 CY of crushed aggregate subbase, 17,000 CY of concrete, and 24,000 CY (roughly 48,600 tons) of asphalt will need to be imported to the site. In addition, 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 pervious green spaces, including stormwater management areas. The import of this material is anticipated to generate approximately 4,750 truck trips or approximately 80 trucks per day over a 3-month duration. As mentioned above construction traffic will be routed along the required truck routes and enter the site through the proposed southern project driveway, and or through the City Streets through the Port District . 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 fence, 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. Construction activities that may cause noise impacts include earthwork, paving, structure construction, land clearing, and blasting. Exact noise levels due to construction cannot be determined at specific sites since the number and types of construction equipment that would be used cannot be predicted, but the equipment will not be allowed to operate during the restricted times set forth by the Town.

Mitigation measures will be incorporated into the specific building and site plan contract documents to reduce construction noise and perceived disturbances in the Project Area.

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, a blasting plan will be prepared and provided to the Planning Board for review and approval at the time of site plan application. The blasting plan will include such items as: notification of neighbors; the duration of blasting operations, the use of protective mats; and monitoring of particle velocity with instrumentation.

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 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 all unpaved areas using the hydro-mulching grass seeding technique within 14 days of disturbance;
- Frequent watering to minimize wind erosion during construction; and
- Rock check dams

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 be required 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 and sewer 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 and sewer 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 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 and sewer districts to the Proposed Project.
    c. Acceptance of dedication of new water and sewer mains, as necessary.
3. Town of Bethlehem Department of Public Works
    a. Permits for water and sewer 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 69 – Flood Damage Prevention
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 and sewer 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 sewer main extension
    e. Approval of water and sewer district extensions
    f. Article 15 Protection of Waters Permit
    g. Section 401 Water Quality Certification
    h. Protection of Waters Permits (for Hudson River work and the proposed bridge over the Normans Kill)
    i. Water Quality Certification
    j. Approval of the cap over the remediations area/site
    k. Sewer and Water district extensions/approvals
    l. Town Water District extension and subsequent water supply application
    m. Air Permit per 6 NYCRR Part 201
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

This Generic Draft 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 Conservation (6NYCRR Part 61 7) on behalf of the APDC.

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 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 project has no specific building or project being proposed. Therefore, this Generic Environmental Impact Statement will address the generic impacts of the Proposed Project in more general and conceptual terms, the cumulative effects on the environment for all phases of the total 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 project complies with the environmental thresholds and mitigation measures identified by this Generic Environmental Impact Statement.

The purpose of this DGEIS is to serve as a guide to demonstrate that the Proposed Project is in compliance with SEQRA regulations and can be used as the basis for preparing a findings statement and establishing a SEQRA determination.

The step by step SEQRA process can be found on the NYSEDC web site (https://www.dec.ny.gov/permits/6189.html). The total timeframe to complete the process is anticipated to be approximately 6 to 8 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
- Completion and Acceptance of Supplemental DGEIS: December 17, 2019
- Public Information Meeting for Ezra Prentice Community on Supplemental DGEIS: January 6, 2020
- Public Review and Comment Period for SDGEIS End: January 17, 2020
- Completion and Acceptance of FGEIS: May 5, 2020

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3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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3.1. Soils, Geology, and Topography

3.1.1. Environmental Setting

Terrestrial Lands

Historically the area was composed of small islands and river channels subject to natural shifts due to flows associated with the Hudson River and the former Island Creek, a side channel of the Hudson River. Island Creek historically flowed along the western side of the Project Site through the current power line corridor and discharged to the Hudson River at the southern end of the Project Site. Based on available mapping, sometime between 1936 and 1961, Island Creek channel was diverted at the north end of the Project Site directly to the Hudson River, whereupon it was referred to solely as Normans Kill, the main tributary to this former channel. Refer to **Section 3.11** for additional historical site information and documentation.

The Project Site has been subject to historic fills to create lands and a portion of the site was operated as a coal ash disposal site by Niagara Mohawk from approximately 1952 to 1970.

Currently, most of the Project Site is relatively flat with a slight slope towards the Hudson River, with an abandoned elevated railway bed that traverses the Project Site in a north-south direction. A portion of the southwestern access easement (west of the utility corridor) is a ridge. Bedrock outcrops were noted at the side and top of this ridge. A site topographical survey was completed and is provided in **Appendix O of the DGEIS**.

Based on soils information provided by the USDA-NRCS (**Figure 3.1-3**), most of the Project Area is mapped as Wayland Soils Complex (Wo) and Udorthents- loamy (Ug) soils. A small portion of the northern Project limits is mapped as Urban land (Ur), and the western portions of access easements from River Road/NYS Route 144 are mapped as Nassau very channery silt loam (NrD). Wayland series soils consist of very deep, poorly drained and very poorly drained, nearly level soils formed in recent alluvium within floodplains. Ug soils consists of nearly level and gently sloping areas where the original soils have been cut away or covered with a loamy fill material and can be found in almost every landscape position. Ur soils of nearly level to moderately steep areas where the soils have been altered or obscured by more than 85% with urban works and structures. Nassau series soils consist of shallow, somewhat excessively drained soils formed in channery till derived from acid shale and slate that are nearly level to very steep soils and that are found on summits, shoulders, and backslopes of ridges and hills on glaciated uplands. Soil mapping of the Project Area has been provided as **Figure 3.1-1**.

Geotechnical studies have been undertaken to evaluate the subsurface conditions of the Project Site. These investigations have been summarized in the following reports:

- *Preliminary Geotechnical Evaluation and Interpretive Report*, CME Associates, Inc., April 5, 2017
- *Supplemental Geotechnical Report*, Dente Group, July 20, 2017

Copies of these reports have been included in **Appendix E of the DGEIS**.

Based on these previous investigations, the subsurface conditions of the Project Site are generally characterized by historic fills of various depths overlying, in sequence with depth; river sediments, alluvial sands, glaciolacustrine silt/ clay, glacial till, and shale bedrock.

The fill was noted at specific boring locations ranging from 6 to 23 feet below existing grade. The fill material is characterized as a random landfill deposit containing natural and solid waste deposits such as, but not limited to, foundry sand waste, sand, silt, coal ash, gravel, and organic matter. A predominant component of the fill was reported as coal ash.

Shale bedrock was found beneath the glacial till soils at select boring locations. The depth to rock ranged from approximately 61 feet below grade near the northwest portion of the Project Site, to greater than 148 feet at the southeast portion of the Project Site. The rock depths appear shallowest on the north and west sides of the Project Site and increase to the east towards the Hudson River and in a south direction across the Project Site. Based on the New York State Museum and Science Service's Geologic Map of New York: State Hudson-Mohawk Sheet, and the geotechnical rock core samples, the bedrock appears to be consistent with the Normans kill Shale Formation.

According to the geotechnical reports, shallow groundwater was observed at depths ranging from approximately 1.5 to 13.7 feet below existing grade. However, due to the subsurface conditions, the shallower observations could be representative of perched groundwater zones due to discontinuous impermeable layers. Shallow groundwater fluctuations should be expected to occur at the Project Site depending on several factors such as rainfall, seasonal changes, prevailing climate, ambient weather conditions, and the tidal influences of the Hudson River.

Lands Under Water

Portions of the Project Site are bounded by the Hudson River and Normans Kill. The beds of these two tidally influenced surface waters are generally characterized by sediments comprised primarily of silt and sands.

A preliminary assessment of the sediment within the area of proposed dredging for the proposed wharf was conducted. A copy of this report, which includes the limits of dredging, is included in **Appendix F of the DGEIS**.

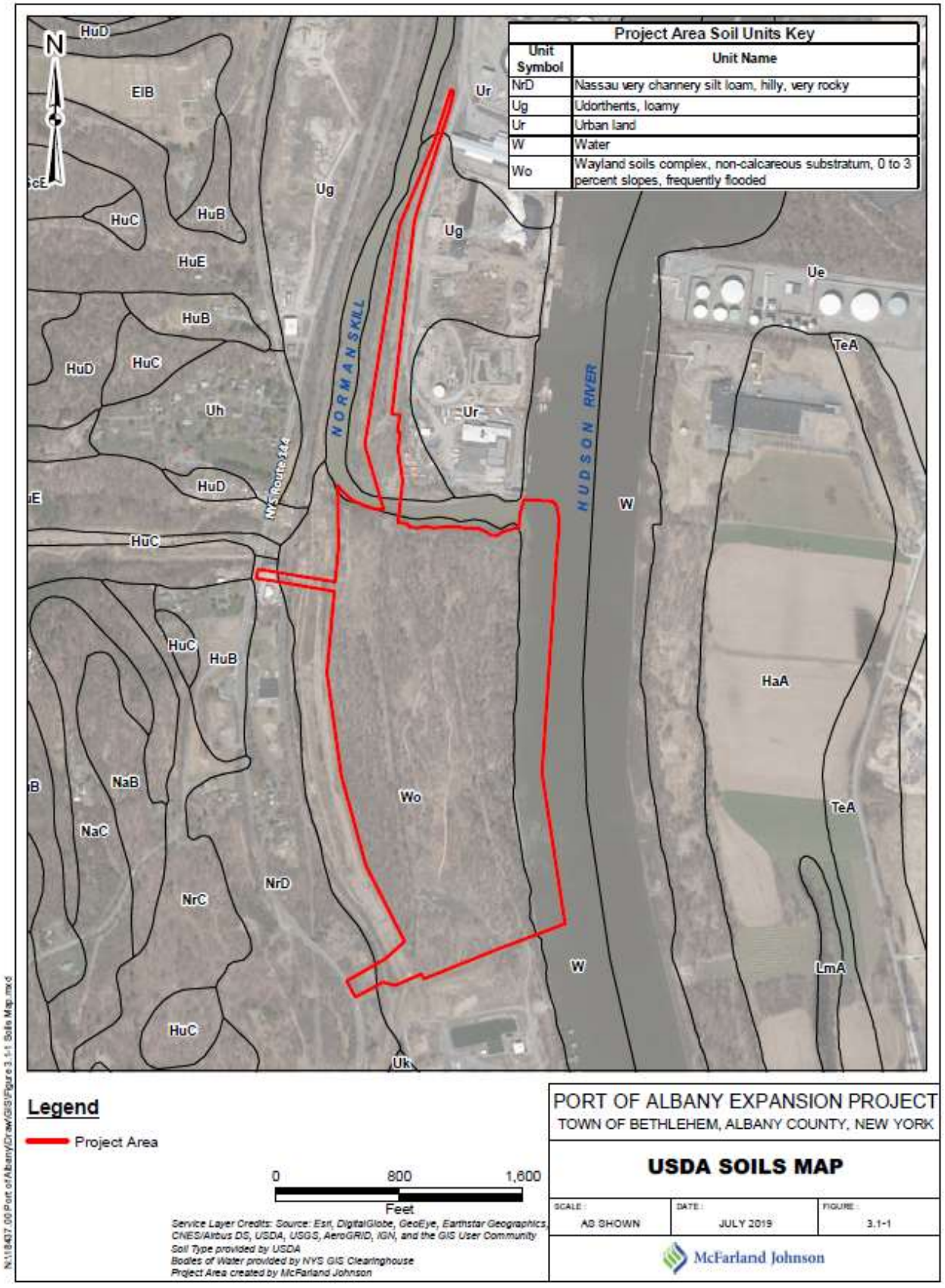
A total of 5 sediment cores, C-1 through C-5, were collected to approximately 10 feet below the sediment surface. The core logs indicate the sediments consisted primarily of fine, medium and coarse sands with none to some silt.

Composite samples collected from the 5 sediment cores were analyzed for the following parameters:

- Arsenic, cadmium, copper, lead, and mercury- EPA Methods 3050B and 7474
- Benzene, toluene, ethylbenzene, and xylenes - EPA Method 8260C
- Polynuclear aromatic hydrocarbons (PAHs) – EPA Method 8270D
- Dieldrin, mirex, and chlordane- EPA Method 8081A

- Dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethane (DDD), and dichlorodiphenyldichloroethylene (DDE)- EPA Method 8081A
- Total polychlorinated biphenyls (PCB)- EPA Method 8082A
- Cyanide – EPA Method 9010C

The results of the sampling indicated that the detected concentrations of pesticides and PCBs in 1 of the 5 selected core locations (core C-2) would warrant dredging management option "Class B" pursuant to the NYSDEC Division of Water Technical & Operational Guidance Document Series (TOGS) 5.1.9.


Project Area Soil Units Key
Unit Symbol | Unit Name
NrD | Nassau very channery silt loam, hilly, very rocky
Ug | Udorthents, loamy
Ur | Urban land
W | Water
Wo | Wayland soils complex, non-calcareous substratum, 0 to 3 percent slopes, frequently flooded
N
HuD
ElB
Ur
Ug
HuC
HuB
HuE
Ue
TeA
Uh
NORMANSKILL
HUDSON RIVER
W
HaA
NaB
Wo
NaC
NrD
NrC
LmA
Uk
Legend
Project Area
0
800
1,600
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Soil Type provided by USDA
Bodies of Water provided by NYS GIS Clearinghouse
Project Area created by McFarland Johnson
PORT OF ALBANY EXPANSION PROJECT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
USDA SOILS MAP
SCALE: AS SHOWN
DATE: JULY 2019
FIGURE: 3.1-1
McFarland Johnson

3.1.2. Potential Impacts

Terrestrial Lands

Based on the geotechnical investigation, the existing subsurface conditions are not considered suitable as is, for support of conventional shallow building foundations and slab-on-grade construction, and subsurface improvements will be required.

The fly ash and bottom ash at the Project Site has the potential to contain high levels of metals and other contaminants that may require entering into a NYSDEC remedial program under 6 NYCRR Part 375. Further subsurface investigations are required to adequately assess the limits of any potential for contaminants across the site. However, as described in **Section 2.0** the Proposed Project will be designed to balance earthwork, and therefore it is anticipated that no on-site soil will be removed from the Project Site and no off-site disposal of cut material is being proposed.

A soil management plan approved by NYSDEC will be required. Soil to be removed from the Project Site will be handled and analyzed according the NYSDEC remediation guidelines for waste characterization. On-Project Site soil will also be characterized. The need for off-site disposal of materials will be determined by the NYSDEC based on future subsurface investigations and remedial actions. If during this permitting process the need for off-site disposal of contaminated materials is determined by the NYSDEC the material will be disposed at a landfill permitted to accept such material. The off-site disposal site is anticipated to be at a landfill permitted to accept such wastes, or other properly permitted facility as approved by the NYSDEC should a Beneficial Use Determination (BUD) be granted. Industry standard construction site preparation and disposal of construction debris will be implemented and are the same for all development scenarios.

Further investigations include subsurface soil and groundwater sampling in accordance with NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation prior to site development to assess the potential for contaminants in exceedance of NYSDEC CP-51: Soil Cleanup Guidance Policy recommended soil cleanup levels. The subsurface investigations will be developed in coordination with the NYSDEC. Upon application to DEC, further coordination with the NYSDEC will occur as part of future surface, subsurface investigations and remedial actions.

The Proposed Project will change the surface coverage of the Project Site by increasing the amount of imperviousness. This change will increase the peak discharge rate of stormwater runoff. In addition, the increased imperviousness will create a need for water quality features. The construction of the Proposed Project requires Erosion and Sediment Control measures to mitigate potential short-term water quality impacts including the exposure of bare soil and the mobilization of sediment.

Construction activities may cause noise impacts including earthwork, paving, structure construction, land clearing, and blasting related to bedrock and shale. Construction activities will abide by the Town of Bethlehem's Town Code § 81-5 regarding construction noise and hours of operation. Additional construction considerations are discussed in **Section 2.5.**

Lands Under Water

Class B management options for dredged materials suggests the use of a closed bucket or other method to meet environmental objectives during dredging activity. Additionally, disposal criteria for removed Class B sediments will require further evaluation.

Dredging is under the jurisdiction of the NYSDEC, as such a Sediment Sampling and Analysis Plan (SSAP) will need to be prepared in accordance with TOGS 5.1.9 guidelines or other site-specific requirements under a NYSDEC remedial program prior to any dredging. The applicant will comply with all applicable NYSDEC regulations. Previous soil sample results were included in **Appendix F of the DGEIS** within the Hudson River Dredging Report. A dredging plan based on the results of the SSAP will be prepared as part of future NYSDEC Article 15 and USACE Section 10/ 404 permitting requirements. The dredging plan and permitting documents will address potential environmental and navigability impacts to the Hudson River in consultation with the NYSDEC and USACE.

3.1.3. Mitigation Measures

Terrestrial Lands

There are no natural or unique geographical features located at the Project Site, and therefore no mitigation measures are proposed to reduce impacts to natural or unique geographical features.

Based on the existing subsurface conditions, deep dynamic compaction, rigid inclusions, surcharges, and/or partial undercuts with surface stabilization, will be utilized to improve the fills and sediments in-situ to provide support of lightly loaded structures, pavements, and open areas which are not usually highly sensitive to post construction settlement. These improvement methods may be used solely or in combination based on the location and type of structure. It is anticipated that the dynamic compaction operation will occur between Monday through Friday for a period of 2 months. Dynamic compaction is proposed for all load bearing (Building and parking areas) areas of the Project Site. The balance of the Project Site will be compacted with industry standard compaction equipment.

Dynamic compaction operations will comply with the Town of Bethlehem's Local Law No. 5-2009 noise requirements and will only take place between the lesser of 7 am to 7 pm or 7 am to dawn as daylight permits. Industry averages show that dynamic compaction registers less than 70 dBA at 10 m away (as stated by ScienceDirect Dynamic Compaction). According to the fundamentals of noise propagation, sound pressures will decrease (attenuate) at a rate of 6 dB each time the distance is doubled. Assuming dynamic compaction will register 70 dBA at 10 m away and sound levels drop by 6 dBA by doubling the distance, at approximately 18 m (60 ft) the sound levels will be at 65 dBA meeting Town of Bethlehem sound requirements at the property line. Since the roadway will be situated more than 60 feet (20 meters) away from the western property line, dynamic compaction will not occur within approximately 60 feet (18 meters) of the property line to ensure compliance with the Town noise ordinance. As shown on the figure below, industry standards show that a toilet flushing or a vacuum cleaner are generally at 70 dBA and normal

conversation is at 60 dBA, therefore the 65 dBA at the property boundary would be somewhere between those two reference points.

Figure 3.1-2 Sound Levels

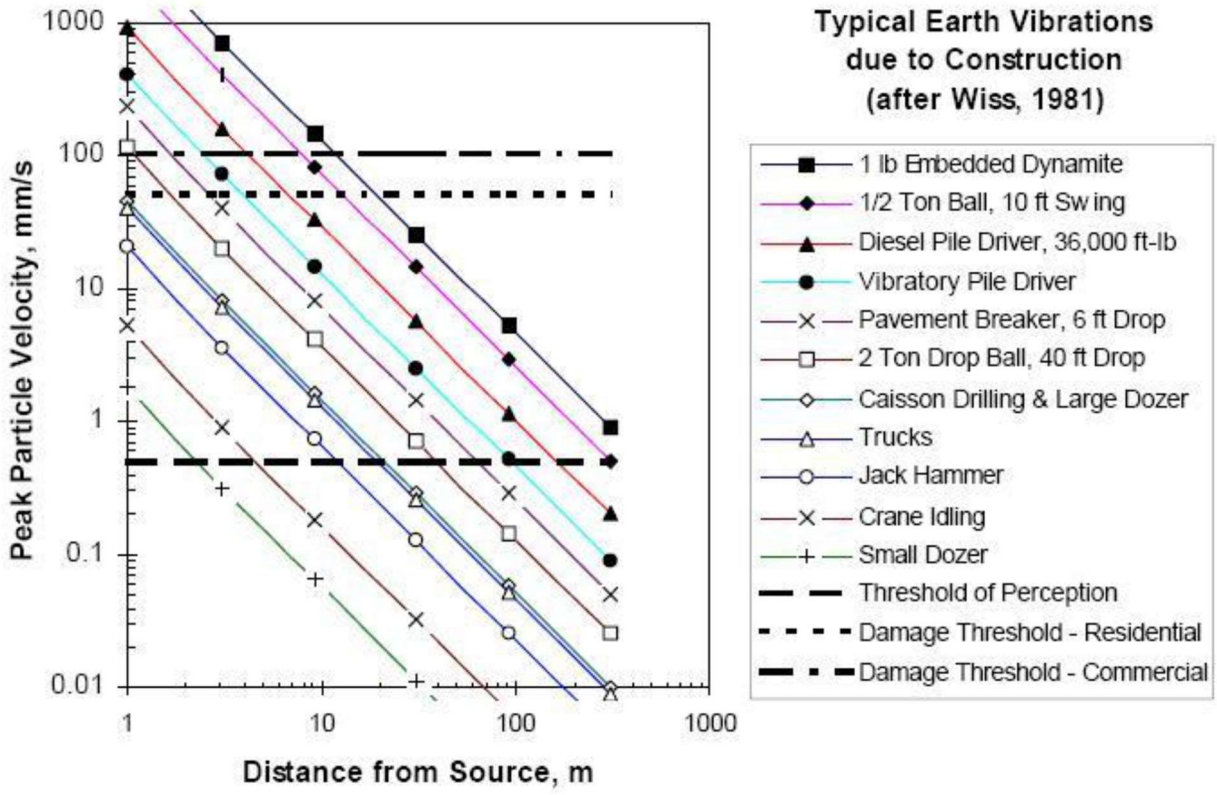
The nearest residential property, located along Old River Road, is approximately 360 feet from the Project Site's property line and at an approximate elevation of 45 feet, or 20 feet above the project site. Therefore, noise from dynamic compaction is calculated to be approximately 48 dBA at the home assuming no physical barrier exists between the site and house that would further reduce the noise level. Therefore, the 48 dBA is a worst case analysis and is below that of a normal conversation, and well below the Town noise ordinance regulation of 65dBA. To further minimize this short term noise impact, and to avoid any perceived nuisance, the dynamic compaction will be sequenced such that the operation will begin along the western edge of the roadway and move eastward which will decrease the amount of time the compaction operation is at its closest point to the residential homes. As the compaction operation moves eastward, further away from the homes, the noise will dissipate even further below the highest anticipated decibel level of 48 dBA.

Based on preliminary design, the wharf and associated caissons will be recessed back approximately 40 feet from the existing shoreline which will help mitigate for potential underwater noise impacts. Based on the potential requirements of the associated NYSDEC permit and consultation with NOAA, the USACOE, and the National Marine Fisheries Service, appropriate noise thresholds will be established, monitored, and mitigated as necessary.

Dynamic compaction techniques are completed using a crane and dropping a weight in an engineered pattern across the ground surface in order to densify the subsoils. The energy introduced into the subsoils while large, dissipates as it emanates out and downward from the impact area. The operation includes monitoring of the peak particle velocity of the soil at the property limits or sensitive facilities within the Project Area. **Figure 3.1-3**below was adapted from the New York State Department of Transportation (NYSDOT) Highway Design Manual which shows earth vibrations caused by common construction activities with the threshold values where they become noticeable or would be expected to be of concern to typical residential or commercial buildings. The figure shows that all typical activities generate particle velocities below the damage threshold of any typical construction even at a modest and conservative setback distance of 200 feet from the densification activity. As the use of this technique across this development will be 675 feet from the closest existing building (226 River Road) its use should be without consequence. Regardless, during construction particle velocities will be monitored, and techniques modified as required to achieve the desired densification and maintain particle velocities below the residential threshold at the Proposed Project's property limits or sensitive facilities within the Project Site.

As stated above, typical activities generate particle velocities below the damage threshold of any typical construction even at a modest and conservative setback distance of 200 feet from the densification activity. The closest building is over 330 feet from the Project Site (property line) and over 500 feet from the proposed building making any adjacent building further than any anticipated impact on noise and or vibration. While impacts on noise or vibration are anticipated to be negligible or non-existent, noise monitoring during dynamic compaction at the property boundary will occur.

Figure 3.1-3: Generic Model of Construction Vibrations as a Function of Distance



Source: NYSDOT Highway Design Manual, Chapter 9- Soils, Walls, and Foundations, Figure 9.6-2, September 15, 2013

Traffic noise within the Project Site is expected from heavy trucks traveling through the Project Site and parking lots. Noise levels from the typical heavy trucks that are expected to operate at the Project Site may produce maximum noise levels of up to 75 dBA at the reference distance of 50 feet (according to the USDOT Federal Highway Administration Construction Noise Handbook). According to the fundamentals of noise propagation, sound pressures from stationary or slow-moving objects will decrease (attenuate) at a rate of 6 dB each time the distance away is doubled. At a distance of 150 feet, the noise will attenuate to approximately 65 dBA. Concept A shows the roadway used by trucks will be approximately 150 feet, at its closest, to the property line. As a result, the Proposed Project will comply with the Town noise ordinance.

There are no sensitive receptors (residential land uses) immediately adjacent to the property boundary. The Project Site is bordered by the Hudson River to the east, PSEG Power Plant to the south, National Grid high transmission power lines and railroad tracks to the west, and the Port of Albany to the North. Therefore, there is adequate distance to attenuate site noise from the sensitive residential land uses. In addition, the site sits at a lower elevation than Route 144 creating a sound attenuator on the western site boundary.

Once a specific tenant and project is identified, noise from the Proposed Project will be addressed and if necessary, a noise barrier along the western property line could be constructed.

Construction related impacts, including soil erosion and sedimentation will be mitigated through appropriate Erosion and Sediment Control as designed and enforced in accordance with the NYSDEC New York State Standards and Specifications for Erosion and Sediment Control. See **Section 3.8** for additional detail of the proposed stormwater management system that will mitigate any potential impacts.

Due to the presence of coal fly ash and bottom ash, further subsurface investigations are required to adequately assess the potential for contaminants across the Project Site. Engineering and institutional controls developed in coordination with the NYSDEC will mitigate any potential effects to the environment and human health. It is anticipated that the engineering controls may include a cover system consisting of 1 to 2 feet of soil or engineered fill to be placed over a demarcation maker overlying the coal ash. The cover system (cap), may consist of impervious pavement, concrete building slab or a 1'-2' thick earthen berm. The responsible party or permittee would either be the tenant or the Port of Albany. A work plan prepared in accordance with the NYSDEC regulations will be required prior to construction for management of the coal ash soils and this plan will also address procedures for constructing underground utilities and the future maintenance of the below grade infrastructure. It is possible that some coal ash may need to be transported off-site to a permitted disposal site due to elevated levels of heavy metals, and a long-term ground water monitoring program may be required, all of which will be regulated by the NYSDEC.

The site investigation and remediation will be conducted in accordance with NYSDEC Division of Environmental Remediation (DER) Technical Guidance for Site investigation and Remediation (DER-10). As part of the permitting process the following primary work plans and reports will be developed and submitted to the NYSDEC for approval and permit:

- Remedial Investigation Work Plan (RIWP)- This document will detail the process by which the Project Site will be characterized to determine the nature and extent of contamination of the Project Site, as well as the surface and subsurface characteristics of the Project Site, including topography, geology and hydrogeology, including depth to groundwater.
- Remedial Investigation Report (RIR)- This report will document the Project Site investigations and define the nature and extent of contamination at the Project Site. This document will also include recommendations for further investigations if deemed warranted in order to fully characterize the Project Site.
- Remedial Action Work Plan (RAWP)- This document will detail the actions that will be undertaken, including but not limited to the removal, treatment, containment, transportation, securing, or other engineering or institutional controls, temporarily or permanent, necessary to maintain control or remediate contamination at the Project Site. This document will also include the monitoring requirements during the implementation of the remedial action(s).
- Site Management Plan (SMP)- This document will detail the institutional and engineering controls required for the Project Site and any physical components of the remedial action required to be maintained and monitored to meet the site-specific remedial action goals.

Engineering controls may include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, and access controls. Institutional controls include any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, including, but are not limited to, environmental easements, deed restrictions, site security (other than fencing), consent order/consent decree, 6 NYCRR Part 360 permit, zoning restrictions, deed notice, and groundwater use restrictions.

- Final Engineering Report (FER)- This report will document that the remediation was completed in accordance with the approved RAWP, including any certifications required.

In addition, supplemental reports and plans may be prepared as components of the previously mentioned reports and plans, or as standalone documents based on the results of the remedial investigation and site characterization. These supplemental reports and plans may include, but are not limited, to the following: Remedial Action Monitoring Plan (RAMP), Site Specific Health and Safety Plan (HASP), Community Air Monitoring Plan (CAMP), and Community and Environmental Response Plan (CERP). A SWPPP shall be prepared to address construction and long term land disturbances and stormwater management practices. Further discussion on the SWPPP is discussed in **Section 3.8.**

Lands Under Water

Based on the final design of the wharf and associated dredging, a Sediment Sampling and Analysis Plan will need to be prepared in accordance with TOGS 5.1.9 guidelines or other site-specific requirements under a NYSDEC remedial program. The results of the sediment sampling will dictate the methodologies of sediment removal, handling and disposal to minimize potential effects to the environment and human health. However, based on the preliminary results, it is anticipated that the dredged material could be granted a Beneficial Use Determination (BUD) by the NYSDEC. This determination would allow for the dredged material to be properly dewatered on site and used as fill prior to, or as part of the implementation of the aforementioned engineering controls for the Project Site.

A closed bucket or similar method of sediment removal will be utilized to reduce suspended solids and translocation of materials during dredging operations. In addition, a turbidity curtain will be utilized to minimize potential downstream impacts associated with suspended solids during dredging and shoreline disturbances to the Hudson River. The suspended solids within the work area will be allowed to settle prior to turbidity curtain removal.

Section References:

ScienceDirect, Dynamic Compaction. Available URL: https://www.sciencedirect.com/topics/engineering/dynamic-compaction. Accessed January 13, 2020

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3.2. Vegetation and Wildlife

3.2.1. Environmental Setting

Ecological Communities

Based on the New York Natural Heritage Program (NYNHP) publication "*Ecological Communities of New York State – Second Edition*" (Edinger et al, 2014), the Project Site is comprised of several different ecological community cover types. The approximate boundaries of the primary ecological communities are shown in **Figure 3.2-1**.

The primary ecological communities include:

- Land Fill/ Dump
- Successional Old Field
- Successional Northern Hardwoods
- Freshwater Tidal Marsh
- Freshwater Subtidal Aquatic Bed
- Freshwater Tidal Creek
- Tidal River

Further information regarding each ecological community is provided hereafter.

Landfill/ Dump

This ecological community is described as an area that has been cleared or excavated waste materials have been placed (Edinger et al, 2014). This community best describes those areas of the Project Site subjected to more recent fly ash and bottom ash deposition. These areas range from devoid of any vegetation to dominated by common reed (*Phragmites australis*).

These areas provide little wildlife habitat value and occupation is limited to transient individuals utilizing adjacent ecological communities.

Successional Old Field

This meadow-type community is generally dominated by forbs and grasses on sites that have been cleared or plowed (Edinger et al, 2014). This community is represented by those areas of the Project Site that have been more recently disturbed but have become extensively revegetated with herbaceous vegetation. Unless maintained, this community type has a relatively short duration on the landscape, and will over time transition into a successional shrubland, and subsequently to a successional woodland.

This community is present in a few small patches within the Project Area, and as a result no community specific wildlife observations were made during site visits conducted by a McFarland Johnson wildlife biologist in March, April, and May of 2019. Wildlife observations associated with the more prevalent successional northern hardwoods ecological community are discussed in the following section.

Successional Northern Hardwoods

According to the NYNHP, this hardwood or mixed forest community develops on sites that have been cleared or otherwise disturbed. At the Project Site, this forest community generally grades from younger successional growth along the western portion of the Project Site grading to older successional growth along the Hudson River. The younger successional growth area is generally dominated by quacking aspen (*Populus tremuloides*), gray birch (*Betula populifolia*), and eastern cottonwood (*Populus deltoides*), while the older growth area is dominated by eastern cottonwood, silver maple (*Acer saccharinum*), and black willow (*Salix nigra*). The understory species are dominated by invasive and non-native species including European buckthorn (*Rhamnus cathartica*), Morrow's honeysuckle (*Lonicera morrowii*), common reed, garlic mustard (*Alliaria petiolata*), and oriental bittersweet (*Celastrus orbiculatus*).

Wildlife observations (visual, vocal, tracks, scat, etc.) during site visits conducted by a McFarland Johnson wildlife biologist in March, April, and May of 2019 included eastern cottontail (*Sylvilagus floridanus*), red fox (*Vulpes vulpes*), coyote (*Canis latrans*), white-tailed deer (*Odocoileus virginianus*), black-capped chickadee (*Poecile atricapillus*), dark-eyed junco (*Junco hyemalis*), song sparrow (*Melospiza melodia*), hairy woodpecker (*Leuconotopicus villosus*), American robin (*Turdus migratorius*), red-winged black bird (*Agelaius phoeniceus)*, wild turkey (*Meleagris gallopavo*), northern spring peeper (*Pseudacris crucifer*), green frog (*Lithobates clamitans*), and eastern garter snake (*Thamnophis sirtalis*).

Freshwater Tidal Marsh

This ecological community occurs where the water is usually fresh (<0.5‰ salinity), and less than 2 m (6 ft) deep at high tide. The vegetation is dominated by aquatic vegetation that are emergent at high tide (Edinger et al, 2014). This ecological community is associated with more broadly defined freshwater tidal creek and tidal river ecological communities. This ecological community was limited to two small wetland areas identified along the Hudson River along the south eastern portion of the Project Site. These communities were generally dominated by common reed, narrow-leaf cattail (*Typha angustifolia*), and purple loosestrife (*Lythrum salicaria*).

Wildlife observations during site visits conducted by a McFarland Johnson wildlife biologist in March, April, and May of 2019 within the more broadly defined tidal river ecological community are discussed in subsequent section.

Further descriptions of regulated aquatic environments are detailed in **Section 3.3**.

Freshwater Subtidal Aquatic Bed

This aquatic community is characterized by continuously flooded substrates with rooted aquatic vegetation. The water is typically fresh (<0.5‰ salinity) and is usually less than 2 m (6 ft) deep at low tide (Edinger et al, 2014). Freshwater subtidal aquatic bed communities are present within portions of the Hudson River and Normans Kill Creek in the vicinity of the Project Area. This ecological community is associated with more broadly defined freshwater tidal creek and tidal river ecological communities.

Within this ecological community vegetation is typically characterized by the presence of wild celery (*Vallisneria americana*). Additional characteristic species may include clasping-leaved pondweed (*Potamogeton perfoliatus*), Nuttall's waterweed (*Elodea nuttallii*), coontail (*Ceratophyllum demersum*), and naiads (*Najas guadalupensis, Najas minor*). Two non-native weeds, Eurasian milfoil (*Myriophyllum spicatum*) and water chestnut (*Trapa natans*), are also common in the Hudson River aquatic beds (Edinger et al, 2014).

The NYSDEC also considers this ecological community as inclusive of supporting submerged aquatic vegetation (SAV). According to the NYSDEC, the most common native species of SAV in the Hudson River watershed is water celery, while other native and non-native species may include clasping leaved pondweed, curly pondweed (*Potamogeton crispus*), and Eurasian water milfoil (NYSDEC, 2014). Historical mapping of SAV beds within the Hudson River estuary has been conducted by the NYSDEC based on interpretation aerial imagery from Hastings-on-Hudson to Troy for the years 1997, 2002, 2007, 2014 and 2016. Based on the most recent mapping event conducted in 2016, there is one small documented SAV bed within the potential project disturbance limits (**Figure 3.2-2**).

This ecological community has the potential to provide foraging habitat for a variety of waterfowl including, Canada geese (*Branta canadensis*) and a variety of dabbling and diving ducks. Wildlife observations during site visits conducted by a McFarland Johnson wildlife biologist in March, April, and May of 2019 within the more broadly defined freshwater tidal creek and tidal river ecological communities are discussed in subsequent sections.

Further descriptions of regulated aquatic environments are detailed in **Section 3.3**.

Freshwater Tidal Creek

This ecological community aquatic community is described as a shallow, continuously semidiurnally tidally flooded creek with submerged areas averaging less than 2 m (6 ft) deep at low tide. The water is typically fresh (<0.5‰ salinity). Inclusions within this community may include freshwater subtidal aquatic beds and freshwater tidal marsh. This ecological community type is exclusive to the portion of Normans Kill within the Project Area. Characteristic fish species include banded killifish (*Fundulus diaphanus*), pumpkinseed sunfish (*Lepomis gibbosus*), and smallmouth bass (*Micropterus dolomieui*) (Edinger et al, 2014).

According to the USFWS, the Normans Kill is an important anadromous fish spawning and nursery habitat for fish species such as alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), and white perch (*Morone americana*), and supports a large population of smallmouth bass throughout the year (USFWS, 1997).

Wildlife observations (visual) during site visits conducted by a McFarland Johnson wildlife biologist in March, April, and May of 2019 included Canada geese, wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), common merganser (*Mergus merganser*), and muskrat *(Ondatra zibethicus*).

Further descriptions of regulated aquatic environments are detailed in **Section 3.3**.

Tidal River

According to the NYNHP, this aquatic community consists of continuously flooded substrates that support no emergent vegetation. Within the river there are two ecological zones; the "deepwater zone" includes areas where substrates are usually over 2 m (6 ft) deep at low tide, and a "shallow zone", which includes submerged areas less than 2 m (6 ft) deep at low tide that lack rooted aquatic vegetation. Tidal river communities are present within the Hudson River. Inclusions within this community may include freshwater subtidal aquatic beds and freshwater tidal marsh.

Characteristic fishes of the deepwater include Atlantic tomcod (*Microgadus tomcod*), hogchoker (*Trinectes maculatus*), and rainbow smelt (*Osmerus mordax*). Rare deepwater species of the Hudson River include sturgeon (*Acipenser brevirostrum* and *Acipenser oxyrinchus oxyrinchus*). Characteristic fishes of the shallows include striped bass (*Morone saxatilis*), American shad (*Alosa sapidissima*), banded killifish, spottail shiner (*Notropis hudsonius*), tesselated darter (*Etheostoma olmstedi*), and pumpkinseed. Fishes that occur in both deepwater and shallows include blueback herring, white perch, and alewife (Edinger et al, 2014).

Wildlife observations (visual) within this ecological community during site visits conducted by a McFarland Johnson wildlife biologist in March, April, and May of 2019 included Canada geese, mallard, common merganser, common goldeneye (*Bucephala clangula*), and ring-billed gull (*Larus delawarensis*).

Further descriptions of regulated aquatic environments are detailed in **Section 3.3**.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act (SFA) of 1996 and the MSA Reauthorization Act, was created to prevent overfishing, rebuild overfished stocks, increase long-term economic and social benefits, and ensure a safe and sustainable supply of seafood. Under the MSA, Essential Fish Habitat (EFH) is defined as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity." EFH applies to each life stage, egg, larvae, juvenile, and adult, for over 1,000 species managed by eight regional Fishery Management Councils (FMCs).

EFHs are described and identified in Fishery Management Plans (FMPs) developed by the FMCs and managed by National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS).

The NMFS Essential Fish Habitat Mapper is a mapping tool used to view and access supporting data for EFH, habitat areas of particular concern (HAPC), and EFH areas protected from fishing (EFHA). The EFH Mapper was accessed on April 12, 2019 to determine the potential presence of EFH in the vicinity of the Proposed Project. The EFH Mapper indicated HAPC or EFHA were not identified in the vicinity of the Project Site. The EFH Mapper indicated that the following species and their life stages have been designated within the Hudson River/ Raritan Bay estuary near the Project Site.

Table 3.2-1 : **Potential NOAA Essential Fish Habitat in Vicinity of Site**

Species	Lifestages	Management Council	FMP
Summer Flounder	Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
Winter Flounder	Eggs, Juvenile, Larvae, Adult	New England	Amendment 14 to the Northeast Multispecies FMP
Little Skate	Juvenile, Adult	New England	Amendment 2 to the Northeast Skate Complex FMP
Atlantic Herring	Juvenile, Larvae, Adult	New England	Amendment 14 to the Northeast Multispecies FMP
Red Hake	Eggs, Larvae, Juvenile, Adult	New England	Amendment 14 to the Northeast Multispecies FMP
Windowpane Flounder	Eggs, Juvenile, Larvae, Adult	New England	Amendment 14 to the Northeast Multispecies FMP
Winter Skate	Juvenile, Adult	New England	Amendment 14 to the Northeast Multispecies FMP
Clearnose Skate	Juvenile, Adult	New England	Amendment 14 to the Northeast Multispecies FMP

Source: NOAA NMFS EFH Mapper, accessed on April 12, 2019.

However, a detailed review of the FMPs for each designated species indicates that their designated EFHs are limited to the seawater salinity (salinity > 25.0‰) and mixing water / brackish salinity (0.5 < salinity < 25.0‰) zones within the Hudson River/ Raritan Bay estuary.

Significant Coastal Fish and Wildlife Habitat

The Project Site is located within a New York Department of State (NYSDOS) Division of Coastal Resources designated State Coastal Area Boundary under the authority of Coastal Zone Management Act (CMZA) and Waterfront Revitalization of Coastal Areas and Inland Waterways Act. As part of the designation, the NYSDOS has identified an approximately 2-mile portion of the Normans Kill from its confluence with the Hudson River and upstream as Significant Coastal Fish and Wildlife Habitat (SCFWH) based on the significance of coastal fish and wildlife habitat found within the area.

Threatened and Endangered Species

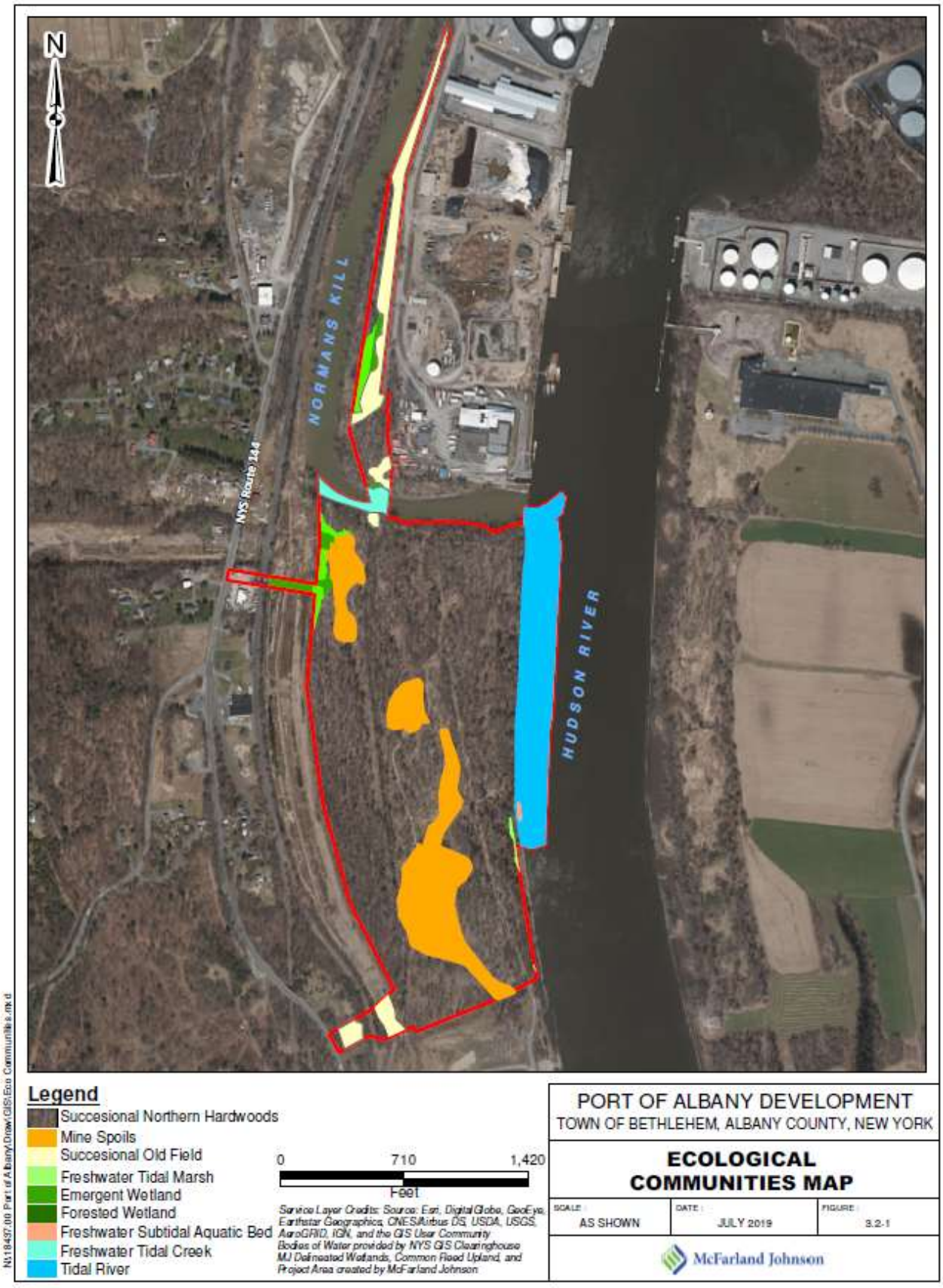
The NYNHP, NOAA, and United States Fish and Wildlife Service (USFWS) were contacted regarding potential state or federally-listed rare, threatened or endangered species to occur in

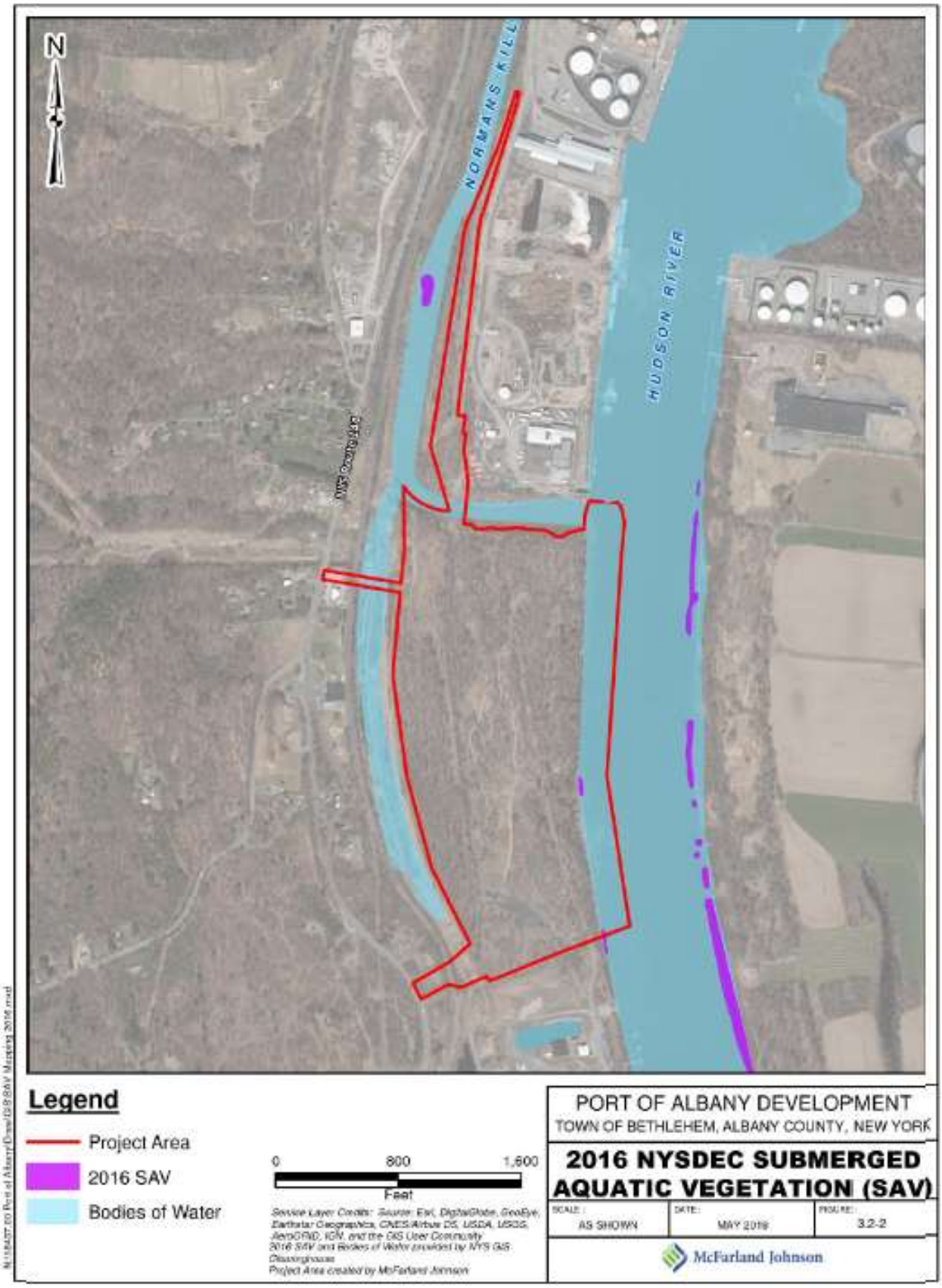
the vicinity of the Project Area. A summary of listed species is provided in **Table 3.2-1**. Copies of agency coordination documentation are included in **Appendix G of the DGEIS**.

Table 3.2-2 **: Threatened and Endangered Species**

Common Name	Scientific Name	State Listing	Federal Listing
Northern Long-eared Bat	*Myotis septentrionalis*	Threatened	Threatened
Bald Eagle	*Haliaeetus leucocephalus*	Threatened	Not Listed
Atlantic Sturgeon	*Acipenser oxyrinchus oxyrinchus*	Not Listed	Endangered
Shortnose Sturgeon	*Acipenser brevirostrum*	Endangered	Endangered
Side-oats Grama	*Bouteloua curtipendula var. curtipendula*	Endangered	Not Listed
Violet Wood Sorrel	*Oxalis violacea*	Threatened	Not Listed
Small's Knotweed	*Polygonum buxiforme*	Endangered	Not Listed
Cobra Clubtail	*Gomphus vastus*	Conservation Concern	Not Listed
Umber Shadowdragon	*Neurocordulia obsoleta*	Conservation Concern	Not Listed
Alewife Floater	*Anodonta implicata*	Conservation Concern	Not Listed

Source: NYNHP, USFWS and NOAA consultations (See **Appendix G of the DGEIS**).


N
NORMANS KILL
NYS Route 144
HUDSON RIVER
Legend
Succesional Northern Hardwoods
Mine Spoils
Succesional Old Field
Freshwater Tidal Marsh
Emergent Wetland
Forested Wetland
Freshwater Subtidal Aquatic Bed
Freshwater Tidal Creek
Tidal River
0
710
1,420
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Bodies of Water provided by NYS GIS Clearinghouse
MJ Delineated Wetlands, Common Flood Upland, and Project Area created by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
ECOLOGICAL COMMUNITIES MAP
SCALE: AS SHOWN
DATE: JULY 2019
FIGURE: 3.2-1
McFarland Johnson
N:\18437.00 Port of Albany\Draw\GIS\Eco Communities.mxd


N
NORMANS KILL
HUDSON RIVER
NYS Canal Corp
Legend
Project Area
2016 SAV
Bodies of Water
0
800
1,600
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2016 SAV and Bodies of Water provided by NYS GIS Clearinghouse
Project Area created by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
2016 NYSDEC SUBMERGED AQUATIC VEGETATION (SAV)
SCALE: AS SHOWN
DATE: MAY 2019
FIGURE: 3.2-2
McFarland Johnson

3.2.2. Potential Impacts

Ecological Communities

Upland Communities

All upland ecological communities within the Project Area consist of previously disturbed lands that are common and demonstratable secure within the region and New York State. As a result, the impacts to these ecological communities is not considered to be a significant environmental impact.

Aquatic Communities

Impacts to freshwater wetlands and surface waters are regulated by the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) or Section 10 of the Rivers and Harbors Act (RHA) and/ or the NYSDEC under Article 15- Protection of Waters. Further descriptions of these potential impacts and mitigation are detailed in **Section 3.3**.

As previously mentioned, based on the most recent mapping event conducted in 2016, there is one small SAV bed identified within the Project limits (**Figure 3.2-2**). As shown on the grading plan in **Appendix Q of the DGEIS**, the Proposed Project will avoid the SAV bed, and therefore there is no anticipated impact.

Essential Fish Habitat

There are no designated EFHs are located in the vicinity of the Proposed Project and no impacts will occur.

Significant Coastal Fish and Wildlife Habitat

According to the DOS, any activities that would degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths in the Normans Kill or its tributaries would result in significant impairment to the habitat. Further, the elimination or disturbance of adjacent wetland and forested habitats could also adversely affect the habitat.

Threatened and Endangered Species

Northern Long-eared Bat

Based on publicly available data from the NYSDEC, as of June 28, 2018 there has been a reported known winter occurrence of northern long-eared bat in the Town of Bethlehem, Albany County (http://www.dec.ny.gov/animals/106090.html). Potential suitable foraging and suitable roosting habitat for northern long-eared bats is present within the Project Area. The Proposed Project will result in the removal of trees that could provide potential suitable roosting habitat. All trees within the Project Site will be cut between November 1 to March 31 in accordance with NYSDEC and USFWS recommended conservation measures designed to minimize the likelihood of significant adverse impacts to northern long-eared bats. Based on this information, the Proposed Project may affect, however is not likely to adversely affect northern long-eared bat.

The Proposed Project will follow the following applicable AMMs:

- The project, to the extent practicable, will be designed to avoid tree removal in excess of what is required to implement the project safely.
- The project will be constructed to ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field.
- Temporary lighting during construction will be directed away from suitable NLEB habitat during the active season.
- Permanent outdoor lighting will use downward-facing, full cut-off lens lights, or otherwise direct lighting away from suitable NLEB habitat.

Bald Eagle

There are no bald eagle nests (active or alternate) located within 660 feet of the Project Site. Based on current USFWS bald eagle management guidelines, the Proposed Project will not "disturb" or otherwise agitate or bother a bald eagle to a degree that it causes or is likely to cause injury to a bald eagle, a decrease in its productivity, or nest abandonment, based on the best scientific information available.

Atlantic Sturgeon

According to the NYSDEC, Atlantic sturgeon can be found in the freshwater and brackish/salt water regions of the Hudson River north to Albany, but the species is usually confined to the deeper, lower reaches of the river, and is a rare occurrence in the vicinity of the Proposed Project reach of the Hudson River (NYNHP, 2019a). Dredging activities associated with the proposed wharf has the potential result in direct mortality to Atlantic sturgeon and alteration of the existing benthic environment of the Hudson River within the work limits.

Shortnose Sturgeon

Shortnose sturgeon can be found throughout the Hudson River estuary at various time of the year. Their preferred habitat is deep pools with soft substrates and vegetated bottoms (NYNHP, 2019b). Dredging activities associated with the proposed wharf has the potential result in direct mortality to shortnose sturgeon and alteration of the existing benthic environment of the Hudson River within the work limits.

Side-oats Grama

A plant survey was conducted by Terrestrial Environmental Specialists, Inc. (TES) on May 10, 2019. The survey indicated only one area within the Proposed Project limits will the potential to support side-oats grama. Review of this area did not result in location of any individuals. As a result, no impacts to this species are expected to occur. A copy of the report has been included in **Appendix G of the DGEIS**.

Violet Wood Sorrel

The TES plant survey indicated that there was no suitable violet wood sorrel habitat within the Proposed Project limits. No impacts to this species are expected to occur as a result of this Proposed Project.

Small's Knotweed

TES observed one patch of *Polygonum sp*. in the disturbed roadside community immediately adjacent and west of South Port Street at the northern limits of the Proposed Project Area. TES indicated that the plants observed where most likely the common doorweed (*Polygonum aviculare*), however Small's knotweed can only be reliably identified from other closely related Polygonum species when in flower. Small's knotweed begins in July and the fruits will persist until the first frost. As shown on the grading plan in **Appendix Q of the DGEIS**, the Proposed Project will avoid this area, and therefore there is no anticipated impact to this species. The implementation of the SWPPP which will require the installation of a protective silt fence shall serve as mitigation against potential impacts to Small's knotweed.

Cobra Clubtail

Cobra clubtails can be found on large sandy-bottom rivers and wind-swept lakes (MA NHESP, 2015a). Available habitat for this species is considered abundant in the vicinity of the Project Area and potential impacts to cobra clubtail are considered to be insignificant. The implementation of the SWPPP which will require the installation of a protective silt fence shall serve as mitigation against potential impacts to cobra clubtail.

Umber Shadowdragon

Umber shadowdragon can be found on medium to large ponds, lakes and rivers and seem to do well in artificially created artificially created habits including reservoirs and dammed sections of rivers (MA NHESP, 2015b). Available habitat for this species is considered abundant in the vicinity of the Project Area and potential impacts to this species are considered to be insignificant. The implementation of the SWPPP which will require the installation of a protective silt fence shall serve as mitigation against potential impacts to umber shadowdragon.

Alewife Floater

Dredging activities associated with the proposed wharf has the potential result in direct mortality of alewife floater and alteration of the existing benthic environment of the Hudson River within the work limits.

3.2.3. Mitigation Measures

Ecological Communities

Upland Communities

All upland ecological communities within the Project Area consist of previously disturbed lands that are common and demonstratable secure within the region and New York State, and as a result no mitigation is proposed.

Aquatic Communities

Impacts to freshwater wetlands and surface waters would be regulated by USACE under Section 404 of the CWA or Section 10 of the RHA and/ or NYSDEC under Article 15- Protection of Waters. Further descriptions of these potential impacts and mitigation to are detailed in **Section 3.3**.

All proposed work will avoid the SAV bed shown on the 2016 survey, therefore no mitigation is proposed at this time. Avoidance and minimization measures, including any required surveys and mitigation for potential impacts to SAV, will be addressed during future Article 15 permitting efforts.

Essential Fish Habitat

No EFHs are located in the vicinity of the Proposed Project and therefore no mitigation measures are proposed.

Significant Coastal Fish and Wildlife Habitat

Appropriate erosion and sediment controls measures will be implemented to mitigate potential water quality impacts to the Normans Kill. No alterations to the stream bed will be performed as part of the Proposed Project. The Proposed Project will likely require federal permit(s) (USACE Section 404 Permit and/ or Section 10 Permit) and therefore, coastal consistency review by the NYSDOS will be required to determine the consistency of the Proposed Project with the New York State Coastal Management Program (NYCMP). Potential mitigation options may include maintaining bank cover, soil stabilization, and providing adequate riparian buffer areas. Additional information regarding the coastal consistency process is provided in **Section 3.14**.

Threatened and Endangered Species

Northern Long-eared Bat

All trees within the Project impact area will be cut between November 1 to March 31 in accordance with NYSDEC and USFWS recommended conservation measures designed to minimize the likelihood of significant adverse impacts to northern long-eared bats.

Bald Eagle

No specific mitigation measures are proposed for bald eagles.

Atlantic Sturgeon

Dredging activities associated with the Proposed Project will be conducted September 1 to November 30 to minimize potential impacts to Atlantic sturgeon. A turbidity curtain will be utilized to minimize potential downstream impacts associated with suspended solids during dredging and shoreline disturbances to the Hudson River. The suspended solids within the work area will be allowed to settle prior to turbidity curtain removal. Avoidance and minimization measures, including any required mitigation for potential impacts to Atlantic sturgeon, will be addressed during the future NYSDEC Article 15 permitting process.

NYSDOS (44 NYCMP policies) The Proposed Project will require Section 10 and 404 permits from the USACE. As part of the permitting process, the USACE will serve as the lead federal agency in the required Section 7 and the Fish and Wildlife Coordination Act (FWCA) consultation processes with NOAA. Avoidance, minimization and mitigation of potential impacts to shortnose sturgeon and Atlantic sturgeon will be presented in the Joint Application for Permit based on the final design of the Proposed Project and pre-application consultation with the USACE and NOAA.

Based on preliminary design, the wharf and associated caissons (Piles) will be recessed back approximately 40 feet from the existing shoreline which will provide an earthen barrier during construction which will mitigate any potential underwater noise impacts. In addition, based on the potential requirements associated with obtaining the required NYSDEC permit and which includes consultation with NOAA, the USACE, and the National Marine Fisheries Service, appropriate noise thresholds will be established, monitored, and mitigated as necessary.

Shortnose Sturgeon

The mitigation measures implemented to avoid and minimize potential impacts to Atlantic sturgeon will equally serve as mitigation to avoid and minimize potential impacts to shortnose sturgeon. Avoidance and minimization measures, including any required mitigation for potential impacts to shortnose sturgeon, will be addressed during the future NYSDEC Article 15 permitting process. See reference to USACE and NOAA permitting above under Atlantic Sturgeon.

Side-oats Grama

Due to lack of presence within the Project Area, no specific mitigation measures are proposed for this species.

Violet Wood Sorrel

Based on a lack of habitat and species presence, no specific mitigation measures are proposed for violet wood sorrel.

Small's Knotweed

All proposed work will avoid the potential location of Small’s knotweed, therefore no mitigation is proposed at this time.

Cobra Clubtail

Cobra clubtail is an understudied, cryptic species and exact management needs are unknown. As a result, no specific mitigation measures are proposed for cobra clubtail beyond those measures being already proposed for sensitive habitats, and other rare, threatened and endangered species known to occur in the vicinity of the Project Area.

Umber Shadowdragon

Similar to cobra clubtail, exact management needs for this species are unknown. As a result, no specific mitigation measures are proposed for umber shadow dragon beyond those measures being already proposed for sensitive habitats, and other rare, threatened and endangered species known to occur in the vicinity of the Project Area.

Alewife Floater

Based on consultation with the NYSDEC during an on-site meeting on May 13, 2019, prior to any disturbances to the beds of the Hudson River or Normans Kill a freshwater mussel survey will be conducted to confirm the presence or absence of rare, threatened, or endangered freshwater mussels. A mussel contractor will be selected from among those individuals or entities pre-qualified by the NYSDEC for freshwater mussel studies in New York. Prior to the survey, the contractor will acquire a License to Collect and Possess (LCP) and Endangered and Threatened Species (ETS) permits from NYSDEC Special Licenses.

If rare, threatened, or endangered freshwater mussels are discovered, an Avoidance, Minimization, and Mitigation Plan (AMMP) will be developed in close coordination with the NYSDEC. Generally, if impacts to these species cannot be avoided via avoidance measures, such as limiting the extent of disturbance and utilization of best management practices, it is common practice to relocate target species prior to construction and monitor relocated mussels for up to a year after relocation.

Avoidance and minimization measures, including any required surveys, relocation, and monitoring to mitigate for potential impacts to rare or protected freshwater mussels, will be addressed during future NYSDEC Article 15 permitting process.

Section References:

Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, New York.

MA NHESP. 2003a. Massachusetts rare species fact sheets. Massachusetts Division of Fisheries & Wildlife, Westborough, Massachusetts. Available URL:

https://www.mass.gov/files/documents/2016/08/qe/neurocordulia-obsoleta.pdf. Accessed June 17, 2019.

MA NHESP. 2003b. Massachusetts rare species fact sheets. Massachusetts Division of Fisheries & Wildlife, Westborough, Massachusetts. Available URL: https://www.mass.gov/files/documents/2016/08/qe/neurocordulia-obsoleta.pdf. Accessed June 17, 2019.

NYNHP, 2019a. Online Conservation Guide for *Acipenser brevirostrum*. Available URL: https://guides.nynhp.org/shortnose-sturgeon/. Accessed June 17, 2019.

NYNHP, 2019b. Online Conservation Guide for *Acipenser oxyrinchus*. Available URL: https://guides.nynhp.org/atlantic-sturgeon/. Accessed June 17, 2019.

NYSDEC, 2014. "Submerged Aquatic Vegetation Habitat." Available URL: http://www.dec.ny.gov/lands/87648.html. Accessed March 2, 2019.

USFWS, 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed. U.S. Fish and Wildlife Service. Southern New England- New York Bight Coastal Ecosystems Program, Charleston Rhode Island.

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3.3. Regulated Wetlands and Surface Waters

3.3.1. Environmental Setting

Surface Waters

Surface waters within the Project Area include the Hudson River and Normans Kill. Both riverine systems are subject to tidal influence and are considered tidal freshwater reaches, having salinities of <0.5%.

The portions of the Hudson River and Normans Kill within the Project Area have NYSDEC water classifications of Class C. Based on this information, these sections of waterbodies are not considered to be "Protected Streams" under Article 15 of the Environmental Conservation Law. However, the sections of the Hudson River and Normans Kill within the Project Area are considered to be "Navigable Waters of the State" under Article 15 of the Environmental Conservation Law, and therefore any proposed work below the mean high water elevation is subject to permit review.

The sections of the Hudson River and Normans Kill within the Project Area are considered to be Navigable Waters of the US under Section 10 of the Rivers and Harbors Act and are considered a Water of the US (WOUS) under Section 404 of the Clean Water Act.

Further information regarding the jurisdictional limits of the NYSDEC and USACE are described hereafter.

NYSDEC Article 15 Jurisdictional Limits

NYSDEC Article 15 jurisdictional limits for “Protected Waters” and "Navigable Waters of the State" are defined by the “mean high water” (MHW). The MHW is defined as the approximate average high water level for a given body of water at a given location, that distinguishes between predominantly aquatic and predominantly terrestrial habitat as determined, in order of use, by the following:

(l) available hydrologic data, calculations, and other relevant information concerning water levels (e.g. discharge, storage, tidal, and other recurrent water elevation data)

(2) vegetative characteristics (e.g., location, presence, absence or destruction of terrestrial or aquatic vegetation);

(3) physical characteristics (e.g., clear natural line impressed on a bank, scouring, shelving, or the presence of sediments, litter or debris); and

(4) other appropriate means that consider the characteristics of the surrounding area.”

The calculated NYSDEC MHW based on data from NOAA Station 8518995- Albany Hudson River, located at latitude 42°39.0' and longitude 73°44.8’, for the most current NOAA National Tidal Datum Epoch (1983-2001), is 4.16 feet (NGVD29). In this section the Normans Kill has the same MHW as the Hudson River.

USACE Section 404 Jurisdictional Limits

USACE Section 404 jurisdictional limits are defined by the “high tide line" (MHT) elevation. The "high tide line" is defined as the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm. USACE guidelines allow for use of available hydrologic data, calculations, and other relevant information concerning water levels (e.g. discharge, storage, tidal, and other recurrent water elevation data) in defining the MHT elevations.

Based on publicly available data from United States Geological Survey (USGS) Station 01359139-Hudson River at Albany, located at latitude 42°38'46" and longitude 73°44'51", and the average of the highest recorded water elevations per day from April 1 to May 31 for years 2013 to 2017, the calculated USACE MHT is 4.26 feet (NGVD29). The USACE reserves the right to request field interpretations and inspections to define site specific MHT elevations.

USACE Section 10 Jurisdictional Limits

USACE Section 10 jurisdictional limits are defined by the "ordinary high water" (OHW). The OHW is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. USACE guidelines allow for use of available hydrologic data, calculations, and other relevant information concerning water levels (e.g. discharge, storage, tidal, and other recurrent water elevation data) in defining the OHW elevations.

The previously discussed MHT elevation is considered to be the more restrictive (higher) regulative elevation limit in regard to USACE regulated activities, and due to similarities in definition and overlapping regulations, the USACE takes this precedence when defining regulatory limits under Section 10 of the CWA. As such, the OHW is also considered to be 4.26 feet (NGVD29). Like the MHT determination, the USACE reserves the right to request field interpretations and inspections to define site specific OHW elevations.

Wetlands

The New York State Freshwater Wetland and Tidal Wetlands mapping of the Project Site indicates there are no NYSDEC jurisdictional wetlands within or adjacent the Project Area (**See Figures 3.3-1 and 3.3-2**). Review of USFWS National Wetlands Inventory (NWI) mapping of the Project Site indicates that the majority of the Project Area is mapped as palustrine emergent wetlands (PEM) and palustrine forested wetlands (PFO) (**See Figure 3.3-3**). It should be noted that NWI mapping

does not have any regulatory consequence, but rather indicates areas that may meet federal wetland criteria as identified by the USFWS using aerial photography.

A wetland delineation was conducted in April 2019 by McFarland Johnson. The wetland delineation was determined through field investigations of vegetation, soils and hydrology performed in accordance with the 1987 USACE Wetlands Delineation Manual (1987 USACE Manual), and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Regional Supplement), dated January 2012. The wetland boundaries were surveyed using a hand-held Trimble GPS Geo7X unit with decimeter (10 cm/ 4 inch) post processing accuracy.

The results of this delineation indicated that there are 8 freshwater wetlands located within the project limits. These wetlands are hereafter referred to as Wetlands 1, 3, 4, 5, 6, 7, 8, and 9. Wetland 2 was a previously classified wetland that upon more recent delineation was determined to no longer be classified as a wetland. This determination was verified by the NYSDEC and USACOE. Wetlands 3, 4, 5, 6, 7, and 9 are predominately PEM wetlands, while Wetlands 1 and 8, consist of PEM and PFO wetland cover types. Furthermore, Wetlands 3 and 4 are directly subject to tidal cyclic tidal inundation. Further details regarding the delineation are provided in the Wetlands and Waterways Delineation Report prepared by McFarland Johnson which has been included in **Appendix H of the DGEIS.**

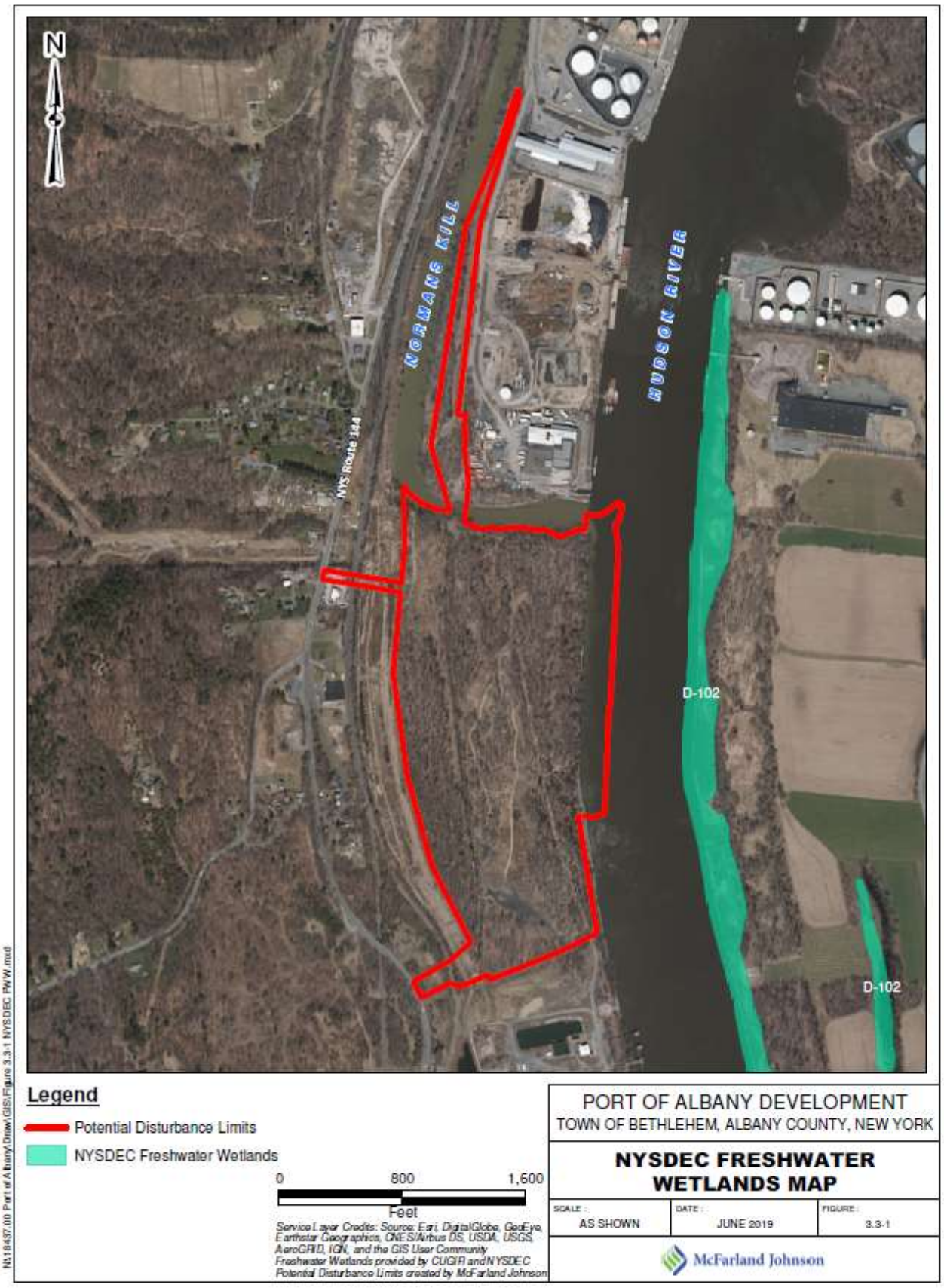
Table 3.3-1 Wetland Areas

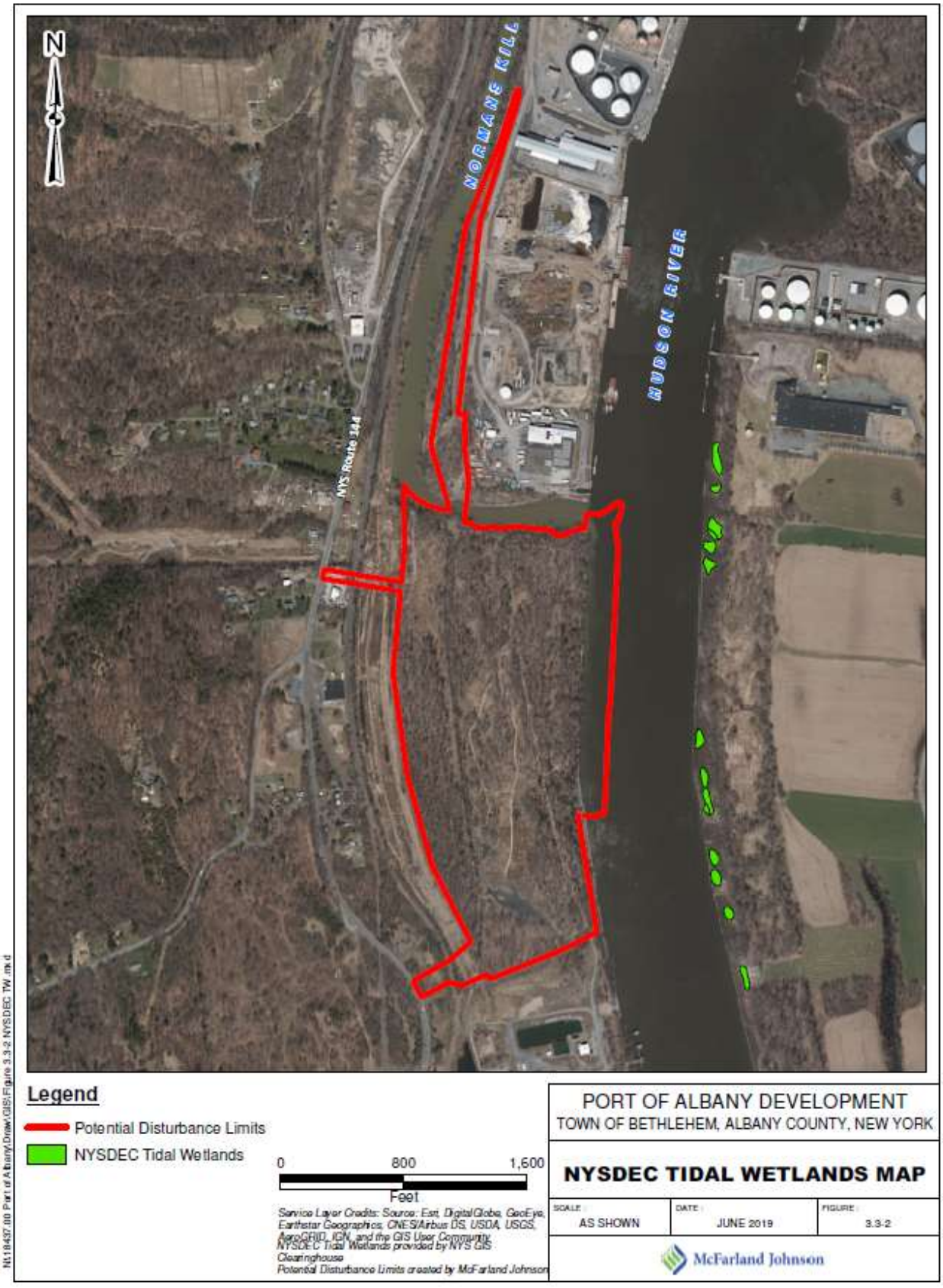
Wetlands within 94.75-Acre PSA				
Feature I.D.	Feature Type	Acres	NYSDEC Jurisdiction	USACE Jurisdiction
Wetland 1	PEM	0.67	No	Yes
	PFO	0.59	No	Yes
Wetland 3	PEM	0.19	No	Yes
Wetland 4	PEM	0.04	No	Yes
Wetland 5	PEM	0.01	No	Yes
Wetland 6	PEM	0.01	No	Yes
Wetland 7	PEM	0.02	No	Yes
Wetland 8	PEM	0.19	No	Yes
	PFO	0.57	No	Yes
Wetland 9	PEM	0.04	No	Yes

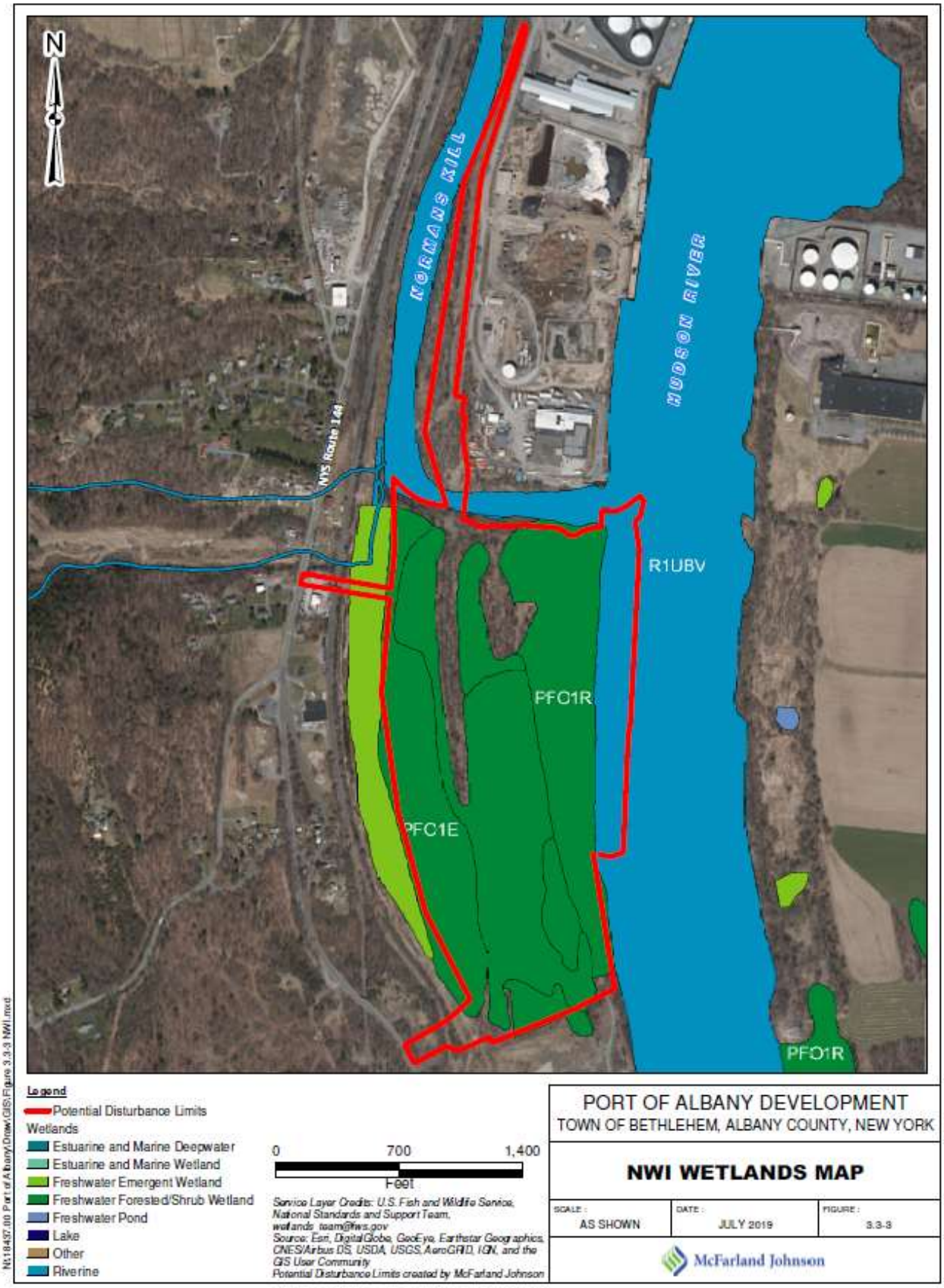
Source: Wetlands and Surface Waters Delineation Report, DGEIS Appendix H

As shown above in **Table 3.3-1**, there is a total acreage of 2.33 acres of wetlands identified on the Project Site.

The location of mapped NYSDEC wetlands and NWI wetlands within the vicinity of the Project Area, along with the limits of the field delineated wetlands by McFarland Johnson are shown on **Figure 3.3-4.** The USACE field reviewed the wetland boundaries and provided verbal acceptance of the boundaries on May 13, 2019. A Preliminary Jurisdictional Determination is pending.


N
NORMANS KILL
HUDSON RIVER
NYS Route 144
D-102
D-102
Legend
Potential Disturbance Limits
NYSDEC Freshwater Wetlands
0
800
1,600
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Freshwater Wetlands provided by CUGIR and NYSDEC
Potential Disturbance Limits created by McFarland Johnson
N:\19437.00 Port of Albany\Draw\GIS\Figure 3.3-1 NYSDEC FWW.mxd
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
NYSDEC FRESHWATER WETLANDS MAP
SCALE: AS SHOWN
DATE: JUNE 2019
FIGURE: 3.3-1
McFarland Johnson


N
NORMANS KILL
HUDSON RIVER
NYS Route 144
Legend
Potential Disturbance Limits
NYSDEC Tidal Wetlands
0
800
1,600
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
NYSDEC Tidal Wetlands provided by NYS GIS Clearinghouse
Potential Disturbance Limits created by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
NYSDEC TIDAL WETLANDS MAP
SCALE: AS SHOWN
DATE: JUNE 2019
FIGURE: 3.3-2
McFarland Johnson
N:\18437.00 Port of Albany\Draw\GIS\Figure 3.3-2 NYSDEC TW .mxd


N
NORMANS KILL
HUDSON RIVER
NYS Route 144
R1UBV
PFO1R
PFO1E
PFO1R
Legend
Potential Disturbance Limits
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
0
700
1,400
Feet
Service Layer Credits: U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Potential Disturbance Limits created by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
NWI WETLANDS MAP
SCALE : AS SHOWN
DATE : JULY 2019
FIGURE : 3.3-3
McFarland Johnson
N:\18457.00 Port of Albany\Draw\GIS\Figure 3.3-3 NWI.mxd


N
NORMANS KILL
HUDSON RIVER
NYS Route 144
Wetland 8
Wetland 9
Wetland 1
Wetland 5
Wetland 6
Not to Scale
Wetland 7
Not to Scale
Wetland 3
Not to Scale
Wetland 4
Not to Scale
Legend
Potential Disturbance Limits
Delineated Wetlands
0
700
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Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Potential Disturbance Limits created by McFarland Johnson and Wetlands Delineated by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
WETLAND DELINEATION MAP
SCALE: AS SHOWN
DATE: JUNE 2019
FIGURE: 3.3-4
McFarland Johnson
N:\19487.00 Port of Albany\Draw\GIS\Figure 3.3-4 M.J Wetlands.mxd

3.3.2. Potential Impacts

Surface Waters

The construction of the proposed wharf will require the dredging of approximately 128,000 cubic yards of sediment along the shore of the Hudson River. This work will be performed below the NYSDEC MHW and USACE MHT and a NYSDEC Article 15 Protection of Water Permit will be required. The project would be considered a "Major Project" under the Uniform Procedures Act requirements (6 NYCRR Part 621).

Wetlands

The construction of the bridge crossing of the Normans Kill will result in the impact to 0.04 acres of emergent freshwater wetland, Wetland 9. However, every effort will be made during final design to minimize temporary and permanent impacts to all wetlands on site. As discussed in Section 3.9, if the project included a water line with an internal loop, the line would pass through the western access easement, and could pass through existing wetlands, Wetland 1. This line would either be directionally drilled/bored to avoid the wetland impacts or a Nationwide Permit would be obtained to address any temporary impacts to the wetland. Impacts to federally regulated wetlands will require a USACE Section 404 Permit. If the impacts to federally regulated wetlands are done in conjunction with the dredging impacts, the impacts would be permitted under the same USACE Section 404/ Section 10 Individual Permit. Should the wharf construction portion of the project be abandoned, the wetlands impacts could be permitted solely under a Section 404 Nationwide Permit No. 39- *Commercial and Institutional Developments* (NWP-39). The project will not impact Wetland 3 through 8.

3.3.3. Mitigation Measures

Surface Waters

Mitigation for impacts to surfaces waters, will be conducted in accordance with NYSDEC and USACE requirements during future permitting efforts for the project. Potential mitigation options include water quality improvement projects and enhancement and/or preservation of riparian areas within the Hudson River and Normans Kill watersheds. Due to the amount of dredging quantity involved, an USACE Section 404/ Section 10 Individual Permit will be required for the project. Mitigation will be conducted such that there is a net benefit to the local watershed.

Wetlands

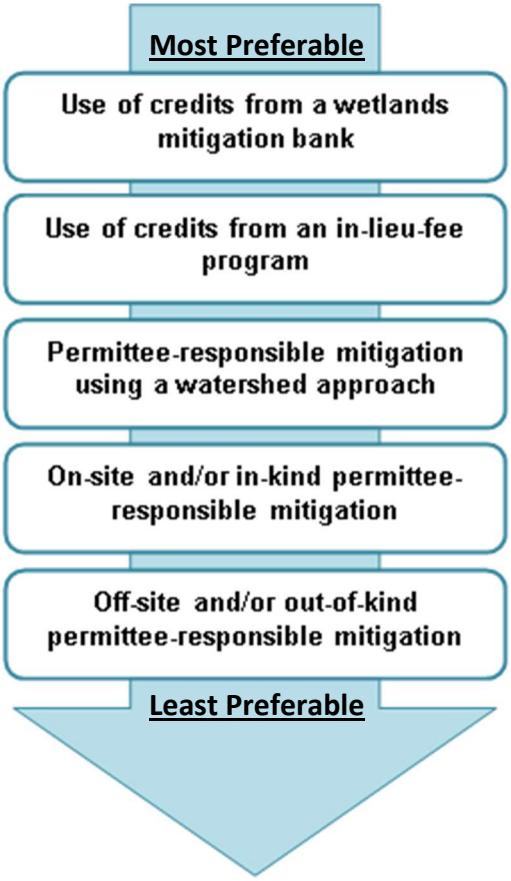
Compensatory wetland mitigation may be required as a permit condition by the USACE depending on the final specific details of the project. Wetland mitigation can come in the form of restoration, establishment, enhancement, and/or preservation of wetlands. Typical mitigation ratios recommended by the USACE are shown in **Table 3.3-1**.

Table 3.3-1: Typical USACE Recommended Wetland Mitigation Ratios

Wetland Type	Restoration (Re-Establishment)	Creation (Establishment)	Enhancement (Rehabilitation)	Preservation (Protection/ Management)
Open Water (PUB)	1:1	1:1	Project Specific	Project Specific
Emergent (PEM)	2:1	2:1 to 3:1	3:1 to 10:1	15:1
Scrub-Shrub (PSS)	2:1	2:1 to 3:1	3:1 to 10:1	15:1
Forested (PFO)	2:1 to 3:1	3:1 to 4:1	5:1 to 10:1	15:1

Source: Excerpted from USACE's "New England District Compensation Mitigation Guidance" dated July 20, 2010

Based on regulations promulgated by the Department of Defense and Environmental Protection Agency in *Mitigation for Losses of Aquatic Resources; Final Rule* (Fed. Reg. Vol. 73, No. 70, April 10, 2008) the hierarchy graphic of the preferred wetland mitigation options for impacts to federally regulated wetlands are presented in the following graphic.



The project anticipates impacting a total 0.04 acres of wetlands associated with the construction of the bridge over the Normanskill. This level of impact does not require mitigation as it falls below the USACE 0.10 acre threshold. However, once a specific tenant or project is identified and it is determined that additional wetland impact is necessary, then based on the hierarchy of the preferred wetland mitigation options identified in the above figure for impacts to federally regulated wetlands, and the available mitigation options in the region, the preferred and most appropriate mitigation option for this project would be to utilize in-lieu-fee program which has a service area within the same 8-digit Hydrologic Unit Code (HUC), or adjacent 8-digit HUC within the same drainage basin (HUC-6), such as the TWT's (The Wetland Trust) Mohawk River Watershed Service Area. If at the time of need, consideration will be given to utilizing any newly established in-lieu-fee mitigation Wetland Trust that becomes approved for use within the project service area. In-lieu-fee mitigation occurs in circumstances where a permittee provides funds to an in-lieu-fee sponsor instead of either completing project-specific mitigation or purchasing credits from an approved mitigation bank. In-lieu-fee programs may be used to compensate for impacts to aquatic resources authorized by general permits and individual permits. This program is administered by USACE and regional land banks. The USACE has a fee schedule determined for each watershed/community as it varies based upon location. The USACE would review the wetland impact for the project, apply the appropriate fee and applicant would pay the in-lieu-fee to the regional land bank directly.

Mitigation in accordance with USACE rules and regulations will ensure no net loss of wetlands.

3.4. Floodplains and Floodways

3.4.1. Environmental Setting

Based on the most current Federal Emergency Management Agency (FEMA) map of Project Area (Map No. 36001C0307D, Effective March 16, 2015) the majority of the Project Area is mapped within the 100-year floodplain of the Hudson River (**Figure 3.4-1**). The floodplain area is mapped as "Zone AE", meaning the area inundated by 1% annual chance flooding, for which base flood elevations (BFEs) have been determined. The BFE line has been established at approximately 18 feet within the area of the Project Site as referenced to North American Vertical Datum of 1988 (NAVD 88).

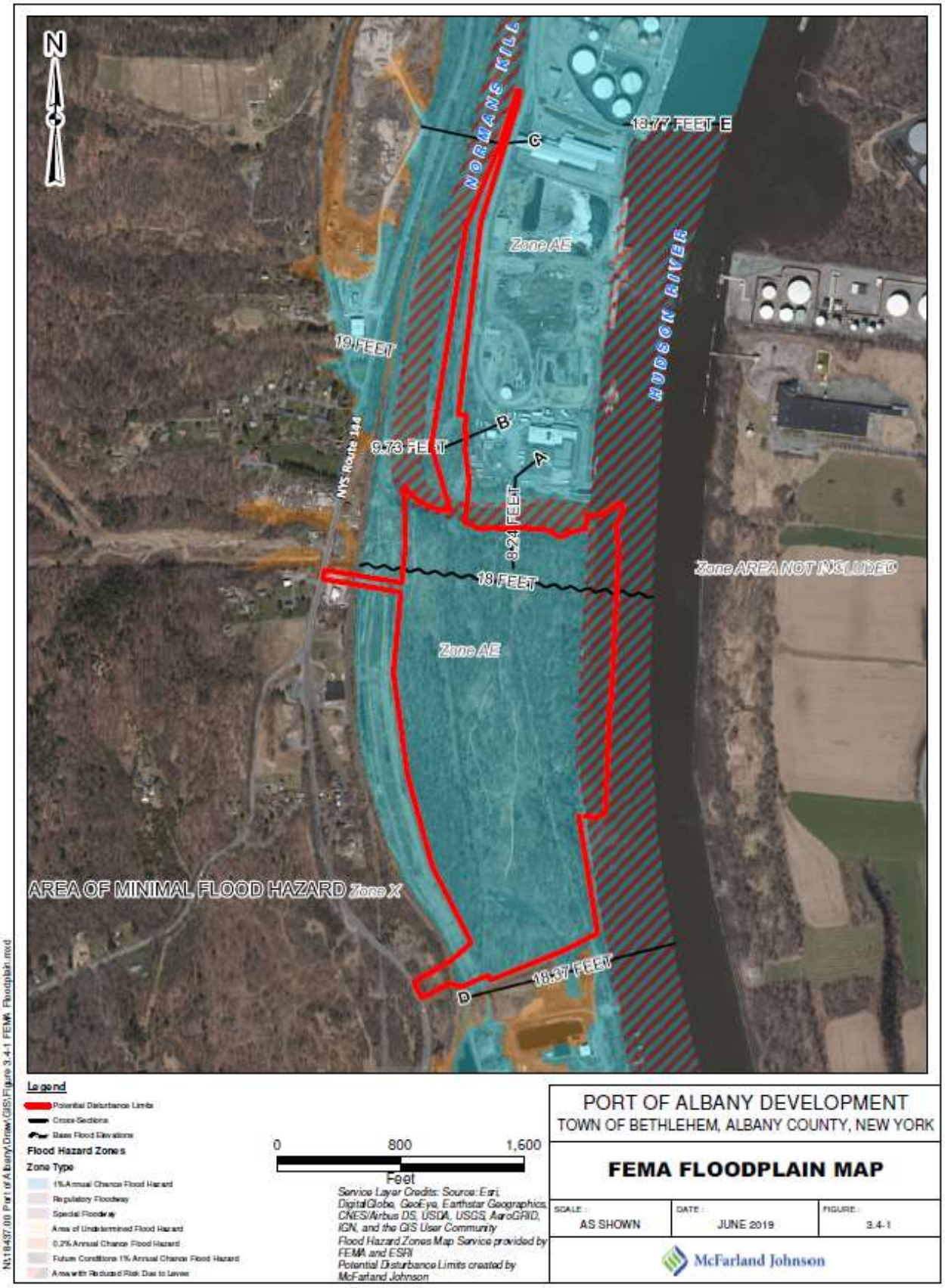
Floodway zones have been established for the Hudson River and Normans Kill. These areas are also mapped as Zone AE and closely follow the banks of the rivers.

Historical data of the Hudson River show that crest heights of the river below 18 feet. The gauge on the Hudson River at Albany, NY managed by the NY Water Science Center Troy (USGS gauge number 01359139), approximately three miles upstream of the Project Site and three miles downstream of the Troy Lock and Dam, show only four recorded event greater than 18 feet; one of which was the result of an ice dam. During Irene in August of 2011 the Hudson crested at approximately 14.6 feet in this location.

Below is a table of results showing predicted sea level rise in the Mid-Hudson Region for different time horizons at different confidence levels. These results were generated from the NYSDEC's ClimAID model. Storm surge is applicable as storm surges relate to coastal locations and the Site Location is not considered a coastal location, as defined by FEMA.

Time Interval	*Low Projection*	*Low-Medium Projection*	*Medium Projection*	*High-Medium Projection*	*High Projection*
2020s	*1 inch*	*3 inches*	*5 inches*	*7 inches*	*9 inches*
2050s	*5 inches*	*9 inches*	*14 inches*	*19 inches*	*27 inches*
2080s	*10 inches*	*14 inches*	*25 inches*	*36 inches*	*54 inches*
2100	*11 inches*	*18 inches*	*32 inches*	*46 inches*	*71 inches*

Source: 6 CRR-NY 490.4(a)


N
NORMANS KILL
HUDSON RIVER
13.77 FEET
E
C
Zone AE
19 FEET
B
9.73 FEET
NYS Route 144
A
8.24 FEET
18 FEET
Zone AREA NOT INCLUDED
Zone AE
AREA OF MINIMAL FLOOD HAZARD Zone X
18.37 FEET
D
Legend
Potential Disturbance Limits
Cross-Sections
Base Flood Elevations
Flood Hazard Zones
Zone Type
1% Annual Chance Flood Hazard
Regulatory Floodway
Special Floodway
Area of Undetermined Flood Hazard
0.2% Annual Chance Flood Hazard
Future Conditions 1% Annual Chance Flood Hazard
Area with Reduced Risk Due to Levee
0
800
1,600
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Flood Hazard Zones Map Service provided by FEMA and ESRI
Potential Disturbance Limits created by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
FEMA FLOODPLAIN MAP
SCALE: AS SHOWN
DATE: JUNE 2019
FIGURE: 3.4-1
McFarland Johnson
N:\18497.00 Port of Albany\Draw\GIS\Figure 3.4-1 FEMA Floodplain.mxd

3.4.2. Potential Impacts

The placement of fill or other encroachments into floodways and floodplains has the potential to raise BFEs or displace floodwaters to adjacent areas. In addition, the placement of buildings and other structures within floodplains subjects them to potential damages or loss during flooding events. Furthermore, is expected that, as a result of climate change, sea levels will rise over time making peak flood elevations higher than they currently are. The NYSDEC "Low Projection" (as NYSDEC reports is based on historical data) of climate related sea-level rise by the year 2100 is 11 inches for the Mid-Hudson Region (The "Low Projection" amount of sea-level rise that is likely to be exceeded by the 10th percentile of ClimAID model outputs).

The project includes the construction of a wharf which will require work within the floodway. Removal of material from the navigational channel of the river will required be to provide adequate draft for ships to access the wharf.

The project also involves fill and placement of structure(s) within the 100-year floodplain. In accordance with FEMA's National Flood Insurance Program (NFIP) the lowest floor of structures built in Special Flood Hazard Areas (SFHAs), including Zone AE, shall will be greater than 1 foot above the BFE. The project will be designed such that all building lowest floor elevations and bridge lowest surface elevation will be at a minimum elevation of 20.3 feet (NAVD 88), which is 2.3 feet above the BFE or 1.3 feet above the FEMA required floor elevation. All building structures will be placed at a finished floor of at least elevation 20.3 feet (NAVD 88). This elevation places the buildings 2.3 feet above the current FEMA 100-year BFE, and 1.3 feet above the FEMA 100-year BFE modified for the Low-Projection of sea level rise for the year 2100.

Per the Draft NYS Flood Risk Management Guidance for Implementation of Climate Risk and Resiliency Act (CRRA), Section 3.3.2.5.1.2 Non-Critical Facilities, Tidal Areas the DEC recommends the following:

> Applicants in projects involving non-critical facilities and infrastructure in tidal areas should demonstrate consideration of the following guideline elevation, as practical, considering feasibility, project costs, costs of flooding, funding eligibility, risk tolerance, environmental effects and historic preservation:
>
> The elevation and special flood-hazard area that result from adding the medium sea-level rise projection applicable for the full, expected service life of the facility, plus two feet of freeboard, to the BFE and extending this level to its intersection with the ground.

Given the definitions in the Draft NYS Flood Risk Management Guidance for Implementation of Climate Risk and Resiliency Act (CRRA), the project is considered to be a non-critical facility; it is located within a tidal area of the Hudson River; and the project's anticipated useful life is 50 years. This would make the medium projection of sea level rise 25 inches, or 2.1 feet over the life of the project. Assuming a Base Flood Elevation (BFE) of 18, the resulting Finished Floor Elevation (FFE) of the building would be 22.1 feet (18' + medium sea level rise of the project life + 2'). The project's current FFE is 20.3 feet, which was established to keep the project safely above the BFE, account for sea level rise, and balance the earthwork of the Project Site to the greatest extent

practicable. Raising the building and associated Project Site an additional 1.9 feet would require roughly 133,000 cubic yards of fill to be hauled onto the Project Site. This would have a significant impact on project costs and impose additional environmental impact on the surrounding transportation system and neighboring communities by hauling a significant amount of fill. In addition, given FEMA has not released an updated Floodplain study, the historical crest of the Hudson was 14.6 in 2011 (at NOAA station 3-miles from this Project Site), which could be considered the current peak flood level. The most recent crest is 3.4 feet lower than the FEMA reported BFL of 18. Therefore, utilizing the DEC medium projection level would require the import of an additional 133,000 cubic yards of fill is not considered practical nor cost effective. Therefore, taking into consideration the DEC guidelines, the proposed FFE of 20.3, is considered a practical, risk tolerant, cost effective, and environmentally sensitive solution.

The risk associated with using the "low" vs the "medium" projection of sea rise is that the medium projected sea rise would potentially flood a portion of the Project Site, the lowest points nearest to the river used for vehicle parking, to up to 6.1 feet; and that the building could potentially experience floodwaters to a depth of roughly 1.9 feet . The Project Site will be occupied by largely mobile assets (materials, trucks, cars, etc.) that can be evacuated from the flood prone areas in the case of an emergency. The building will be privately owned, operated, and insured. In the event of flooding any damage will be repaired or replaced by the owner at no expense to the Town of Bethlehem.

The package treatment plant will be designed and installed to exceed the *NYSDEC DRAFT New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act June 20, 2018.* This Act states the following: *Section 3.3.2.4.1, Non-Critical Water Infrastructure:*

> *Applicants in projects involving non-critical water treatment and supply equipment in both tidal and nontidal areas should demonstrate consideration of the following guideline, considering practicality, costs, risk tolerance and environmental effects:*
>
> - *The vertical flood elevation and corresponding horizontal floodplain that result from adding two feet of freeboard to the BFE [100-yr storm even water elevation] and extending this level (transversely to the direction of flow in riverine situations) to its intersection with the ground*

The Resiliency Act suggests that the package treatment plant be designed such that it will not allow a release of raw sewage for a storm event 2 feet above the 100 yr. flood elevation. Two feet above the 100 yr. storm event is elevation 20.0 (100 yr. BFE of 18 feet plus 2 feet). The project's package treatment plant will exceed this recommendation by being designed and constructed to be resilient and operable at flood elevation of 22.1 feet (BFE of 18 feet, plus the 50 year-medium projection sea level rise of 2.1 feet, plus 2 feet of freeboard).

3.4.3. Mitigation Measures

In accordance with FEMA's National Flood Insurance Program (NFIP) the lowest floor of structures built in Special Flood Hazard Areas (SFHAs), including Zone AE, shall will be greater than 1 foot above the BFE. The project will be designed such that all building lowest floor elevations are a minimum elevation of 20.3 feet (NAVD 88). This will provide for a minimum

elevation of 1.3-feet above the NYSDEC "Low Projection" of climate related sea-level rise to year 2100. The "Low Projection" amount of sea-level rise is that is likely (the 10th percentile of ClimAID model outputs) to be exceeded by the specified time interval. A section of the Project Site was taken as part of an engineering analysis at the location of the FEMA 18-foot BFE and is represented in **Figure 3.4-2**. The cross section shows the material removed for the wharf as well as the material being moved to bring the Project Site up to grade. As shown in the section there is more material being removed than added. Therefore, the project is not anticipated to significantly affect the flood plain BFE in this area.

The project involves activities within the Hudson River floodway; however, the only work proposed within the floodway is the removal of material to create a wharf and the required channel depths for proper access. Any actions by this project will not result in a deleterious effect of the floodway's capacity to convey storm events.

Once a tenant is identified, the site plan application will include a mobilization plan that will discuss any outdoor storage of potential pollutants. The mobilization plan will also describe how any mobile equipment will be moved to higher ground within the existing Port District storage areas. In addition, the final project design will involve coordination with FEMA and the Town of Bethlehem. The project will use floodplain design standards that meet or exceed floodplain development requirements and building codes, and as a result no further mitigation is being proposed. It is duly acknowledged that when the final project is proposed, as part of the Site Plan approval process, the owner will be required to obtain a Floodplain Development Permit pursuant to Bethlehem Town Code Chapter 69-Flood Damage Prevention.

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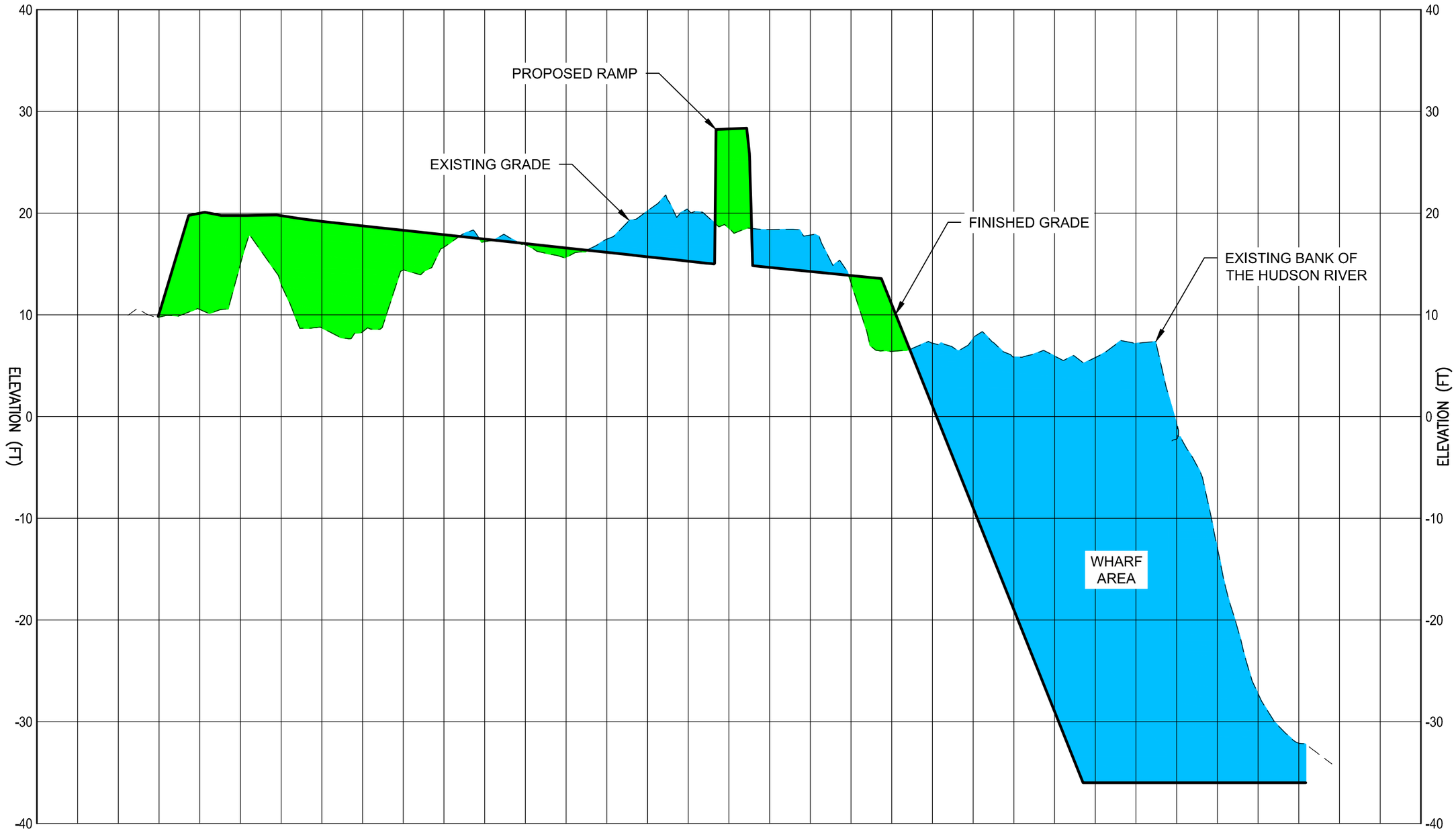

LEGEND

CUT

FILL

CUT	10,150 SF
FILL	2,700 SF

PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK

FLOODPLAIN ANALYSIS

SCALE:	DATE:	FIGURE:
NOT TO SCALE	JUNE 2019	3.4–2

McFarland Johnson

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3.5. Groundwater

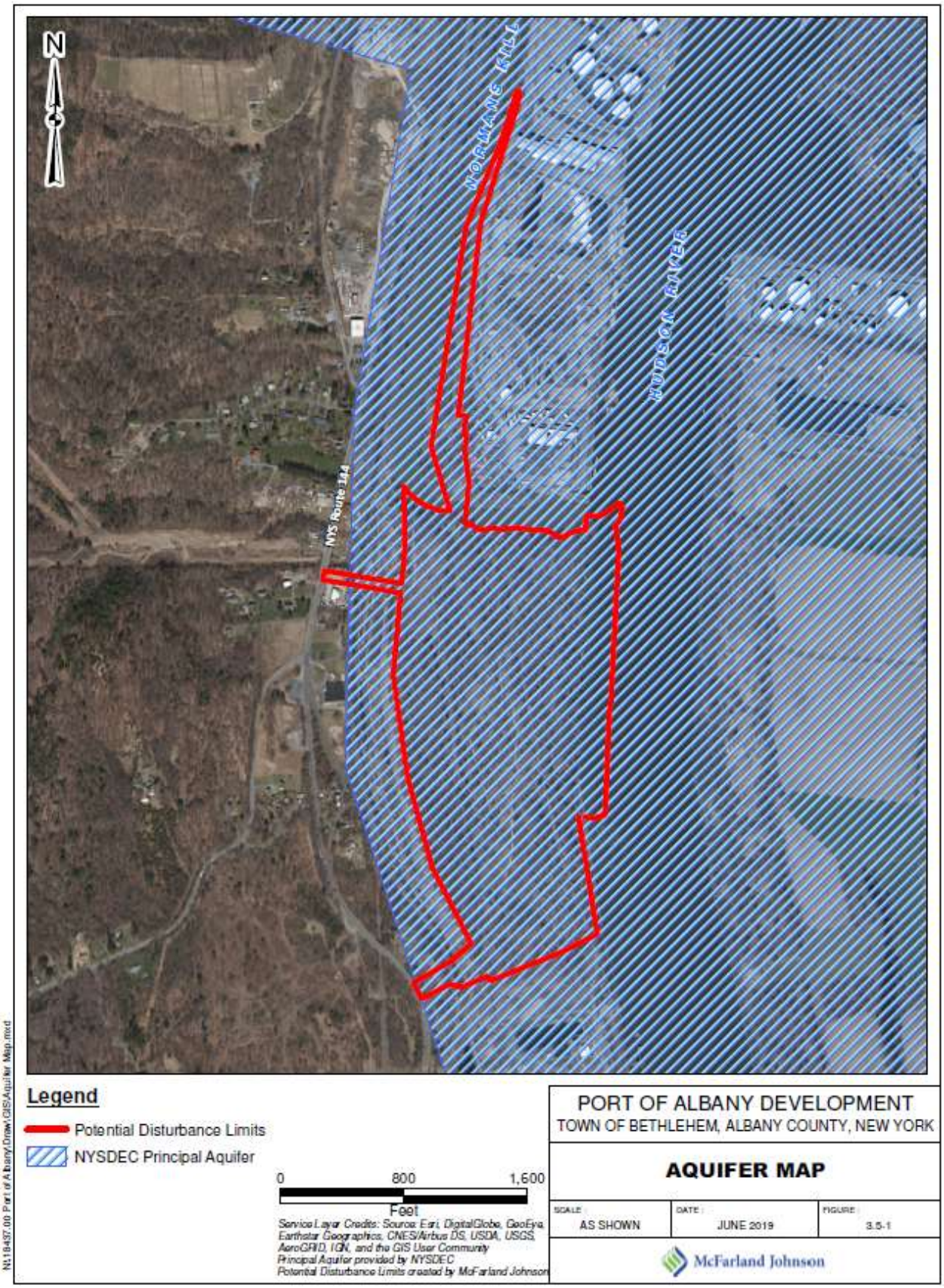
3.5.1. Environmental Setting

Based on recent subsurface and geotechnical investigations prepared by CME Associates, Inc. and Dente Group respectively, shallow groundwater was observed at depths ranging from approximately 1.5 to 13.7 feet below existing grade. However, due to the subsurface conditions, the shallower observations could be representative of perched groundwater zones due to discontinuous impermeable layers. Shallow groundwater fluctuations should be expected to occur at the Project Site depending on several factors such as rainfall, seasonal changes, prevailing climate, ambient weather conditions, and the tidal influences of the Hudson River. Geotechnical reports have been included in **Appendix E of the DGEIS**.

The Environmental Protection Agency (EPA) Sole Source Aquifer (SSA) program was established under the Safe Drinking Water Act (SDWA). According to the EPA, a SSA is defined as one that supplies at least 50 percent of the drinking water for its service area, and wherein which there is no reasonably available alternative drinking water sources should the aquifer become contaminated. The SSA program allows for EPA review of federally funded projects that have the potential to affect designated SSAs and their source areas.

New York has several programs designed to protect groundwater, most notably the Water Quality Standards Program (6 NYCRR Parts 700-706) and the Aquifer Vulnerability Assessment requirement under SEQR. In addition, the NYSDEC protects designated Primary and Principal Aquifers as defined under Section 2.1.3 of the Division of Water Technical & Operational Guidance Series. A Primary Aquifer is one that is highly productive and is currently being utilized as a source of water supply by a major municipal water supply system. A Principal Aquifer is defined as an aquifer that is or could potentially be highly productive but is not currently intensely used as a source of water for a major municipal water system.

The project is not located over an EPA designated sole source aquifer, or a NYSDEC designated primary aquifer. However, the Project Site is located over a NYSDEC mapped principal aquifer area (See **Figure 3.5-1**).


N
NORMANS KILL
HUDSON RIVER
NYS Route 144
Legend
Potential Disturbance Limits
NYSDEC Principal Aquifer
0
800
1,600
Feet
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Principal Aquifer provided by NYSDEC
Potential Disturbance Limits created by McFarland Johnson
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
AQUIFER MAP
SCALE: AS SHOWN
DATE: JUNE 2019
FIGURE: 3.5-1
McFarland Johnson
N:\18437.00 Port of Albany\Draw\GIS\Aquifer Map.mxd

3.5.2. Potential Impacts

Groundwater serves as an important potable water supply for many individual households, small communities, and larger municipalities. Potential impacts from development projects can include potential groundwater contamination through chemical, toxin, or other pollutant releases during and post-construction. In particular, improper handling and storage of bulk petroleum and hazardous substances can result in significant groundwater contamination.

The majority of the area surrounding the Project Area is served by municipal potable water supply systems, including the Town of Bethlehem and City of Albany. The Town of Bethlehem water supply comes from the Vly Creek Reservoir, New Scotland Wellfield, Selkirk Wellfield, and the City of Albany via the Albany Aqueduct. The closest Town water supply source to the project site is, the Selkirk Wellfield which is approximately 4.5 miles to the south. Therefore, due to the distance and location of the closest Town water source to the Project Site there is no significant adverse impact to the Town of Bethlehem water supply.

The City of Albany comes from the Alcove Reservoir in the Town of Coeymans and is treated prior to delivery via the Albany Aqueduct. Based on the estimated potable water supply demand for the project and the availability of municipal potable water supplies from both surface and groundwater sources, the project will not have a significant effect on potable water groundwater supply capacities, source locations, or infrastructure. See **Section 3.9** for further details regarding water service for the project.

Based on the estimated potable water demand of 16,950 gpd (as discussed in **Section 3.9**) and the available Town capacity of 6 mgd as stated in the **FGEIS Appendix F** the Town of Bethlehem Drinking Water Quality Report, the project will have no significant adverse impact on the capacity of the Town water supply , or infrastructure.

3.5.3. Mitigation Measures

Potential pollution sources during construction will be effectively mitigated through the incorporation of appropriate erosion and sediment controls, stormwater management, and fuel/ chemical storage and handling best management practices during and post construction of the project.

The State Pollutant Discharge Elimination System (SPDES) program controls point source discharges to groundwaters as well as surface waters during and post construction. Compliance with the SPDES design and permitting requirements, as well as other applicable local, State, and federal rules and regulations regarding petroleum and chemical storage during and after construction, will be required for this project and will effectively mitigate potential groundwater impacts. See **Section 3.8** for further information specific to the SPDES requirements.

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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.

This section describes climate and air quality. Air quality within the area adjacent to the Project Site has been the focus of numerous studies and reports for many years. The NYSDEC has studied the air quality in the Albany South End for years based on concerns for public health. The NYSDEC determined air toxins of particular concern to public health for residents in the Albany South end. Regulatory reports and studies related to climate and air quality are summarized below.

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 Project 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. See **Figure 3.6-1** for air monitoring locations utilized in the various air monitoring studies discussed.

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 which began 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 air quality values within the Albany South End were similar to concentrations routinely found at other locations in the State. 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 study concluded that the source of the hydrogen sulfide odor in this localized (Buckeye Terminal) area and may include an asphalt plant and diesel emissions from trucks and equipment, including marine vessels and intermittent operations of diesel engines.

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 west as Highway 87, and as far east 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.

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EZRA PRENTICE PLAYGROUND (ALBANY SOUTH END AIR QUALITY SCREENING 2014)

EZRA PRENTICE STUDY MONITOR (JANUARY 2018 UPDATE AND ALBANY SOUTH END COMMUNITY AIR QUALITY STUDY)

#4 (ODORS & HYDROGEN SULFIDE)

KRANK PARK (ALBANY SOUTH END AIR QUALITY SCREENING 2014)

3RD AVE STUDY MONITOR (JANUARY 2018 UPDATE AND ALBANY SOUTH END COMMUNITY AIR QUALITY STUDY)

LOUDONVILLE (ANNUAL MONITORING)

GANSEVOORT & FRANKLIN STREETS (ALBANY SOUTH END AIR QUALITY SCREENING 2014)

#5 (ODORS & HYDROGEN SULFIDE)

#6 (ODORS & HYDROGEN SULFIDE)

SOUTH ALBANY MONITOR (ALBANY SOUTH END COMMUNITY AIR QUALITY STUDY, ANNUAL MONITORING REPORT)

#1 (ODORS & HYDROGEN SULFIDE)

#7 (ODORS & HYDROGEN SULFIDE)

NYSDEC NETWORK MONITOR (ACHD) (ANNUAL MONITORING, JANUARY 2018 UPDATE, AND ALBANY SOUTH END COMMUNITY AIR QUALITY STUDY)

#8 (ODORS & HYDROGEN SULFIDE)

#2 (ODORS & HYDROGEN SULFIDE)

#3 (ODORS & HYDROGEN SULFIDE)

AIR MONITORING LOCATIONS

AIR REPORT	LOCATIONS	NOTES
ALBANY SOUTH END COMMUNITY AIR QUALITY SCREENING	1 - EZRA PRENTICE PLAYGROUND, 2 - CORNER OF GANSEVOORT AND FRANKLIN, 3 - KRANK PARK	
ALBANY SOUTH END - BENZENE RESULTS	--	NOT SPECIFIED
ODORS & HYDROGEN SULFIDE	ROTATED BETWEEN 8 LOCATIONS (#1 - #8)	
DEC'S AIR TOXICS MONITOR	--	NOT SPECIFIED
SOUTH END STUDY PROGRESS UPDATE JANUARY 2018	1 - EZRA PRENTICE, 2- ALBANY COUNTY HD, 3 - 3RD AVENUE, 4 - PORTABLE	PORTABLE NOT SHOWN
ALBANY SOUTH END COMMUNITY AIR QUALITY STUDY	1 - EZRA PRENTICE, 2- ALBANY COUNTY HD, 3 - 3RD AVENUE, 4 - PORTABLE	PORTABLE NOT SHOWN
NW YORK STATE AIR QUALITY REPORT, AIR MONITORING SYSTEM, 2018	STATE NETWORK, 3 IN REGION, 1 - LOUDONVILLE, 2 - ALBANY (ALBANY COUNTY HD), 3 - SOUTH ALBANY	IN 2018 REPORT LOUDONVILLE HAD FOUR AIR TOXINS REPORTED, ALBANY HAD 1 AIR TOXIN REPORTED, SOUTH ALBANY HAD NONE REPORTED

SCALE

0 2000 4000

FEET

PORT OF ALBANY

PORT OF ALBANY EXPANSION PROJECT

NYSDEC AIR MONITORING LOCATIONS

SCALE:	DATE:	FIGURE:
1" = 2000'	MARCH 2020	3.6-1

McFarland Johnson

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3.6.2. Potential Impacts

Operation of the Project Site will likely include the use of fleet vehicles, fleet equipment (such as forklifts), 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 District 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 required 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 potentially 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.

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 paint both will be equipped with proper filtration systems and overspray controls per the permit requirements. The spray booth will be located more than 1.7 miles from the Ezra Prentice community and 360 feet from the closest residence; as a result, any odors associated with spray booths will dissipate and not reach the community or nearby residences.

The NYSDEC completed an extensive air monitoring study in October 2019 "*Albany South End Community Air Quality Study Report*". The study included monitoring of various air pollutants including particulate matter, PM2.5. The study showed that predominant winds come from the south, as shown on the NYSDEC Figure 22 "Wind Rose Plots for Ezra Prentice and ACHD". The study also concluded on Page 44 that "Mobile source pollutants disperse quickly moving from the edge of an active roadway. Typically, the concentrations drop to background levels within a few hundred feet from the edge of the roadway. This is an important consideration because the distance to the roadway has a bigger impact on local pollutant concentrations than the number of vehicles on that roadway." In addition, an objective of the study was to "develop an understanding of how far particulate matter travels from the road into the neighborhood." The report concluded that there is a rapid decline in concentration of UFP and other pollutants emitted by vehicles with distance from the road. UFP concentrations may decrease by at least 50% at distances greater than 500 feet. The Project Site is located approximately 1.7 miles southeast from the Ezra Prentice community and therefore the impact from new tenant operations and traffic located on the Project Site will not have a significant impact on the Ezra Prentice community. In addition, any proposed tenant will be required to apply for any appropriate air permits and comply with all local, state, and federal regulations.

Ezra Prentice community is located as close as 20 feet from South Pearl Street, which adds to air quality concerns relating to traffic along this City Street. The required truck route will direct trucks through existing City of Albany streets within the Port of Albany District. This truck route, at its closest, is located to the east over 1,650 feet away from Ezra Prentice community. As stated above, mobile source pollutants disperse quickly from the edge of the road and drop to background levels within a few hundred feet from the road. Since the truck route is over 1,600 feet away from the Ezra Prentice community the required truck route will not cause a significant adverse impact on the community.

The required truck route that is closest to the Ezra Prentice Community is through the existing Port District along Smith Boulevard. A truck on Smith Boulevard would be approximately 0.35 miles (1,848 feet) to the east of Ezra Prentice. Based on the analysis performed by the NYSDEC, due to the distance from Ezra Prentice and the predominant prevailing winds (from the south) it can be concluded that the required truck routes will have not have a significant impact on the Ezra Prentice community relative to the PM2.5 concentrations or other air pollutants summarized in the report.

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 District or via South Port Road by prohibiting exiting (westbound) right hand turns, and therefore would not affect the Ezra Prentice community. The required 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 required 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

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.

Potential manufacturing uses of the Project Site have not been determined at this point, but there is a potential the Project Site would have an indoor spray paint booth. The spray paint booth would have an exhaust system equipped with a proper filtration system 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.

Odor releases from the site are unlikely; however, additional potential odor mitigation could also include vegetative buffers between the property and adjacent properties. The New York State DEC Standard for hydrogen sulfide is 0.01 ppm for a one-hour period which will be used as the odor threshold value for this project.

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 over the anticipated 10 year build-out period. 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. The CAMP will follow NYSDEC requirements and will be specific to the site construction. The purpose of the CAMP is to protect off-site receptors from potential air toxins as a result of construction activities on-site.

3.7. Traffic and Transportation

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

The Port of Albany is in the design process of upgrading Smith Boulevard from Boat Street to Raft Street with construction anticipated in the Spring of 2021. Also, as part of the Port of Albany Expansion Project, Port Road South will be improved starting at the new bridge over the Normanskill extending approximately 900 linear feet north connecting to existing South Port Road .

Scope of the Traffic and Transportation Study

The purpose of this study 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 determine the impacts, if any, associated with the proposed development. Based on 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:

- 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)

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 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. In addition to this data, an automatic traffic recorder was placed on NYS Route 144 (River Road) near the Project Site for a week from Monday June 17, 2019 to Friday June 21, 2019 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 the TIS 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. 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 collected data to represent an average day for both the AM and PM peak hours, resulting in a 6% increase in the counted traffic. Available historic count data from NYSDOT and previously completed traffic studies in the area were reviewed to confirm this seasonal adjustment was appropriate.

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 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 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 NYSTA Building. Of these, only the Gateway Commerce Center has had a traffic study competed 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. The previous study completed for the Project Site (Beacon Harbor TIS 2009) was also reviewed 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. The Port of Albany Expansion Project will be developed with similar uses and tenants that currently exist within the Port District; therefore, the Project 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 Project 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 which is the recommended methodology as stated in ITE Trip Generation Manual, and is the industry standard that was approved by NYSDOT for this project. Trip generation rates referenced in the Trip Generation section of the TIS on page 13 were provided to validate that using the calculated rate was reasonable when comparable to the rates assigned by the ITE. 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. 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 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 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.

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 US Route 9W (*Signalized*)	Westbound	L	E	E	E	E	E	E
		R	B	B	B	B	B	B
	Northbound	T	D	D	D	D	E	D
		R	A	A	A	A	A	A
	Southbound	L	C	D	D	D	D	D
		T	A	A	A	A	A	A
	OVERALL		**C**	**C**	**D**	**D**	**D**	**C**
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**
NYS Route 144 at I-87 Exit 22 Ramp (*Un-Signalized*)	Northbound	T-L	A	A	A	A	A	
	Eastbound	L	B	C	C	C	C	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at Glenmont Road (*Un-Signalized*)	Eastbound	L-R	E	F	F	F	F	
	Northbound	T-L	A	A	A	A	A	
	OVERALL		**A**	**B**	**B**	**B**	**B**	
NYS Route 144 at NYS Route 32 (*Un-Signalized/Signalized*)	Northbound	T-L	A	A	A	A	A	B
	Eastbound	L	E	F	F	F	F	C
		R	B	B	B	B	B	A
	Southbound	T-R						A
	OVERALL		**A**	**A**	**A**	**A**	**C**	**B**
Church Street at Broadway (*Un-Signalized*)	Westbound	L	B	B	B	B	C	
		R	A	A	A	A	A	
	Southbound	L	A	A	A	A	A	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
Clapper Road at NYS Route 144 (River Road) (*Un-Signalized*)	Northbound	L	A	A	A	A	A	
	Eastbound	L	B	B	B	B	C	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
I-787/I-87 Exit 23 On Ramp at US Route 9W) (*Signalized*)	Northbound	L	B	B	B	B	B	
		T	A	A	A	A	A	
	Southbound	T	C	C	C	C	C	
	OVERALL		**B**	**B**	**B**	**B**	**B**	
I-787/I-87 Exit 23 Off Ramp at US Route 9W) (*Signalized*)	Eastbound	L	E	F	F	F	F	
		R	B	B	B	B	B	
	Northbound	T	B	B	B	B	B	
	Southbound	T	A	A	A	A	A	
	OVERALL		**C**	**C**	**C**	**C**	**C**	
NYS Route 144 at Wemple Road North (*Un-Signalized*)	Northbound	L-T	A	A	A	A	A	
	Eastbound	L-R	C	C	C	C	C	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at Wemple Road South (*Un-Signalized*)	Northbound	L-T	A	A	A	A	A	
	Eastbound	L-R	B	B	B	B	B	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at Proposed Site Driveway (*Un-Signalized*)	Westbound	L			B	B	C	
	Southbound	L			A	A	A	
	OVERALL				**A**	**A**	**A**	

INTERSECTION LEVEL OF SERVICE TABLE – EVENING PEAK HOUR

Study Intersection	Approach and Movement		2019 Existing LOS	2029 Background LOS	2029 Build-Phase I LOS	2029 Build-Phase II LOS	2029 Build-Phase III LOS	2029 Build-Phase III w/ Mitigation 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 US Route 9W (*Signalized*)	Westbound	L	C	D	D	D	D	
		R	B	B	B	B	B	
	Northbound	T	C	C	C	C	C	
		R	A	A	A	A	A	
	Southbound	L	B	B	B	C	C	
		T	B	B	B	B	B	
	OVERALL		**C**	**C**	**C**	**C**	**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**
NYS Route 144 at I-87 Exit 22 Ramp (*Un-Signalized*)	Northbound	T-L	A	A	A	A	A	
	Eastbound	L	B	B	B	B	B	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at Glenmont Road (*Un-Signalized*)	Eastbound	L-R	C	C	C	C	D	
	Northbound	T-L	A	A	A	A	A	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at NYS Route 32 (*Un-Signalized/Signalized*)	Northbound	T-L	B	B	B	B	B	A
	Eastbound	L	D	E	E	E	F	C
		R	C	C	C	C	C	B
	Southbound	T-R						B
	OVERALL		**A**	**A**	**A**	**A**	**A**	**B**
Church Street at Broadway (*Un-Signalized*)	Westbound	L	B	B	B	B	B	
		R	A	A	A	A	A	
	Southbound	L	A	A	A	A	A	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
Clapper Road at NYS Route 144 (River Road) (*Un-Signalized*)	Northbound	L	A	A	A	A	A	
	Eastbound	L	B	B	B	B	C	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
I-787/I-87 Exit 23 On Ramp at US Route 9W (Signalized)	Northbound	L	F	E	E	E	F	F
		T	A	A	A	A	A	A
	Southbound	T	F	F	F	F	F	F
	OVERALL		**F**	**F**	**F**	**F**	**F**	**E**
I-787/I-87 Exit 23 Off Ramp at US Route 9W (*Signalized*)	Eastbound	L	E	E	E	E	E	E
		R	B	B	B	B	B	B
	Northbound	T	A	A	A	A	A	A
	Southbound	T	D	E	E	E	E	D
	OVERALL		**C**	**D**	**D**	**D**	**D**	**C**
NYS Route 144 at Wemple Road North (Un-*Signalized*)	Northbound	L-T	A	A	A	A	A	
	Eastbound	L-R	B	B	B	C	C	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at Wemple Road South (*Un-Signalized*)	Northbound	L-T	A	A	A	A	A	
	Eastbound	L-R	B	B	B	B	B	
	OVERALL		**A**	**A**	**A**	**A**	**A**	
NYS Route 144 at Proposed Site Driveway (*Un-Signalized*)	Westbound	L			B	B	B	
	Southbound	L			A	A	A	
	OVERALL				**A**	**A**	**A**	

No. 1 – NYS Route 32 at 1st Avenue/I-787 Exit 2 Ramp

This signalized intersection is 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 the NYSDOT as development occurs in the area to ensure the timings are optimized for the current traffic volumes.

No. 2 – NYS Route 32 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 NYSDOT continue to monitor the intersection to optimize the signal timings to the current traffic volumes.

No. 3 – NYS Route 32 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.

No. 4 – NYS Route 144 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 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.

No. 6 – NYS Route 144 at NYS Route 32

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 installation of the traffic signal should be considered for the initial phase of construction for the development since this intersection is experiencing poor operating conditions without additional traffic from the Proposed Project Site. It is recommended that the traffic signal should be installed prior to initiating Phase II.

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, CME Associates, Inc., 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. A detailed traffic analysis of the existing intersection is not warranted, given the conversion to a roundabout.

No. 9 – Clapper Road at NYS Route 144

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. 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 be monitored as development occurs in the area to ensure the timings are optimized for the current traffic volumes as it is operating near capacity. Therefore, no noticeable impacts are anticipated at these intersections as a result of the proposed development.

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

Wemple Road has two intersections with NYS Route 144 (River Road), therefore each access drive was analyzed separately in order to more accurately model existing and future conditions. As shown in the table below, both 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. 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.

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

As requested, 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 (four total combined lanes) 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. 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 2016 Highway Capacity Manual are shown in the table below.

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		

The results of the analysis show that, the density in the ramp influence area of the merging highway on I-787 is currently 27.0 pc/mi/ln, or LOS 'C' in the morning peak hour and 15.4 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' (37.9 pc/mi/ln) and LOS 'B' (15.9 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.

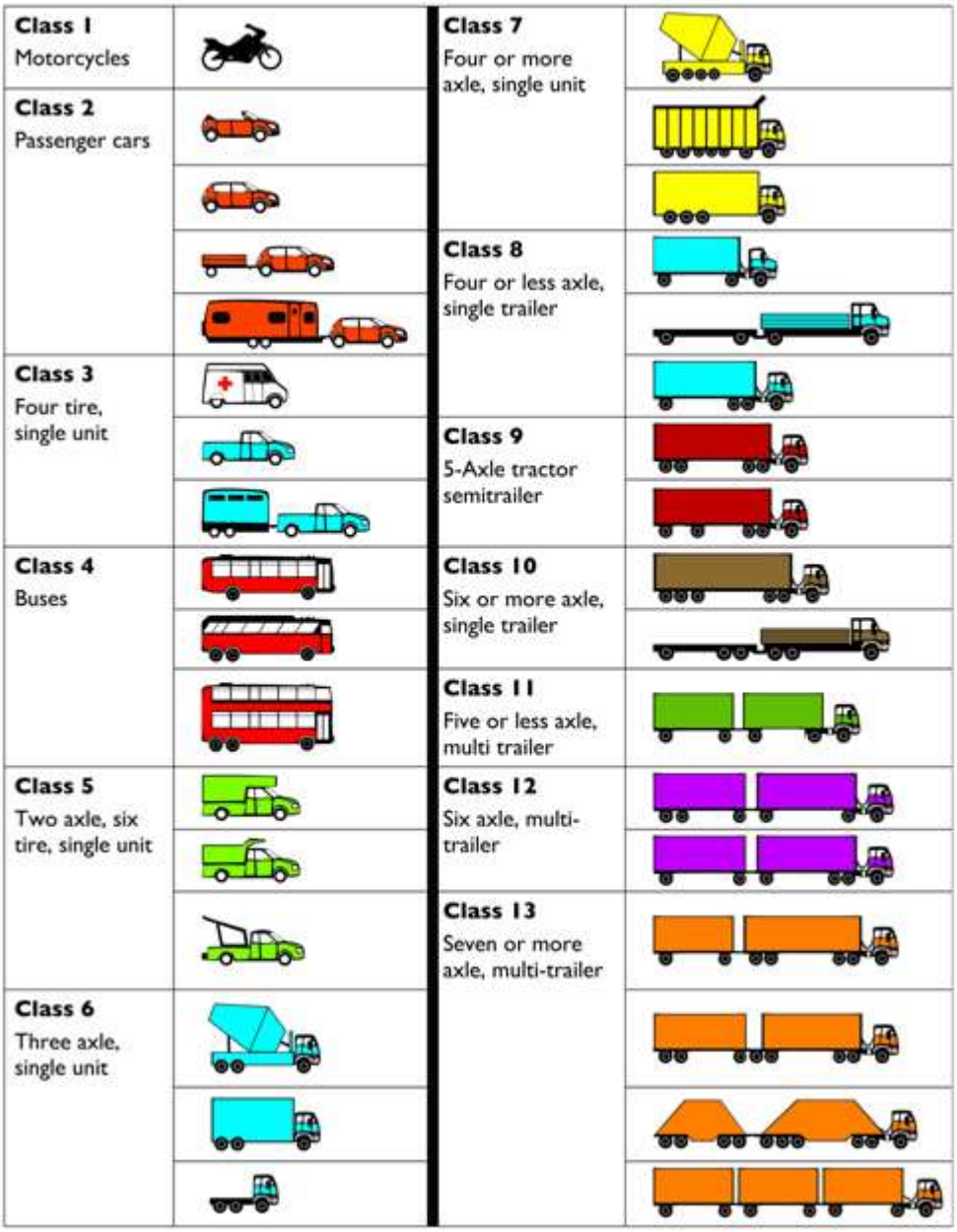
Truck Impact Analysis

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 is 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.

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.

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 Project 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.

Figure 3.7-1: FHWA Vehicle Classification Chart



Truck Volume Assessment

The projected truck trip distribution was established based on the actual distribution patterns from the existing Port of Albany site and given that the proposed new southern driveway onto NYS Route 144 will prohibit trucks due to intersection sight distance not meeting highway standards for truck turn movements. This distribution was compared with other truck studies recently completed in the area 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. Data from other traffic 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 the information presented was either not relevant to this study, or was too old to be useful.

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 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.

The midday peak was established using the truck peak hour data from the previously referenced South Albany Truck Traffic report. The peak truck traffic will be on the road during the midday hours where overall traffic volumes are significantly less than the morning and evening commuter peak hours. As a result, a capacity analysis for the truck peak hours is not useful as the roadway network has the capacity during the midday. **Table 6** below shows from a qualitative standpoint, the anticipated impact from the proposed development related to the volume of trucks during the midday peak timeframe using the existing truck distribution.

Table 6 – Truck Volumes Current Truck Distribution

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.

Based on the existing truck distribution, it is estimated that 45% of trucks entering and exiting the proposed development will utilize the Broadway/Church Street intersection to the north. 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 35% of trucks entering and exiting from the north, as well as the 10% of trucks entering and exiting from the west and south, respectively, will pass through residential areas.

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 Project 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 within the TIS, the results table is included in Appendix B of the TIS and the Synchro printouts of this analysis are included within Appendix C of the TIS.

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 within the TIS, 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 required 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 within the TIS, 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. The eastbound left turn movement at the NYS Route 144/I-87 Exit 22 ramp intersection during the morning and evening peak hour goes from a LOS 'C' and LOS 'B', respectively, to a LOS 'F'. This is due to the increase of approximately 75 trucks making this left turn onto NYS Route 144 for the southbound sensitivity analysis scenario. This sensitivity scenario assumes 100% of the trucks will use this route, which is not a likely scenario. The increased delay is due to these trucks requiring long gaps in traffic to safely turn onto NYS Route 144, increasing the delay time for vehicles waiting to make this turn movement. 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 within the TIS is assuming 100% of trucks are travelling to the I-87 Interchange via NYS Route 32 and US Route 9W. 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.

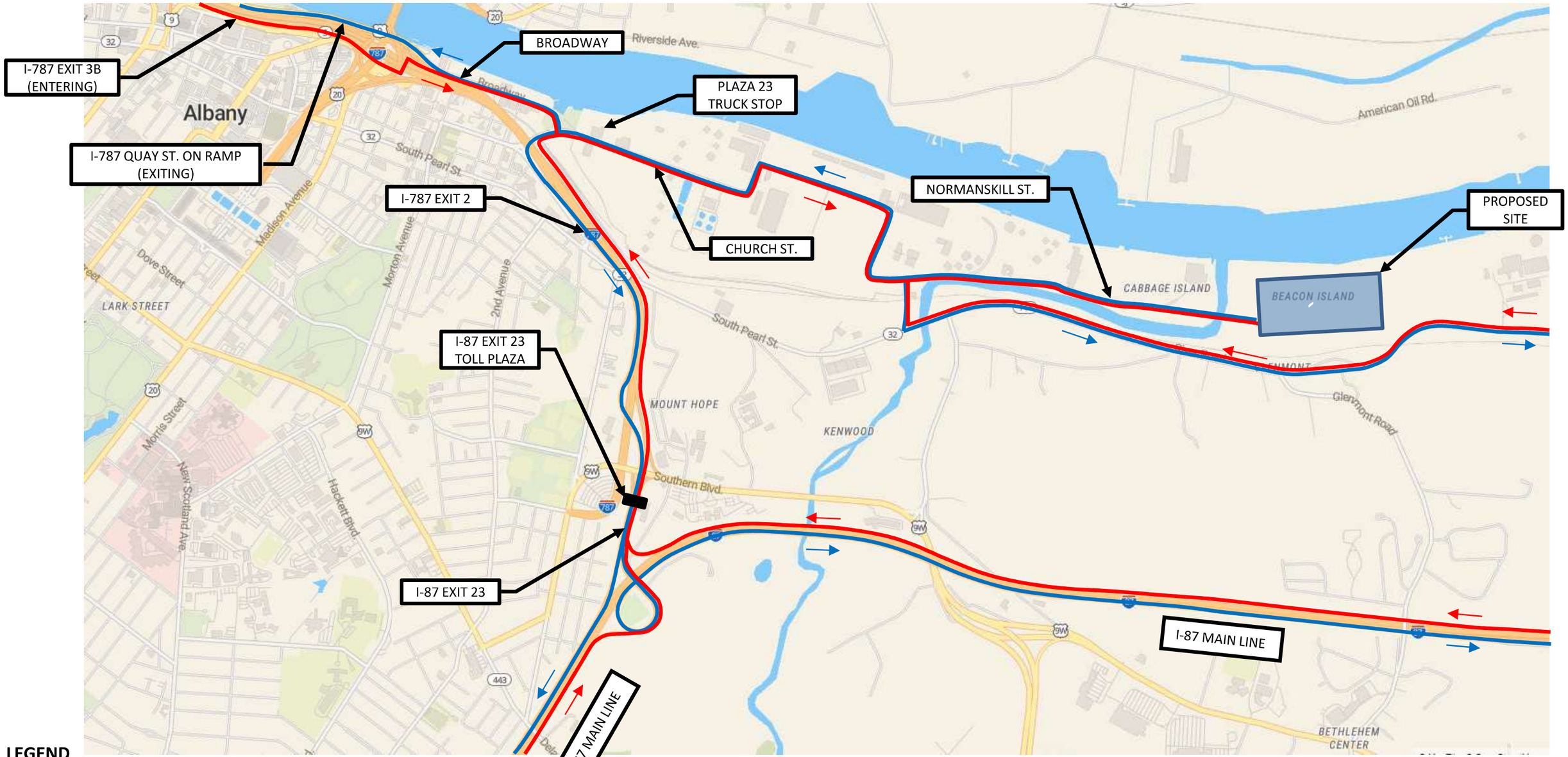
Conclusion

The required truck route is shown on Figure 17 within the TIS and **Figure 3.7-2** of the DGEIS includes the two-primary means of truck access to the Project site, via Church Street and Broadway to the north to access I-787 and the NYS Route 144 at South Port Road to head south on NYS Route 144. This required truck route also includes a restriction on right-turns for proposed trucks exiting the Project Site via South Port Road and traveling north, to limit any impact that the proposed trucks may have on the environmentally sensitive areas along South Pearl Street, including the Ezra Prentice community. This restriction minimizes the anticipated impact from the proposed development on the surrounding roadway network related to the volume of trucks during the midday peak timeframe. **Table 6a** below shows from a qualitative standpoint, the anticipated impact from the proposed development related to the volume of trucks during the midday peak timeframe using the required truck routes (distribution), as opposed to **Table 6**, which utilizes the existing truck routes (distribution). Figures 18 and 19 within the TIS show the trip distribution percentages and the resulting truck trip generation volumes when accounting for this right-turn restriction.

Table 6a – Truck Volumes Proposed Truck Route

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	34	32	0.0%	0.0%
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	83	86	0.0%	0.0%
NYS Route 144 from NYS Route 32 to Glenmont Rd. (North/South)	68	79	72	82	5.9%	3.8%
NYS Route 144 from Glenmont Rd. to Clapper Rd. (North/South)	67	75	71	78	6.0%	4.0%
NYS Route 144 from Clapper Rd. to I-87 Exit 22 (North/South)	67	75	71	78	6.0%	4.0%



LEGEND

- Entering Truck Traffic
- Exiting Truck Traffic

Required Truck Routes To/From Proposed Site

Not to Scale

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Lease Clause for New Tenants

Additional detail of the measures that APDC will implement to ensure truck traffic follows the truck route can be found in the **SDGEIS 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.

Port of Albany District Roadway Condition Evaluation

As documented in the City of Albany – S. Pearl St. Heavy Vehicles Travel Pattern Study completed by CDTC dated May 2018, the current roadway condition "is in a poor state of repair. The pavements are in poor condition, there are multiple railroad crossings, it lacks adequate pavement markings and signage, and there are tight turning radii at several intersections". The study also confirms that the roadway network consists of Town of Bethlehem (Normanskill Street) and City of Albany owned streets.

McFarland Johnson, Inc. completed a Pavement Evaluation Report for the required truck route on City Streets that lie within the Port of Albany District that are not currently planned for upgrades. The evaluation included a portion of Raft Street, Port Street/Normanskill Street, and the entire length of South Port Road. The field inspection and evaluation was completed following the NYSDOT Pavement Distress Condition Survey procedures. The inspection determined that based on the type, severity, and extent of surface cracking, 4 out of 12 sections are considered to be in fair condition while the balance is in poor condition. See **Appendix L of the FGEIS** for the Pavement Evaluation Report.

The truck route contains 8 railroad crossings from which 7 are owned by Albany Port Railroad with the remaining crossing owned by CSX. The 7 crossings owned by Albany Port Railroad were improved to meet NYSDOT standards approximately 10 years ago. At the time of inspection all 8 crossings were in fair condition.

During inspection, all observed trucks were able to complete turns within the travel lanes without impacting opposing traffic. Therefore, all turning maneuvers are adequate.

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 lifting cargo to and from the maritime terminal. This enabled funding for improvements to the portion of Smith Boulevard that runs adjacent to the maritime terminal.

The planned roadway reconstruction of Smith Boulevard between Boat Street and Raft Street is still in the design phase and is planned for the 2020/2021 construction season. The roadway, whether full-depth or partial reconstruction, will be designed to accommodate heavy truck traffic. All design work is being completed by McLaren Engineering group, who will utilize

Equivalent Single-Axle Load (ESAL) concept to measure the impacts of the planned traffic on the proposed pavement. The work is intended to contribute to the comprehensive improvement of the City Streets that run through the Port District that will serve as the truck route as envisioned and articulated in the 2018 CDTC report "City of Albany: S. Pearl St. Heavy Vehicle Travel Pattern Study." Further details and concept plan for the proposed road improvements are included in **Appendix G of the Supplemental DGEIS**.

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. The Port of Albany will fully cooperate and support the City to apply for and secure funding.

The pavement evaluation provides an initial assessment of roadway conditions. During the site plan review process, a life cycle analysis will be conducted to better understand the remaining life of the roadway and assist to outline a schedule of future improvements necessary to ensure the roadway will continue to function as needed to support Project related truck traffic. Additionally, prior to any site plan approval, a roadway use agreement between the applicant and the local municipality shall be entered into as an additional mitigation measure which shall require the applicant to evaluate the existing condition of the roadway, identify any improvements necessary to support the Project related truck traffic, provide Town oversight to the implementation of such identified improvements and ensure the applicant maintains the improved road in a as good a condition when compared to the improved condition for the life of the Project. The intent of the roadway use agreement is to ensure that the required truck route functions as intended as the primary mitigation measure to prevent Project related truck traffic from impacting the Ezra Prentice neighborhood.

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 in the TIS. 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. There are sufficient available gaps for all the traffic movements at the intersection. The eastbound left-turn vehicles will experience delay as they wait for an acceptable gap.

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 at Glenmont Road as well as NYS Route 144 at NYS Route 32 were reviewed using 2019 existing volumes due to the volumes and operating conditions at both intersections has potential to warrant a traffic signal. These intersections were also reviewed using the 2029 Build Phase III volumes to see if the proposed development's additional traffic generation has the potential to result in a signal to be warranted.

The updated detailed signal warrant analysis worksheets for the existing and proposed conditions for both intersections are provided in **Appendix L of the FGEIS**. This analysis shows that the NYS Route 144 and Glenmont Road intersection meets one of the MUTCD signal warrants for the existing condition and the following three 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, it simply means that further evaluation is necessary to determine the most appropriate traffic control measure to be implemented at the intersection. Despite meeting a signal warrant using existing traffic volumes, the gap analysis on NYS Route 144 was performed (see the Gap Analysis section of the TIS for more details) shows 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 this Gap Analysis and potential delays that installing a traffic signal has on traffic progression along a corridor, a signal is not recommended at this intersection.

The NYS Route 144/NYS Route 32 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 30-mph 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 service with minor increases in delay over the 2029 Background levels. 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 each subsequent site plan application to determine if installing a signal is warranted.

Site Distance Analysis

The sight distance at the proposed site driveway (southern driveway) was field measured to determine if the available intersection sight distances meet the AASHTO recommended values for passenger vehicles. The posted speed limit along NYS Route 144 is 55 mph. As shown in **Table 8** below, adequate sight distance (intersection sight distance and roadway stopping 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 for the 55-mph posted speed. Therefore, under current conditions, the proposed southern driveway location left hand turns exiting and entering would not be feasible since it fails to meet sight distance standards with the current regulatory posted speed limit of 55mph. Therefore, the driveway is proposed to be limited to a right-in and right-out configuration.

Given the additional time needed for trucks to exit (decelerate) and enter (accelerate) a 55 MPH roadway, this southern driveway right-in right-out configuration is not adequate for trucks therefore trucks will not be allowed to use this southern proposed access drive.

However, this section of the NYS Route 144 has an advisory posted speed limit of 45 mph with a curve sign (MUTCD W1-4) due to the horizontal curves; as such, based on field measurements, there is adequate intersection and stopping sight distance for 45 mph when looking right and left 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.

Therefore, it is recommended that the advisory speed limit of 45 mph in this section become the regulatory posted speed limit, the vegetation is cut back 15 feet from the edge of travel lane and additional signage be installed (Static or Dynamic) to notify southbound drivers approaching the proposed site entrance (MUTCD W2-2 with W16-9P). Adding intersection lighting is also

recommended and considered during the NYSDOT highway work permit application process to improve the visibility of the intersection.

The recommended reduction in regulatory speed and vegetation removal along the sight lines shown in the sight distance figure provided in the **FGEIS Appendix L** would result in the proposed driveway to have adequate sight distance for all turning maneuvers for passenger vehicles that meets the AASHTO and NYSDOT recommended lengths as noted below in **Table 8**. However, truck sight distance limitations would still exist and this driveway would still prohibit trucks from entering and exiting.

Updated TIS 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.

Once a specific tenant or building is proposed, an application for a driveway permit will be submitted to the NYSDOT at which time the request to change the 45-mph speed limit from advisory to regulatory will be made.

In the event that NYSDOT does not approve the speed limit reduction along NYS Route 144 (River Road) the necessary sight distance cannot be obtained for the proposed southern driveway location with the current conditions. Therefore, as mentioned above, the proposed southern driveway would be limited to allowing only right turn movements entering the site and right turn movements exiting the site as shown in the Alternative Driveway Configuration figure provided in **Appendix L of the FGEIS.** This restricted driveway allows access to the site utilizing the adequate site distance to the south for northbound traffic and avoids the left hand turning movements that have restricted sight distance associated with southbound traffic. Trucks would still be prohibited from utilizing this access point, even with the right in-right out configuration.

For either driveway configuration, as noted in the TIS, it is recommended that the following mitigation should also be considered during the design of the proposed southern driveway:

- Signage be installed (Static or Dynamic) to notify southbound drivers approaching the proposed southern driveway 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 to improve the visibility of the intersection during nighttime conditions.

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. The summary table below shows the results of the data analysis.

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 raw accident data provided, in **Appendix L of the FGEIS**, 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 the intersections reviewed are un-signalized 3-way 'T' intersections which typically have a low accident rate as shown by the most recent NYSDOT released statewide average rates from 2016 of 0.18 (Urban) and 0.17 (Rural). The intersections within the corridor have accident rates higher than the statewide average except for 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.

The proposed southern access drive will be limited to allowing passenger vehicles to only enter and exit via a right-in right-out driveway configuration. This intersection configuration results in only two conflict points in comparison to 9 conflict points for that of a standard full access 'T' intersection. This reduces the risk for right angle and rear end accidents at the intersection as there is no left turn crossing maneuvers nor any stopped vehicles within the mainline traffic flow. In addition, the right in will allow traffic to enter without needing to come to a full stop, and traffic exiting can accelerate to merge into the lane further reducing the risk for accidents.

3.7.2. Maritime

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 FT. The river is utilized for recreational boating traffic with locations for ingress/egress/docking operations along the river, which are provided in the TIS. Based on previous annual reports for the Port of Albany and historic growth trends, it is estimated that the Port currently receives approximately 100 ships/barges per year, projected to reach 210 by 2029, equating to approximately 4 ships per week. Based on the tenant and the construction of a new wharf at the Project Site, maritime traffic may increase 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, the Normans Kill 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 will be designed with adequate freeboard to accommodate the existing usage.

3.7.3. Rail

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 Project Site, over and across the Normans Kill, connecting the Project 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 Project Site to the existing rail line.

The bulk of the daily rail activity at the existing Port of Albany 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 gets 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, 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.

An 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.

3.7.4. Public Transportation

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 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 Project 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. The available public transit service in the immediate Project Area is shown on Figure 20 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 in the study area or 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.

3.7.5. Pedestrian and Bicycle

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. 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.

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.

The Church Street crossing is within the Albany Port Expansion Project's traffic study area while the Broadway crossing is north of the traffic study area; however, both intersections are expected to experience an increase in traffic associated with the Albany Port Expansion Project. The improvements at the Church Street crossing (from the I-787 frontage road) are proposed as part of the South End Bikeway Connector Trail Project to include a new pedestrian/bicycle crossing for the multi-use trail with all way stop sign control to replace the existing flashing signal. This eliminates any concern with accidents associated with right turn movements at signalized intersections. At the Broadway Crossing near Quay Street, based on consultation with the consultant engineer for the project sponsor, the intersection will either be converted to an all way stop for vehicular traffic or have the cycle track proceed through the intersection with vehicular traffic yielding to the cycle track. Either option being constructed as part of the South End Bikeway Connector Trail Project will improve the crossing by granting the right of way to the pedestrian/bicyclist on the trail.

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 current employees commute to work via transportation methods other than 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.

3.7.6. 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 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:

- 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.

- All truck traffic associated with the Albany Port Expansion Project will be directed to utilize the required routes (as shown on **Figure 3.7-2**) and will be restricted from making right turns onto South Pearl Street (NYS Route 144) at the South Port Road intersection to eliminate any additional trucks passing through the Ezra Prentice and other residential communities. This route will also be implemented for all anticipated temporary truck traffic associated with construction activities. APDC will include the truck route clause in all new tenant leases as well as installing a surveillance camera near the intersection of South Port Road and Port Road to ensure truck traffic follows the required truck route.

- Additional signage will be installed on the roadways within the Port District to indicate the required truck route.

- Access to the Project Site is proposed via one new right-in right-out access drive restricted to car traffic only, located on NYS Route 144 and via a new vehicular bridge that will span Normans Kill 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 table below outlines during what phase of development mitigation is recommended at each of the study area intersections.

Proposed Threshold / Mitigation Table

	PHASE I 0 - 300,000 SQUARE FEET 0 - 124 MORNING PEAK HOUR TRIPS 0 - 141 EVENING PEAK HOUR TRIPS	PHASE II 301,000 - 600,000 SQUARE FEET 125 - 247 MORNING PEAK HOUR TRIPS 142 - 281 EVENING PEAK HOUR TRIPS	PHASE III 601,000 - 1,130,000 SQUARE FEET 248 - 465 MORNING PEAK HOUR TRIPS 282 - 529 TOTAL SITE-GENERATED TRIPS
	A follow-up traffic analysis will be completed for all site plan applications within these thresholds	A follow-up traffic analysis will be completed for all site plan applications within these thresholds	A follow-up traffic analysis will be completed for all site plan applications within these thresholds
INTERSECTION	PROPOSED MITIGATION	PROPOSED MITIGATION	PROPOSED MITIGATION
NYS Route 32 (S. Pearl Street) at 1st Ave/I-787 Exit 2 Ramp	None	None	- Changes to the existing traffic signal timings.
NYS Route 32 (Corning Hill Road) at US Route 9W	None	None	- Changes to the existing traffic signal timings.
NYS Route 32 (S. Pearl Street) at South Port Road	None	- Construct a 200 FT southbound left-turn lane - Construct a 200 FT westbound right-turn lane - Install new traffic signal equipment for additional lanes	None
NYS Route 144 at I-87 Exit 22 Ramp	None	None	None
NYS Route 144 (River Road) at Glenmont Road	None	None	None
NYS Route 144 (River Road) at NYS Route 32 (Corning Hill Road)	- Installation of a traffic signal to be coordinated with the existing traffic signal at South Port Road	None	None
Church Street at Broadway	None	None	None
Glenmont/Feura Bush Road at US Route 9W	None	None	None
Clapper Road at NYS Route 144	None	None	None
I-787/I-87 Exit 23 Interchange at US Route 9W	None	None	-Changes to the existing traffic signal timings.
Wemple Road at NYS Route 144	None	None	None
South Driveway	- Permanently reduce speed limit along River Road in the vicinity of the intersection to 45 mph* - Prohibit trucks from entering and exiting - During construction a work zone along River Road will be established to further reduce the speed limit	- During construction a work zone along River Road will be established to further reduce the speed limit	- During construction a work zone along River Road will be established to further reduce the speed limit

Notes: 1. Proposed mitigation to be implemented at the beginning of each phase.
2. Proposed mitigation measures are subject to NYSDOT Approvals
* In the event the NYSDOT does not approve a speed reduction, the driveway will become a right in right out driveway only.

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

- At each site plan application, a traffic impact analysis will be completed so that the specific trip generation and trip distribution of tenants could be applied to the 12 intersections analyzed, reflecting potential change in intersection operations, significant impacts and mitigation necessary.

- At the time of the initial site plan approval, the Port of Albany will contribute their fair share monetary portion of the funding necessary to conduct a Town initiated corridor study of NYS Route 144 (River Road).

- It is recommended that the proposed southern access drive operate as a right-in right-out for passenger cars only.

- It is recommended that the Port of Albany request a speed limit reduction from 55 MPH to 45 MPH along route 144 in the vicinity of the southern driveway. If the speed limit is reduced by the NYSDOT, the driveway is recommended to allow all turning movements 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. However, trucks would remain prohibited due to sight distance limitations.

- A sight distance evaluation indicates that clearing of existing vegetation that overhangs NYS Route 144 in the vicinity of the southern driveway is necessary. No additional sight distance improvements are necessary.

- 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, should the end tenant require a single shipping and receiving route for all truck activities, it is required that this route be via 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.

- 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.

- Based on conversations with managers in the Trucking Industry, there are two types of trucking companies; asset based trucking companies and independent truckers. The

asset based carriers are trucking companies who own their fleet of trucks and their drivers are company employees. The independent truck drivers are self-employed and obtain their delivery/shipping assignments through a broker. Asset based companies and brokers contract directly with their customers to deliver products and materials. Delivery contracts are typically for a one year period and contain penalties if drivers violate the terms of the contract. As mentioned, the Port of Albany will include as part of their tenant lease~~,~~ a condition that will require that each tenant have their shipments and deliveries enter and exit along the required truck routes and avoid S. Pearl Street. This condition will also be made part of the trucking service contract that each tenant will execute with their trucking service provider. The trucking service carrier will then communicate the required truck route to be followed including turn by turn direction which will be printed on the Bill of Lading which is provided to every truck driver prior to deliver. Violators will be penalized with the possibility of termination of the trucking service contract and or lease as described in **Appendix G.**

- It is commonplace and industry standard to have GPS units on all trucks. Some asset companies also require drivers to use handheld GPS units. These GPS units allow trucking companies and brokers to monitor the routes taken and driving behavior for all shipments and deliveries. The Port of Albany will implement a quarterly audit of their tenants trucking service contracts to ensure the identified truck routes are being followed.

- **Appendix L of the FGEIS** 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. See the letter from the Mayor of the City of Albany in **Appendix L**. 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.

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3.8. Drainage

3.8.1. Environmental Setting

The existing drainage area is comprised of approximately 81.62 acres, bordered by the Normans Kill to the north, and the Hudson River to the east. At the south boundary there is a Public Service Energy Group (PSEG) power plant, and to the west a parcel owned by Niagara Mohawk Power Corporation that conveys overhead electric transmission lines, as well as an underground gas main. The Project Site consists primarily of brush and trees with a small gravel area as well as abandoned railroad tracks. The existing pervious area is approximately 78.02 acres, and the existing impervious area is approximately 3.60 acres.

There are four delineated wetlands within the affected drainage area (see **Section 3.3 Wetlands** for a more detailed description). Wetland 1 (1.26 acres) is a freshwater emergent and forested wetland located in the northwest portion of the property and functions as storage during flooding events. Wetland 3 (0.07 acres) and Wetland 4 (0.003 acres) are both located on the bank of the Hudson River and are freshwater tidal wetlands. Wetland 9 (0.04 acres) is located on the north side of the Normans Kill and is a freshwater emergent wetland.

The existing site falls within the Normans Kill watershed of the Middle Hudson Sub-Basin for the Lower Hudson River Basin (HUC10: 0202000602, Water Index No H-221-4) which is listed as a Class C water. Neither the Normans Kill nor the Hudson River are listed in the NYSDEC Stormwater Management Design Manual (Manual) Appendix C as a watershed where enhanced phosphorus removal standards are required. Additionally, neither are listed in the Manual's Appendix E as a watershed impaired by pollutants related to construction activity. The Project Site is located within the Town of Bethlehem, Albany County, New York, which is an MS4 community, requiring this report and project to receive approval from the Town of Bethlehem.

According to the Natural Resources Conservation Service (NRCS) web soil survey, there are four (4) soil unit types (see **Section 3.1 Soil, Geography and Topography** for a more detailed description). The majority of the soil falls within the hydrologic soil group B/D with a soil group of Wayland. The first letter corresponds to drained soil's properties under drained conditions and the second to saturated conditions. Group B soils have moderate infiltration and runoff rates while group D have a low infiltration rate and a high runoff rate. Runoff from the Project Site travels via sheet and shallow concentrated flow directly to the Normans Kill and Hudson River.

The Project Site's topography is largely comprised of flood plain and contains very little elevation change. Most of the Project Site is at or near elevation 16 feet; the Project Site rises slightly to the west and south as it moves away from the Hudson River. The land beyond the Project Site rises more steeply to the west beyond the site boundary. There are four district drainage areas within the Project Site where runoff either collects on-site or drains directly into the Hudson River or Normans Kill.

McFarland Johnson, Inc. prepared a detailed analysis and report entitled "Drainage Design Report" dated May 2019 and updated in January 2020, see **FGEIS Appendix D**. The report is the study of the project pre and post construction stormwater impacts. As described in the report, the existing hydrology of the four drainage areas were analyzed in accordance with the NYSDEC Stormwater Management Design Manual using HydroCAD™. The results are as follows:

Existing Hydrology			
Drainage Area	1-yr Peak Discharge (cfs)	10-yr Peak Discharge (cfs)	100-yr Peak Discharge (cfs)
1	3.53	10.23	23.56
2	7.21	21.02	48.31
3	5.76	17.27	40.08
4	3.70	11.19	26.06

3.8.2. Potential Impacts

The proposed development is a 1,130,000 square foot industrial building that will contain industrial uses permitted by site plan and special use permit per the Town Code. The ancillary impervious areas including parking for automobiles and trucks, a roadway, railroad, and a maritime wharf. There will also be pervious areas of grass and unaltered brush and trees. The Project Site will consist of approximately 49.63 acres of impervious cover and approximately 31.99 acres of pervious cover. Since the Project Site will have land disturbance of more than 1-acre, a full State Pollutant Discharge Elimination System (SPDES) permit (General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002) will be required for the project.

Runoff from the proposed impervious areas will travel via sheet and shallow concentrated flow to one of five closed drainage systems with an outlet into either a bioretention facility or a water quality pond. The bioretention/water quality ponds will provide runoff reduction and water quality volume to treat the water prior to being discharged into the Normans Kill and/or Hudson River. The overall drainage plan incorporates multiple separate systems with outlets to the Normans Kill and/or Hudson River to avoid a more concentrated larger outlet for the Project Site (See Appendix B, Proposed Condition of the Drainage Design Report, **Appendix D to the FGEIS**)

The NYSDEC's Stormwater Management Design Manual requires that water quality controls must be implemented so that stormwater from the proposed development does not increase the total suspended solids and pollutants of the receiving waters. By detaining the Water Quality Volume (WQv) to allow sufficient settling time for suspended solids and pollutants to settle out, Stormwater Management Practices (SMP) will be implemented to achieve the necessary protection. Pretreatment will be provided by means of using grass swales and or forebays.

The NYSDEC's Stormwater Management Design Manual requires further that the peak discharge rates of stormwater be controlled to the pre-development rate. This is typically achieved through detention areas to hold back the excess runoff created by the new development. However, the Manual states that all projects with runoff discharging directly into tidal waters are exempt from the quantity control requirements. This project proposes that stormwater runoff to be released to the Normans Kill and Hudson River, which are both tidal in the project's vicinity, thus eliminating the detention requirement. None the less, as reported in the "Drainage and Design

Report" the proposed hydrology of the four drainage areas were analyzed in accordance with the NYSDEC Stormwater Management Design Manual using HydroCAD™. The results are as follows:

Proposed Hydrology			
Drainage Area	1-yr Peak Discharge (cfs)	10-yr Peak Discharge (cfs)	100-yr Peak Discharge (cfs)
1	2.10	5.70	12.55
2	5.00	13.92	30.95
3	103.22	195.21	350.59
4	73.54	135.45	239.90

The project will change the surface coverage of the Project Site by increasing the amount of imperviousness. This change will increase the peak discharge rate of stormwater runoff. In addition, the increased imperviousness will create a need for water quality features. The construction of the project requires Erosion and Sediment Control measures to mitigate potential short-term water quality impacts including the exposure of bare soil and the mobilization of sediment.

3.8.3. Mitigation Measures

The Proposed Project includes the construction of a 1,130,000 square foot industrial building that will contain industrial uses permitted by site plan and special use permit per the Town Code. The ancillary impervious areas include parking for automobiles and trucks, a roadway, railroad, bridge and a maritime wharf. There will also be pervious areas of grass and unaltered brush and trees. The Project Site will consist of approximately 50 acres of impervious cover and approximately 32 acres of pervious cover. Since the Project Site will have land disturbance of more than one acre, a State Pollutant Discharge Elimination System (SPDES) permit (General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002) will be required for the project. In accordance with then SPDES the project will not be required to provide water quantity controls as it will discharge directly to a tidal water

A Stormwater Pollution Prevention Plan (SWPPP) will be developed in accordance with the permit regulations. The SWPPP will be reviewed and approved by the Town of Bethlehem as an MS4.The SWPPP will be prepared in accordance with the NYSDEC Manual and meet the following criteria as the principle objectives contained in an approved SWPPP.

- Reduction or elimination of erosion and sediment loading to waterbodies during construction activities. Controls will be designed in accordance with the NYSDEC's New York State Standards and Specifications for Erosion and Sediment Control.
- Mitigate the impact of stormwater runoff on the water quality of the receiving waters.

- Mitigate the increased peak runoff rate of runoff during and after construction.
- Maintenance of stormwater controls during and after completion of construction.

These objectives will be accomplished by incorporating design criteria outlined within the Technical Guidelines provided by The Manual and summarized below.

Section 4.2 of the Manual states that WQv is intended to improve the water quality by capturing and treating runoff from small, frequent storm events that contain higher pollutant levels created through the increase of impervious surfaces. Impervious surfaces accumulate pollutants that quickly wash off and rapidly enter downstream waters as well as prevent natural groundwater recharge.

The WQv required for the proposed Project Site is based upon the 90% rainfall event number, percent of impervious cover, and the total Project Site area. Calculations were done using the Green Infrastructure worksheets and can be found within the Drainage Design Report (**Appendix D of the FGEIS**). The total WQv required is 208,176 cubic feet.

Runoff Reduction Volume (RRv) is the reduction of the total WQv by application of green infrastructure techniques and stormwater management practices to more closely replicate pre-development hydrology. The intent of RRv is to recognize the water quality benefits of certain site design practices to address flow as a pollutant of concern.

According to Section 4.3 of the Manual, RRv may be calculated based on three methods:

1. Reduction of the practice contributing area in WQv
2. Reduction of runoff volume by storage capacity of the practice
3. Reduction using standard SMPs with runoff reduction capacity

The minimum RRv required by the Project Site is based on the total area of new impervious cover and the Hydrologic Soil Group (HSG) Specific Reduction Factor (S). The specific reduction factor is based on the HSGs present at the existing Project Site. Calculations were done using the Green Infrastructure worksheets and can be found in **Appendix D of the FGEIS**. The minimum RRv was determined to be 41,076 cubic feet.

To best suit the stormwater requirements of the Proposed Project, three bioretention basins and two stormwater ponds were designed. The bioretention basin was sized in accordance with Section 6.4, Stormwater Filtering Systems of the Manual; because the majority of the native soils of the Project Site are of NRCS soil group D, an underdrain has been included in the design. The ponds were designed in accordance with Section 6.1, Stormwater Ponds, of the Manual. The ponds were sized to provide WQv. However, the ponds do not provide any storm event flow mitigation.

Green Infrastructure is practicable on this Project Site; the practices proposed below will prevent stormwater from infiltrating through the fly ash via an impermeable layer, and an underdrain will be used to drain the water as needed. The DGEIS has used the bioretention practice (Manual practice F-5), required volumes of RRv and provided the results below.

Practice	Manual ID	Application	Application	Required Volume (cf)	Provided Volume (cf)
Bioretention	F-5	Green Infrastructure	RRv	41,076	41,220
Wet Pond	P-2	Water Quality	WQv	208,176	215,943

As mentioned above the project will discharging directly into the Normans Kill and Hudson River, which are both tidal waters, making it exempt from the runoff quantity control requirements of the Manual.

All elements of the closed drainage system will be designed to be non-erosive during a 2-year storm event and capable of conveying a 10-year storm event. After construction, a maintenance and operation report program and agreement will be made between the site operator and the Town to ensure all stormwater management practices are maintained over the life of the site's operations.

Based upon the analysis provided in this report, the proposed development can meet all of the requirements of the Manual and the SPDES Permit. During construction activities Erosion and Sediment Control will be designed and enforced in accordance with the NYSDEC New York State Standards and Specifications for Erosion and Sediment Control. Standard stormwater management practices can provide the required RRv and WQv for the proposed conditions. The elements of the Manual and the Permit that relate to stormwater quantity controls, specifically CPv, Qp, and Qf, are not required at this Project Site as the Project Site discharges directly to a tidal water. All elements of the closed drainage system will be designed to be non-erosive during a 2-year storm event and capable of conveying a 10-year storm event. After construction, a maintenance and operation report program and agreement will be made between the site operator and the Town to ensure all stormwater management practices are maintained over the life of the site's operations.

When an actual project is determined, a Site Management Plan (SMP) will be prepared in accordance with 6 NYCRR Part 375 and DER Technical Guidance for Site Investigation and Remediation and submitted to the NYSDEC, Division of Environmental Remediation and the NYSDOH for their review and approval. The SMP will include at a minimum a: Health and Safety Plan (HASP), to inform and protect the contractor and their work force; a Community Air Monitoring Plan (CAMP), to monitor and protect the surrounding communities; and an Excavation Work Plan (EWP), to direct the activities of the contractor during construction. The EWP will include a detailed description of the work to be performed, the anticipated environmental conditions, and engineering controls to mitigate the movement of fly ash. Specific Sections and recommendations of the EWP will include at a minimum the following:

- *Soil Staging Methods:*
  - *Stockpiles will be continuously encircled with a berm or silt fence*
  - *Stockpiles will be kept covered at all times with anchored tarps*
- *Material Transport:*
  - *Loaded vehicles will be appropriately lined, tarped, and securely covered*

  - *All outbound trucks will be washed at a truck wash before leaving the Project Site*
  - *Truck wash sediment will be collected and disposed of off-site in a legal and appropriate manner*
- *Material Reuse On-Site*
  - *Material will be placed below a demarcation layer or impervious surface*
  - *Material will not be reused within a cover soil layer or as backfill for subsurface utilities*
- *Cover System*
  - *A cover (or cap) of a minimum of 12 inches of clean soil, asphalt, concrete, or building will be installed*
  - *A demarcation layer of orange snow fence, white geotextile, or equivalent material will be installed below the cap*
- *Stormwater Pollution Prevention Plan (SWPPP)*
  - *Sediment controls will be inspected at least once a week and after every storm event*
  - *All necessary repairs will be made immediately*
  - *In addition to internal practices, silt fence or hay bales will be installed around the entire perimeter of the construction area*
  - *A double row of erosion control such as a silt fence & straw bale barrier along the River shoreline will be installed.*
  - *In addition, a turbidity curtain could be installed at the Rivers edge to protect material from entering the water.*
- *Dust Control Plan*
  - *A dedicated on-site water truck with a canon capable of spreading water directly onto all off-road areas will be required*
  - *Clearing and grubbing will be done in stages to limit exposure to dust*
  - *On-site gravel roads will be used to create a dust-free road surface*

The material to be dredged from the Hudson River will be dewatered to minimize the potential for runoff in one of two ways. One option for dewatering is by use of a cofferdam, where the material would be dewatered in place and excavated once dewatering is complete. A second option is to dredge the material and stockpile on land to dewater. All runoff from the dredged material would be collected, stored, and treated on site as required. The specific Dredging and dewatering method will be determined at the time of site plan application and NYSDEC permit application.

3.9. Water Service (Potable and Fire Protection)

3.9.1. *Environmental Setting*

The Applicant proposes to service the Project Site with water by connecting to the existing water infrastructure owned by the Town of Bethlehem and maintained Department of Public Works (DPW) Water District No. 1 within Route 144/River Road. The Project Site is not entirely within a water service area; therefore, a district extension to the Town of Bethlehem Water District No. 1 will be required. A map, plan, and report will be prepared and submitted for review and approval by the Town Board.

On April 1st, 2019, McFarland Johnson met with the Town of Bethlehem to identify and assess the provision of water service to the Project Site by connecting to the existing water line infrastructure owned by the Town of Bethlehem and maintained by the Department of Public Works. It was determined that there is an active 16-inch water main located on the west side of Route 144/River Road adjacent to the access easement in the southwest corner of the Site, labeled as the Glenmont/River Road Pressure Zone in the **DGEIS Appendix K – Water Main Computer Model**. There is also an active 8-inch water main located on the northwest side of Route 144/River Road adjacent to the northern access easement, labeled as Corning Hill Pressure Zone in the **DGEIS Appendix K – Water Main Computer Model**.

On July 23rd, 2019, McFarland Johnson received an Evaluation of Water Distribution Hydraulics from the Town of Bethlehem, attached in the **DGEIS Appendix K**. The Town of Bethlehem's town wide computer-generated water quantity and quality model of their distribution system was used to evaluate the capacity of the existing system at both the Glenmont/River Road Pressure Zone and the Corning Hill Pressure Zone while maintain a minimum system-wide pressure above 20 psi. It was determined that the Corning Hill Pressure Zone can provide 1,000 gpm while the Glenmont/River Road Pressure Zone can provide 1,300 gpm.

The Town of Bethlehem DPW has been contacted regarding the age and state of the existing waterlines within River Road. The existing 8-inch DIP waterline on the Corning Hill pressure zone (to the north) was installed in 1980 and has no known issues. The existing 16-inch DIP waterline on the Glenmont pressure zone (to the south) was installed in 1977 and has no known issues.

The Annual Drinking Water Quality Report for 2018 Town of Bethlehem Water District No.1 (Public Water Supply Identification Number NY0100191) included within the **FGEIS as Appendix F** and excerpts are provided below:

"Town of Bethlehem Water District No.1 has 2 water purification plants, the New Salem Plant and the Clapper Road Plant. The New Salem Water Purification Plant draws its water from the Vly Creek Reservoir, which has a storage capacity of 1.25 billion gallons. The New Salem Water Purification Plant has a peak capacity for purifying 6 million gallons of water per day. The treatment process consists of chlorination for disinfection; taste and odor control with the use of activated carbon; coagulation with aluminum sulfate; filtration with rapid sand filter, and corrosion control. There is no fluoride added to the Bethlehem Water Supply. Algae growth in the Vly Creek Reservoir is controlled by adding copper sulfate to the water and by mechanically mixing the water during the summer months. Water is pumped from the purification plant to a

5,750,000-gallon steel water storage tank. From that point, water is delivered by gravity through a network of water mains.

There are also two water supply wells to supplement the capacity of the New Salem Water Plant which are permitted by the NYS Department of Environmental Conservation and allow for the withdrawal of 1,130,000 gallons per day, or 1.13 million gallons per day (MGD), from the two wells combined.

The Clapper Road Water Purification Plant is supplied by facilities including a groundwater infiltration system and a well field that consists of 11 drilled wells located adjacent to the Hudson River, south of Henry Hudson Park. The Water Purification Plant has the ability to treat 6 MGD. The plant uses 4 Trident filter units for water purification with chlorine as the primary disinfection agent. Chemicals used include coagulation with Polyaluminum Chloride (PAC) and a non-ionic polymer and a corrosion inhibitor.

The Bethlehem Water District currently serves approximately 35,000 people through 11,712 service connections. In 2018, the District provided 527,488,000 gallons of water from the New Salem Plant, 160,170,000 gallons from Well #1 and Well #2, and 453,212,000 gallons of water from the Clapper Road Plant. Supplemental water purchased from Albany was 474,125,000 gallons. The total volume of water produced from all sources in 2018 was 1,614,995,000 gallons. Approximately 1,488,850,280 gallons of water were billed to customers of Water District #1."

3.9.2. *Potential Impacts*

Based on 1,130,000 square feet (sf) of warehouse/industrial use; the Site is anticipated to have 1,130 employees. In accordance with NYSDEC Standards, the domestic water demand is 15 gallons per day per employee. Therefore, the Proposed Project is expected to generate 16,950 gallons per day of domestic water demand. This leads to a domestic demand with an average daily demand of 12 gallons per minute (gpm), max daily demand of 22 gpm, and peak hour demand of 47 gpm. The domestic demand would be evenly distributed over a 24-hour period and would consist of typical "domestic" use by employee (no industrial use is anticipated). There is no anticipated seasonal variation in the domestic demand. The fire flow demand has been estimated to be 2,300 gpm at 20 pounds per square inch (psi) based on a typical fire suppression system for the size and utilization of the building. This demand is associated with an automatic fire sprinkler system.

The Town has run its computer-generated water model to assess the impacts of the above Project demands. The model showed that a combined domestic and fire flow demand could not be met solely from either the Corning Hill Pressure Zone, at 1,000 gpm nor the Glenmont/River Road Pressure Zone, at 1,300 gpm. The model showed that connections to both pressure zones could provide sufficient pressure and flow for both the domestic and fire flows. Based upon these results three alternatives have been considered.

Alternative one is a single connection to the existing 16-inch watermain along River Road in the Glenmont/River Road Pressure Zone into the southwest corner of the Project Site. A private waterline would be extended approximately 1,250 feet through the southwest access easement along the access road through the Site and, connect to both the building's domestic feed as well as a fire protection loop around the perimeter of the building. This connection can provide 1,300

gpm, sufficient to satisfy the domestic water demand. In order to meet the project's fire demand an on-site water storage tank would be installed in the southwest corner of the Project Site. This tank would be designed to supply the building's fire suppression system with sufficient pressure and flow. The tank identified in Option 1 is not required in any other options. The tank would be designed to have a maximum height of 60 feet as allowed by code and would be located along the western portion of the Project Site as to not be visible from any visually sensitive areas.

The second alternative is two connections looped through the Project Site: one connection to the existing Corning Hill Pressure Zone in the north; and one to the Glenmont/River Road Pressure Zone in the south. The two connections would be looped through the Project Site with an approximately 3,550 foot waterline: from the existing 16-inch main in River Road on the Glenmont/River Road Pressure Zone in the south a watermain would run north into the Project Site through the southwest access easement, it would proceed up the internal access road to the northern access easement, where it would connect back out to the existing 8-inch main in River Road on the Corning Hill Pressure Zone. The new waterline loop would be owned and maintained by the Town of Bethlehem within a dedicated easement. The Project would connect off of the waterline loop and service both the building's domestic feed as well as a fire protection loop around the perimeter of the building. Pressure control and check valves on the two Pressure Zones would ensure proper functioning of the systems. Where the internal loop passes through the northern access easement out to the existing 8-inch main on the Corning Hill Pressure Zone, it would pass through existing wetlands. In this location it would be either directionally drilled/bored to avoid any wetland impacts, or a Nationwide Permit would be obtained to address any temporary impacts to the wetlands.

The third alternative is to extend the Glenmont/River Road Pressure Zone with approximately 1,200 feet of 12" waterline to the north within the River Road right-of-way up to the existing 8" Corning Hill Pressure Zone. This waterline would be owned and maintained by the Town of Bethlehem. A private site connection would tap into both pressure zones and extend into the Project Site through the northern access easement. This connection would service both the building's domestic feed as well as a fire protection loop around the perimeter of the building. Pressure control and check valves on the two Pressure Zones would ensure proper functioning of the systems. Where the Project Site's connection passes through the northern access easement, it would pass through existing wetlands. In this location it would be either directionally drilled/bored to avoid any wetland impacts or a Nationwide Permit would be obtained to address any temporary impacts to the wetlands.

The Town of Bethlehem does not desire to own any water distribution infrastructure associated with the Proposed Project; therefore, in both Options 2 and 3, where waterlines enter the Project Site a hot box with required metering and backflow will be installed; and the waterline within the Project Site will be privately constructed, owned, and maintained.

All potential water service options can be seen in the **DGEIS Appendix Q** for "Concept A" Utility Plan.

Since the Proposed Project may be developed in phases, two interim building sizes were considered, one at 300,000 sf and another at 600,000 sf. All infrastructure will be constructed at

the start of the Project; however, two interim water demands were calculated. At 300,000 sf a water flow of 5,650 gallons per; and at 600,000 sf a flow of 11,300 gallons per day.

Based upon the anticipated demands and the Town's computer-generated model, the Town has sufficient capacity within their existing system to service the Proposed Project**.** The Town of Bethlehem prefers Option 3 to supply water to the project.

The final routing of the waterline will be determined during the site plan approval process when a site plan is proposed in coordination with the Town of Bethlehem DPW.

The water demands considered for the Proposed Project are depicted below:

Phase	*Building (sf)*	*Avg Daily Demand (gal/day)*	*Avg Daily Demand (gal/min)*	*Max Daily Demand (gal/min)*	*Peak Hour Demand (gal/min)*
1	*300,000*	*5,650*	*4*	*8*	*16*
2	*600,000*	*11,300*	*8*	*16*	*31*
3 (full build)	*1,130,000*	*16,950*	*12*	*22*	*47*

Water during construction would be supplied temporarily by the contractor(s). Typical water sources would be used such as water trucks delivering water as needed. One of the first infrastructure improvements would be the extension of the watermain(s) to the property from one or both of the routes shown in the **DGEIS Appendix Q.**

3.9.3. *Mitigation Measures*

Improvements to the existing water supply involve either a connection to or an extension of the water main located in proximity to the southwestern project boundary, with alternatives to include a second connection to the water main located in proximity to the northwestern project boundary. Once on the Project Site, the waterline will be constructed to service the development, including a fire protection loop around the perimeter of the building. Hydrants will be installed throughout the Project Site. Final design of the water supply and distribution system will be completed with any specific project in conformance with AWWA standard C600, the Town of Bethlehem Water District No. 1, Albany County Department of Health, and NYSDOH requirements.

All off-site water distribution system improvements will be completed by the project sponsor, entirely at their expense and will be offered to the Town of Bethlehem following their installation at no cost to the Town of Bethlehem. Where watermains enter the Project Site a hot box with required master metering and backflow will be installed; and the watermain within the Project Site will be privately constructed, owned, and maintained.

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.

As part of the project specific Site Management Plan (SMP), prepared in accordance with 6 NYCRR Part 375 and DEC Technical Guidance for Site Investigation and Remediation and submitted to the NYSDEC, Division of Environmental Remediation and the NYSDOH for their review and approval, water quality monitoring will be provided through a Stormwater Pollution Prevention Plan (SWPPP). All stormwater outfalls and discharge including those to the Hudson River will be monitored throughout construction of the project. It is anticipated that all monitoring will take place on the Project Site. The SMP will include the requirement of on-going monitoring of all mitigation measures throughout the project. Any failure in a remediation procedure will require a correction within 24 hours. Any potential contamination that is discovered will require immediate reporting to the NYSDEC.

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3.10. Sanitary Sewer

3.10.1. Environmental Setting

Applicant proposes to service the project with sanitary sewer by connecting to the existing sewer infrastructure owned and maintained by the Albany County Water Purification District just north of the project as set forth below. See the **DGEIS Appendix Q** for "Concept A" utility plan details.

The South Wastewater Treatment Plant (hereinafter the SWTP), owned and operated by the Albany County Water Purification District, is located at the Port of Albany, at a point approximately 9,500 linear feet north of the Project Site. The Project Site is outside the jurisdiction of the Albany County Sewer District, and authorization to treat waste from this project will require approval of the Albany County Legislature. The Port of Albany has coordinated with the Albany County Sewer District to determine the capacity to treat waste from the project.

There are currently no connection points to the City of Albany sewer system in the vicinity of the project. Existing sewer lines located north of the project boundary line are privately owned and convey waste to the SWTP. Therefore, the sewer line connection from the Project Site to the SWTP, to be constructed by the developer, will be privately owned.

As an alternative to connection through the Albany County SWTP, a tie-in can be made to the Town of Bethlehem sewer service. On April 1st, 2019, McFarland Johnson met with the Town of Bethlehem to identify and assess the provision of sewer service to the project by connecting to existing sewer line infrastructure owned by the Town of Bethlehem Department of Public Works. An existing Town of Bethlehem 8-inch gravity sewer line is located along Glenmont Road, approximately 1,800 feet west of the intersection of Glenmont Road and Route 144. The Port of Albany could run a force main approximately 4,000 feet from an onsite pump station to the existing 8-inch gravity line on Glenmont road, west of the Project Site. Further analysis would be needed to determine the capacity of the existing facilities downstream of the intended connection point, including the Glenmont pump station and an 8-inch force main over I-87.

The second potential tie-in point to the Town of Bethlehem sanitary sewer system is located on Route 144, approximately 6,000 feet south of the southern access point of the Project Site. This point is the farthest of the potential tie-in points from the Project Site and would require installation through rock. It is the Port of Albany's understanding that if Town of Bethlehem sewer facilities are used to service the project, the Town will extend its sewer district, as needed.

As a second alternative, wastewater could be treated onsite through a septic system or package wastewater treatment plant.

A raised mound system was analyzed for site suitability. A condition of a mound system is separation distance between the trench bottom and groundwater. Soil boring logs indicate groundwater is 18-inches below grade, which meets the 12-inch minimum requirement required by the New York State Department of Health. However, the existing underlying fly ash fill material is not considered favorable with this system and would likely affect the longevity of the system.

The size of the raised mound basal area would need to be 16,950 SF, which would require 100 trenches at 100 linear feet lengths, a 20,000-gallon septic tank and a pump rated for over 2,000

gallons per minute (GPM) in order to properly dose the system. Based on the soil condition and size of the required system, it is not our recommendation to use this type of wastewater treatment facility on this Project Site. An on-site soil based septic system is not technically feasible.

To treat the demands of the proposed building, an onsite package treatment plant (PTP) of approximately 70,000 SF is required. Due to the location of the project near the Hudson River a tertiary filter is required following the secondary treatment inside the PTP. A certified operator to inspect and monitor the system and send samples to the Environmental Protection Agency is also required. Of the two onsite wastewater treatment options, the PTP is more feasible for this project.

3.10.2. Potential Impacts

Based upon 1,113,000 square feet of warehouse/industrial use; the Project Site is anticipated to have 1,130 employees. In accordance with the NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems, the hydraulic loading rate is 15 gallons per day (GPD) per employee. Therefore, the project is expected to generate 16,950 GPD of sanitary flow.

The wastewater collection system for the Project Site will consist of an on-site gravity system that will flow to an on-site pump station. The pump station will run a private force main connection to the Albany County SWTP for treatment. The sanitary sewer line will cross over the Normans Kill, and be hung from the roadway bridge. Because the project will connect directly to the SWTP, and will be constructing a private force main, no existing downstream infrastructure will be affected.

Since the project may be developed in phases, two interim building sizes were considered, one at 300,000 SF and another at 600,000 SF. All infrastructure will be constructed at the start of the project; however, two interim sewer demands were calculated. At 300,000 SF a sanitary flow of 5,650 GPD will be utilized and at 600,000 SF a flow of 11,300 GPD will be used.

The applicant has provided the project's sanitary demand to Albany County to discuss its ability to serve the project at the SWTP. Currently, the SWTP is permitted for 29 million GPD and operated at an average treatment volume of 23.3 million GPD in 2018. Therefore, there is sufficient capacity for the SWTP to accept the project's estimated 16,950 GPD of additional sanitary flow.

3.10.3. Mitigation Measures

After further consideration of the sanitary sewer alternatives, a private on-site "package treatment" system was evaluated as the best option for sanitary service for the Proposed Project. The selection of the on-site option as the only preferred alternative was made due to the disruption to the public, and environmental impact of running a force main from the proposed building to the existing County treatment plant several miles away.

A pre-engineered manufactured package treatment system capable of treating up to 20,000 gallons per day (projected demand is 16,960) of wastewater will be installed on site and discharge directly to the Hudson River (not to a subsurface system); as such the 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. Based on coordination with the NYSDEC Region 4 Water Engineer, 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.

Table B-4A, Typical Effluent Limits for Non-Intermittent Streams

Parameter	*Type*	*Limitation*	*Units*
BOD_5	*30 day arithmetic mean*	*30*	*mg/L*
BOD_5	*7 day arithmetic mean*	*45*	*mg/L*
TSS	*30 day arithmetic mean*	*30*	*mg/L*
TSS	*7 day arithmetic mean*	*45*	*mg/L*
Settleable Solids	*Daily Maximum*	*0.3/0.1*	*ml/L*
pH	*Range*	*6.0-9.0*	*SU*
*Fecal Coliform**	*30 day geometric mean*	*200*	*No. colonies /100 ml*
*Fecal Coliform**	*7 consecutive day geometric mean*	*400*	*No. colonies /100 ml*
*Total Residual Chlorine**	*Daily Maximum*	*2*	*mg/L*

** Parameter only required from May 1 through October 31*

The on-site wastewater demand for the Proposed Project has been estimated to be 16,960 gallons per day. The Proposed Project includes an on-site package wastewater treatment plant that will exceed this demand.

The Delta Extended Aeration Waste Treatment Plan Model B-17.0 manufactured by Delta Process Equipment Incorporated owned by Infiltrator Water Technologies of Old Saybrook, CT is a system that meets the Proposed Project's requirements. The drawing in **Appendix G of the FGEIS** shows a tank system from Delta Treatment Systems that can treat anywhere from 15,000 gallons per day to 25,000 gallons per day. The B-17.0 model is able to treat 17,000 gallons per day, or just above the estimated project demand. This is the model referenced in the example specifications. More information on this product including specs and typical details are included within the **FGEIS as Appendix G**. The system will be privately constructed, owned, operated, and maintained in accordance with 6NYCRR Part 650 and all NYSDEC requirements. The proposed private on-site system will maintain required separation from the stormwater collection system in accordance with the 10-state standards in order to avoid storm and sanitary combining. The potential location of the on-site package wastewater treatment plan is shown on drawing **UT-01 Utility Layout in Appendix Q Concept Plan A of the DGEIS**. The on-site package treatment system will meet all the requirements of the project's sanitary sewer demands and no mitigation measures are proposed.

The on-site soil conditions are not suitable for a ground-based disposal system. Therefore, the package treatment system will treat the effluent to meet requirements to discharge directly into the Hudson River. The package treatment system is designed to be placed, installed, and used in multiple environments and will be installed at the site to provide suitable treatment for the Project sanitary demands. The package treatment system is shown on **UT-01 Utility Layout within Appendix Q of the DGEIS.**

As the project will not connect to either the Town of Bethlehem's sanitary sewer system or the County of Albany's SWTP no upgrades or improvements to either system is necessary. Furthermore, no analysis of either existing system is required and therefore, a will serve letter, a district extension, or an intermunicipal agreement will not be necessary.

Since the Proposed Project will service its own wastewater on-site, there is no wastewater impact associated with the project.

The onsite wastewater treatment package would not impact the Ezra Prentice community since they are not within the same sewer district. The Project will not cause any impacts to the Ezra Prentice community; therefore, no mitigation is proposed.

3.11. Historic, Cultural, and Archeological Resources

3.11.1. Environmental Setting

The Town of Bethlehem was incorporated in 1793 and has documented cultural, historic, and natural resources. The Town has multiple historic resources including ten sites listed on the National Register of Historic Places, however none of these listed sites are located on or adjacent to the Site. The Town's natural resources include farmland, forest land, and mineral deposits, none of which are on or adjacent to the Site.

The property includes two parcels of land, 4.79-acre parcel at the south end of South Port Road (Tax Map No. 98.01-2-1.00) and an adjacent parcel of land of 76.83 acres (Tax Map No. 98.00-2-10.23). The large parcel, 76.83 acres, lies south of the Normans Kill on lands formerly known as Beacon Island. 8 acres of that parcel are comprised of the Normans Kill creek itself, where the former Canadian Pacific (CP) Railroad bridge crossed the Normans Kill and connected Beacon Island with the Albany Port rail yard.

The Project Site has 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 acres 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 acres 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.

The Site lies within a natural, industrial, and rural/suburban context with limited access. The Site's natural features are forested coverage throughout. The neighboring land uses to the north and south are industrial. The Project Site at one time was used for fly ash and bottom ash disposal. Further away from the Project Site, west of River Road, the area is rural in character with sparse minor roads and low-density residential housing throughout.

A Phase 1A Cultural Resource Survey was completed to meet the requirements of all federal, state, and local regulations in August 2002. The report content and format followed the standards used by the New York Archaeological Council and recommended by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP). The purpose of the Phase 1A was to identify the presence or absence of reported cultural resources within the Project Site and determine the sensitivity of the Site to contain archaeological sites.

Through site inspections, file research, and map research, it was determined that several prehistoric and historic archaeological sites were within a two-mile radius of the Project Site, and one prehistoric site was located within the Project Area. The Site was determined to be highly sensitive for prehistoric and historic archaeological sites. Due to the Phase 1A survey findings, a Phase 1B archaeological survey was recommended due to the possible presence of a prehistoric and historic archaeological sites.

The Phase 1B Study was completed in November 2002 to document the presence or absence of archaeological deposits and sites within the Project Site. The study focused on determining

whether the soil had potential for archaeological sites below the fill. Backhoe testing was completed to cut through the fill, where possible, and determine whether soils beneath indicated potential for archaeological sites to occur, or coarse or unsorted sand and/or gravel, or buried wetlands or tidal flats. Coarse sand and gravel deposits, filled in streams, or former tidal flats would indicate low to negligible archaeological sensitivity.

Multiple test pits were excavated on-site using a backhoe and hand shoveling. Test pits showed no evidence of archaeological sites or intact soil strata likely to contain archaeological sites. Test pits showed the Project Site is covered with fill, often coal ash. Beneath fill soils were water laid sand deposits or clay/sandy clay often associated with stream beds or tidal flats. The Phase 1B study concluded that there was a very low likelihood of archaeological sites within the Project Site.

The Phase 1A and Phase 1B were submitted to the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), who subsequently requested additional information to determine if intact soils were present deeper than the original test pit depths. An Additional Phase 1B Survey was completed to fulfill the NYSOPRHP request in September 2003.

The Additional Phase 1B Survey included review of historic data supplemented by soil borings. The review of soil borings showed that upper soils were easily interpreted as fill and lower soils appeared to have formed below water based on their gray color. The review concluded that the Project Site was composed of fill underlain by soils without archaeological sensitivity. Two anomalies were identified during the boring review, and additional excavations were completed around these locations. It was determined that the anomalies were variation in the fill capping the Project Area. Overall the sub-fill soil appeared to have formed below water, and thus were not stable land surfaces, proving the Site soils were not archaeological sensitivity.

The results of the Additional Phase 1B Survey were submitted to the NYSOPRHP for review, at which time the NYSOPRHP determined the Proposed Project would have “No Effect” upon cultural resources in or eligible for inclusion in the National Registers of Historic Places on September 25, 2003.

In November 2018 the NYSOPRHP was consulted in order to provide current an effect determination for the currently Proposed Project. The NYSOPRHP requested that the north entry road, the western utility corridor, and the south entry road areas be evaluation of prior disturbance and archeological sensitivity.

An Additional Archaeological Evaluation was completed in December 2018. where historic and soil survey maps and documented conditions were reviewed and photos to provide evidence of prior disturbance within the three access areas were compiled. Multiple areas showing prior disturbance or where fill cover old river or stream bottoms and slopped terrain were identified. These findings showed there were no archaeological sensitive areas identified within in the investigated areas.

Upon review of the Additional Archaeological Evaluation and previous archeological studies, the NYSOPRHP determined that a National Register eligible site, Papscanee Island Historic District, was located across the Hudson River from the Project Site. Papscanee Island Historic District is

comprised of agricultural fields which make the area visually unique and would have be recognizable to the historically prominent Mohican Sachem (Chief) Papsickene.

NYSOPRHP requested additional information, including a summary table detailing proposed elevations for construction work, a map showing depth of fill for each boring and trench, and review of visibility of the Site from the nearest public right-of-way to Papscanee Island Historic District. All information requested was to aid in Tribal consultation with the Stockbridge-Munsee Mohican Nation, federally recognized American Indian tribe.

A summary table detailing elevation for construction aspects, a figure detailing depths of fill around the Project Site, and photographs from American Oil Road in Rensselaer, New York, the nearest right-of-way to Papscanee Island Historic District, were collected to determine visibility of the Site from the Historic District. It was determined, from American Oil Road, from multiple photographs collected, that the west side of the Hudson River was not visible from the public right-of-way.

Based on all previously submitted information to the NYSOPRHP for review, the NYSOPRHP indicated in a letter, dated March 14, 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 designed.

All previous correspondence and reports provided to or received from the NYSOPRHP to date have been provided in the **DGEIS Appendix L**.

3.11.2. Potential Impacts

As previously stated, the NYSOPRHP indicated in a letter, dated March 14, 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 designed.

3.11.3. Mitigation Measures

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

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3.12. Aesthetic and Visual Resources

3.12.1. Environmental Setting

The purpose of this section is to assess the qualitative and quantitative visual impacts of the Proposed Project in accordance with SEQR. To that end a Visual Impact Assessment Report was conducted using 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. The report identified the Project Site's existing visual characteristics; identified any changes that may occur due to the project; identified the visual resources and receptors (particularly sensitive receptor) of any changes; assessed the impacts of the changes on those receptors; and finally, recommended mitigation, if necessary, to minimize or eliminate the impact of the changes on the receptors. The report is included as **Appendix M to the DGEIS.**

The Visual Impact Assessment Report includes the following sections and assessments: Description of Existing Visual Character; Identification of Viewshed, area of visual affect (AVE); Identification of Viewer Groups and Scenic Resources (Sensitive Receptors); Assessment of Viewer Sensitivity; Qualitative and Quantitative Assessment of Visual Impacts; and Proposed Mitigation. The report stepped through the process identified in the Federal Highway Administration's, Guidelines for the Visual Impact Assessment of the Highway Projects, specifically Chapters 4 through 7 to identify the AVE. Based upon the AVE, a Qualitative and Quantitative Assessment of the potential project was conducted. Georeferenced photographs were taken at eye level from the locations identified as the AVE. The camera locations, heights, and angles were placed into a three-dimensional rendered model of the Proposed Project and realistic photo-simulations were created.

3.12.2. Potential Impacts

The rendered project includes an 85' high 1.13 million SF warehouse/industrial use building, associated truck and employee parking, and a wharf as represented in Concept A within this DGEIS. The 85-foot building will exceed the allowable 60-foot height permissible by local zoning.

Photo-simulations of the project from the locations defined as the AVE were created. The AVE analysis included both a static and dynamic viewshed analysis, as well an analysis of sensitive receptors. Six sensitive receptors were identified within a 1-mile radius of the Project Site; however, based upon site visits, no sensitive receptors were included within the AVE. See Appendix A, Figure 3 within **Appendix M of the DGEIS** for the locations of the photo-simulations. The results of the photo-simulations are summarized below:

- Location 1: Location 1 is at the end of South Port Street looking south into the Project Site. The project can be seen from this location. The northern portion of the project is visible from the road as one approaches the project. The existing viewshed from this location is through an existing industrial park at a dead-end road with scrub brush vegetation. The proposed viewshed in this location includes the north face of the building. The building is in keeping with those around the Project Site and will be colored and textured to blend with the surroundings as much possible.

- Location 2: Location 2 is the at northwest property line of the project looking east into the Project Site. The project is partially visible from this location. The upper portion of the building can be seen above the existing vegetation. The existing viewshed from this location is of high voltage transmission lines above low level grass and reed vegetation in front of small caliper deciduous trees. The proposed viewshed maintains transmission lines, and grass and reeds vegetation, but replaces most of the deciduous trees with the top of the building. The building is in keeping with those around the Project Site and will be colored and textured to blend with the surroundings as much possible.
- Location 3: Location 3 is on NYS Route 144 at the proposed southwest entrance to the project looking east into the Project Site. The project can be seen from this location through the cut in the berm for the entrance to the Project Site. The existing viewshed from this location is of a roadside berm with scrub brush vegetation on it. The proposed viewshed removes the berm at the entrance location to show the southern portion of the project, mainly the truck staging location. This location is a dynamic viewshed that is barely visible to those passing the Project Site in an automobile.
- Location 4: Location 4 is from Glenmont Road at the location of cleared vegetation allowing a view of the Hudson Valley looking east toward the project. The project is somewhat visible from this location. The very top of the building can be seen above the existing vegetation. The existing viewshed from this location is from an elevated point above NYS Route 144 on Glenmont Road. Route 144 is visible below an open field with existing deciduous trees extending through the Hudson valley to the hills east of the river. The existing trees obstruct any view of the river. The proposed viewshed retains the existing elements with the addition of the top of the building partly through the deciduous trees. The building is in keeping with those around the Project Site and will be colored and textured to blend with the surroundings as much possible.
- Location 5: Location 5 is from the Hudson River looking west into the Project Site. The project is visible from this location. There is no visual barrier between the Hudson River and the project. The existing viewshed from this location is of the eastern shoreline of the project with scrub brush and deciduous trees beyond. The proposed viewshed is of the project with minimal screening. The Hudson riverfront in this area has multiple facilities immediately adjacent to this project with similar industrial uses with old rundown buildings, silos, and material conveyor systems. The proposed project building will be colored and textured to blend into the surrounds and will be an improvement to the existing Industrial buildings view shed.

3.12.3. Mitigation Measures

As mentioned above, the building will exceed the allowable zoning height and thus will pursue a variance for the height of the building. Although the building will exceed the allowable height, it is still in keeping with the surrounding area; there are buildings on the adjacent properties to both the north (Agway Industrial Park) and the south (PSEG) that are industrial in nature and contain structures that exceed 85 feet in height.

Based upon the visualizations created and summarized above the following mitigations are proposed.

- Location 1: This viewshed is from the approaching access road through an existing industrial area. The access road is not heavily trafficked thoroughfare and is only anticipated to be used by people accessing the Project Site; furthermore, it is not practical to screen the project from the access road. No additional mitigation is recommended at this location.
- Location 2: This viewshed is within the access easement to the northern portion of the property. The project has chosen not to use this access easement instead leaving the existing vegetation in place to screen the project from both NYS Route 144 and the residence to the northwest. At this location the project is viewed through the high voltage transmission lines originating at the PSEG plant and the existing railroad bed. The existing vegetation does screen the majority of the project and no further mitigation is recommended at this location.
- Location 3: This viewshed is within the right of way of NYS Route 144. The existing berm, screening the project from NYS Route 144, has been retained to the greatest extent possible. While the project can be seen from this location, it is anticipated that a viewer in a moving vehicle would only be able to see the project for the briefest of moments. No additional mitigation is recommended at this location.
- Location 4: This viewshed is from Glenmont Road at a higher elevation and west of the project. The project is only slightly visible from this location. The vast majority of the project is screened by existing vegetation with only the very top of the building visible. No additional mitigation is recommended at this location.
- Location 5: This viewshed is from the Hudson River. The eastern side of the project is completely visible from this location. Along this stretch of the Hudson River, many of the uses with direct river frontage are industrial, and views from the Hudson River are already significantly impacted by the presence of these uses, particularly the PSEG to the south. Directly across to the Hudson River on the east bank are multiple bulk oil storage facilities. Directly to the north is the existing Port of Albany. No additional mitigation is recommended at this location.

Additional photo-simulations showing a 60-foot building have been created and are included within the **FGEIS as Appendix H.** As stated, a building height variance will be requested from the Zoning Board or Appeals to allow an 85' high building once the specific need arises. We offer the following justification to grant such a variance pursuant to NYS Area variance law:

- *Undesirable Change in the neighborhood: Both properties immediately adjacent the Project Site contain heavy industrial buildings higher than 85 feet. To the south is the PS&G Power Plant that contains buildings that are 145 feet and the Port of Albany to the north has silos that are 95 feet high. Therefore, the proposed heavy industrial building with a maximum 85-foot building height is not creating an undesirable change in the neighborhood.*
- *Alternative to the variance: The building height of 85 feet is a functional requirement for assembly and manufacturing companies who supply components to the offshore wind industry. The 85 foot height is the minimum necessary to allow for the efficient maneuvering and assembly of the components and therefore, there is no feasible alternative to the building height.*
- *Substantiality: As stated above both neighboring properties have existing buildings that exceed the 85-foot height, and therefore the request is not substantial.*

- *Impact on the Environment: As the request height variance does not affect drainage, traffic, dust, noise, odor, or emergency services, and the surrounding area is a heavy industrial zone with existing buildings that exceed the requested 85 foot height, there will be no visual impact and therefore there is no substantial environmental impact.*
- *Self-created difficulty: Since the 85-foot height is the minimum necessary for the entire off-shore wind industry, the requested variance can be considered as not self-created.*

Additional mitigation undertaken to minimize the effects of this project on the surrounding visual landscape are as follows. A buffer of existing vegetation is being maintained along the western edge of the project with a minimum width of 25 feet. The northern access easement to NYS Route 144 was not utilized, so as not to create a visual opening in this area. 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.

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 and no mitigation measures are proposed.

3.13. Land Use and Zoning

3.13.1. Environmental Setting

The Project Site lies within an undeveloped, industrial, and rural/suburban context with limited access. The Project Site is undeveloped with scrub and forested vegetation throughout. A portion of the Project 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 site plan and special use permit 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. Additional land uses within the area include vacant, residential, industrial, and public services as shown in **Figure 3.13-2.** The nearest residential land use is located approximately 360 feet from the Project Site's property line.

Further away from the Project Site, west of River Road, the area is rural in character with sparse minor roads and low-density housing throughout. See **Figure 3.13-1** for the "Town of Bethlehem Zoning Map (2016)" and **Figure 3.13-2** for the "Town of Bethlehem Existing Land Use Map (2017)" which further describe the surrounding zoning and land uses.

As reported by the Town 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 and 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 Port of Albany Expansion Project will not directly alter any vacant adjacent lands, however, due to the new water line route being extended along River Road the new 1,200 linear feet extension will provide an opportunity for vacant properties to connect to public water. The sanitary sewer service will either extend north through the existing Port District and connect to the Albany County treatment plant or an on-site disposal system will be built. The water supply will tie into the existing line along River Road will only be extended to the Project Site and no further. The project will not alter adjacent lands or accessibility from its current setting.

As mentioned in **Section 2.0**, the Proposed Project consists of up to 1.13 million square feet of heavy industrial uses as permitted through site plan review or special use permit. **Table 3.13-1**

is an analysis of the bulk lot requirements required by Town code compared to the proposed development.

Table 3.13-1: Town of Bethlehem Schedule of Area, Yard, and Bulk Requirements

Feature	Required	Proposed
Minimum lot size, nonresidential	5 acres	81.62 acres
Minimum front yard, from right-of-way	100 feet	1284 feet
Minimum front yard, from center line	125 feet	N/A
Minimum side yard	25 feet	308 feet
Minimum rear yard	50 feet	753 feet
Minimum highway frontage	150 feet	**N/A** [(1)]
Maximum height	The lesser of four stories or 60 feet	85 feet[(2)]
Minimum lot depth	200 feet	2850 feet
Minimum lot width	150 feet	757 feet
Maximum lot coverage	30%	15.9% [(3)]

[(1)] Site is a pre-existing nonconforming lot per zoning law. Highway frontage not met, and is permitted for development so long as no change that would increase nonconformity
[(2)] Variance request needed
[(3)]1,130,000 sf two-story building has a footprint of 565,000 sf

As shown and on Concept Site Plan A (the generic Proposed Project **Figure 2.3-1**) all area, yard, and bulk requirements will be met except the maximum building height and highway frontage. Parcel reflects a pre-existing nonconforming lot per the zoning law. Highway frontage is not met since land along Port Road South does not meet lot depth requirements. Nonconforming lots are permitted for development as long as there are no changes in the lot dimensions that would increase in the nonconformity. This project does not include a proposed change in the lot dimensions that would increase nonconformity. The project proposes a maximum building height threshold of 85 feet. This maximum height dimension is in character with the building and structure height of the adjacent properties surrounding the Project Site. The Port of Albany to the north has silos that are approximately 90 feet tall, and the PSE&G property immediately to the south has buildings ranging in height from approximately 85 feet to 145 feet and stacks that are approximately 230 feet tall. Additional analysis of the impact of the proposed 85-foot maximum height is provided in Visual Impact Assessment in **Section 3.12**.

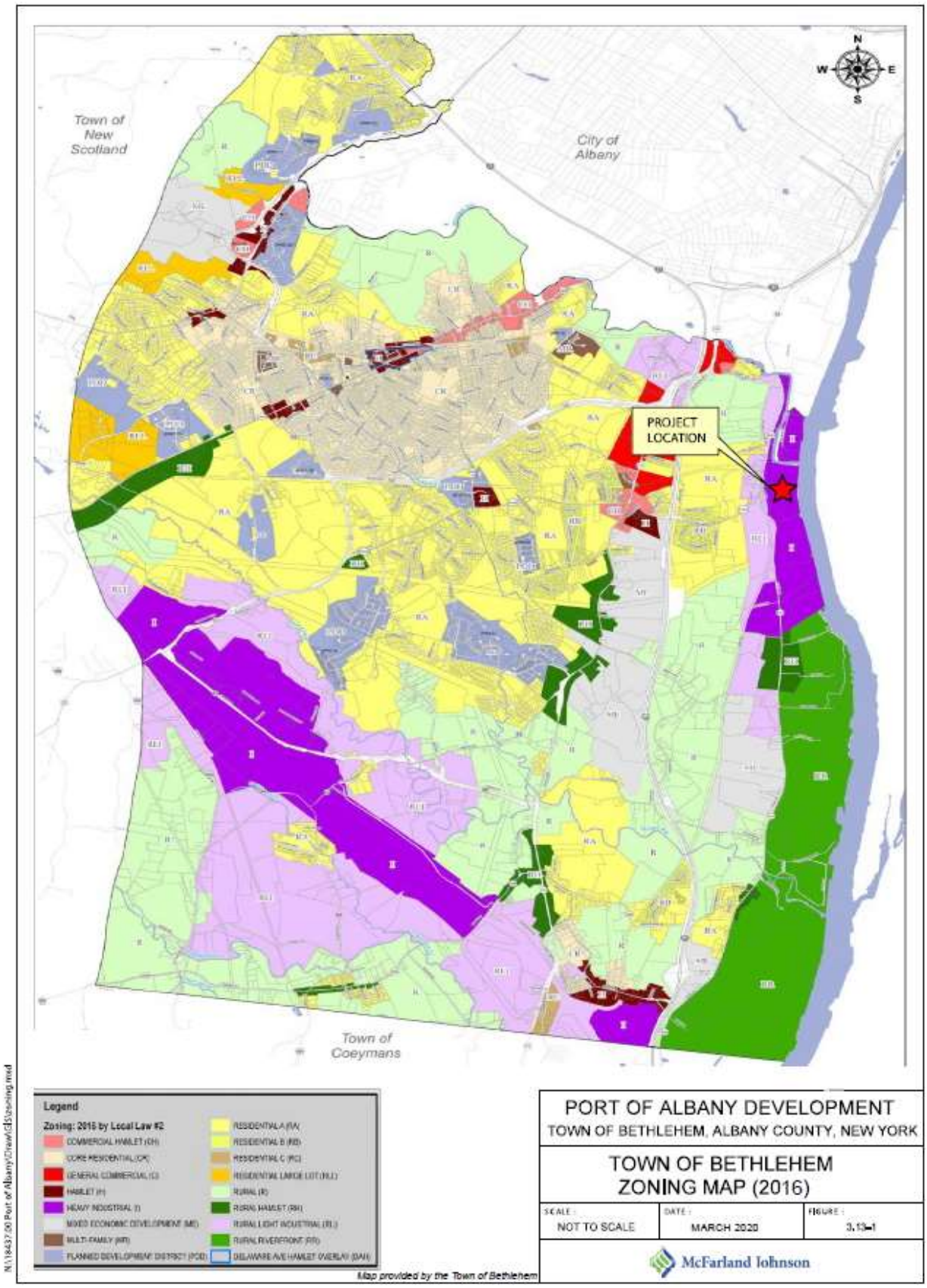
Figure 3.13-3 "Proposed Area, Yard, and Bulk Requirements for Concept A" shows the lot depth is measured as 2,850 feet from the shortest point from the front lot line and rear lot line. **Figure**

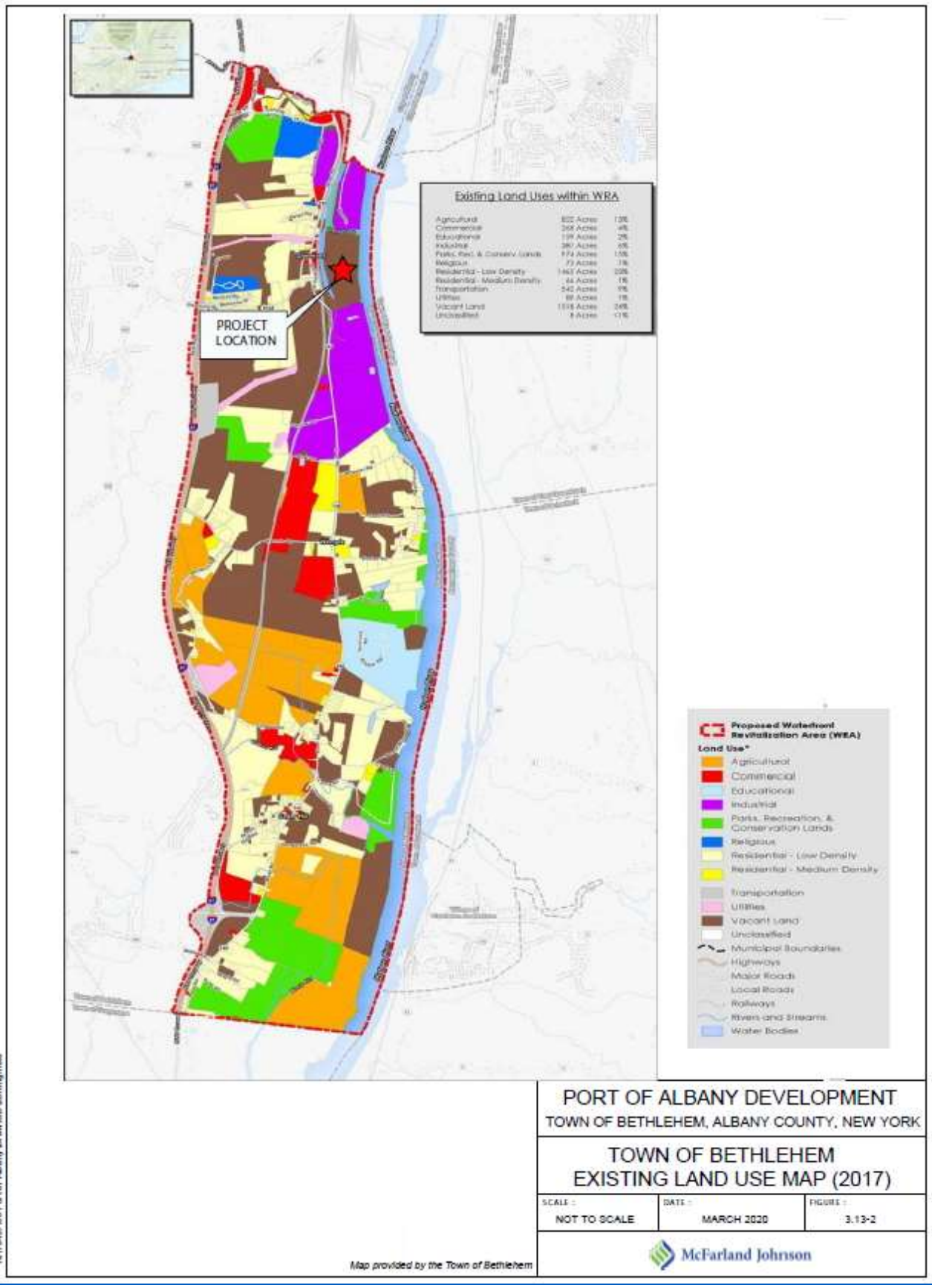
3.13-4 "Existing Yard Requirements" shows the existing property front, side, and rear yard setbacks.

Although the intent is not to subdivide the property, as market conditions and future tenant demands change, subdividing the property may become necessary. This DGEIS contemplates such a scenario with the proposed Concept C site plan, as shown in **Appendix O of the DGEIS**, which depicts a scenario with two separate lots with individual buildings on each lot, where all area, yard and bulk regulations to be met. If the Project Site were to be subdivided, the on-site roadway would become a privately-owned roadway constructed, owned, and maintained by the APDC. As such under Town Law Section 280-a. "Permits for Buildings Not on Improved Mapped Streets", states that "The Town Board may, by resolution, establish an open development area or areas within the Town, wherein permits may be issued for the erection of structures to which access is given by right of way or easement, upon such conditions and subject to such limitations as may be prescribed by general or special rule of the planning board, if one exists, or of the Town Board if a planning board does not exist." The watermain would need to be extended to each subdivided lot and would require approval from the Town and County Health Department. Since the sanitary sewer system and treatment plant is proposed to be private, the necessary easements and across each subdivided property and NYSDEC approval would be required. **See Figure 3.13-5 "Concept C Yard Requirements"** for proposed setbacks for potential subdivision**.**

The Town's Schedule of Area, Yard, and Bulk Requirements states that land division is prohibited, however the Town Zoning Code states that a land division may qualify for administrative review by the Department of Economic Development and Planning Subdivision. The site is located in a Heavy Industrial (I) zoning district and land divisions are only permitted in the R, RLL, RA, RB, RC, CR, RR, RH, and RLI Districts only. Therefore, all future subdivision activities would be completed through the Town of Bethlehem's subdivision approval process.

This project may be constructed in a single phase or in multiple phases over an approximate 10-year period. As stated in **Section 2.0**, at this time, no specific building or project is being proposed. Therefore, this Draft Generic Environmental Impact Statement addresses the generic impacts of the project described in **Section 2.0**, as well as, in more general and conceptual terms, the cumulative effects on the environment for all phases of the total project. As a result, subsequent site plan review for each specific Proposed Project will be required by the lead agent, to ensure that each specific project complies with the environmental thresholds and mitigation measures identified by this Draft Generic Environmental Impact Statement. Such future site plan review will include a SEQRA compliance report that addresses how the specific project complies with each of the sections of this Draft Generic Environmental Impact Statement.


Town of New Scotland
City of Albany
Town of Coeymans
PROJECT LOCATION
N
W
E
S
Legend
Zoning: 2016 by Local Law #2
Map provided by the Town of Bethlehem
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
TOWN OF BETHLEHEM
ZONING MAP (2016)
SCALE: NOT TO SCALE
DATE: MARCH 2020
FIGURE: 3.13-1
McFarland Johnson


Existing Land Uses within WRA
PROJECT LOCATION
Proposed Waterfront Revitalization Area (WRA)
Land Use*
Agricultural
Commercial
Educational
Industrial
Parks, Recreation, & Conservation Lands
Religious
Residential - Low Density
Residential - Medium Density
Transportation
Utilities
Vacant Land
Unclassified
Municipal Boundaries
Highways
Major Roads
Local Roads
Railways
Rivers and Streams
Water Bodies
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
TOWN OF BETHLEHEM
EXISTING LAND USE MAP (2017)
SCALE : NOT TO SCALE
DATE : MARCH 2020
FIGURE : 3.13-2
Map provided by the Town of Bethlehem
McFarland Johnson

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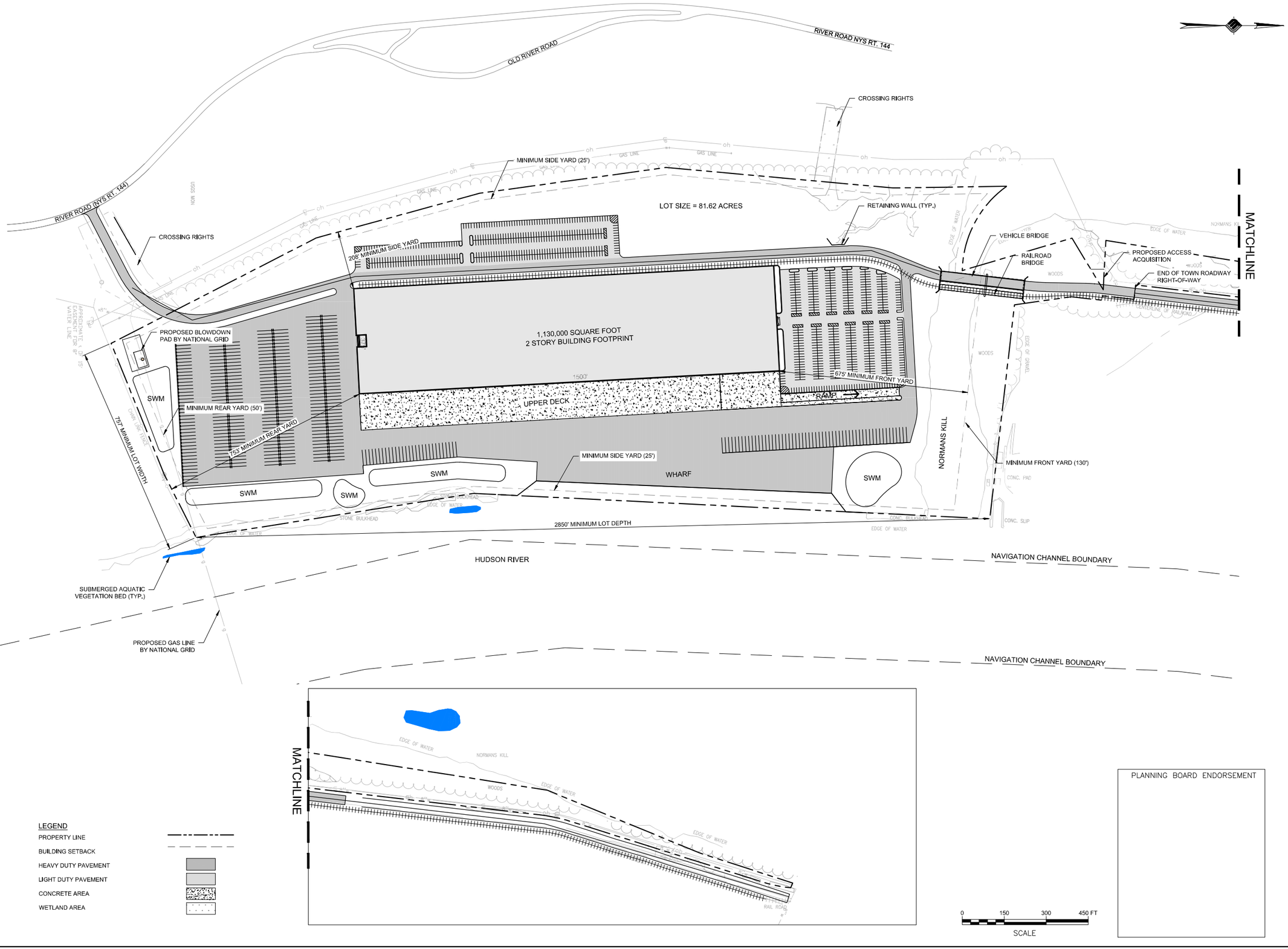

McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383
mjinc.com

PROJECT MILESTONE
90% DESIGN

NO.	DATE	DESCRIPTION

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

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

PLANNING BOARD ENDORSEMENT

DRAWING TITLE
CONCEPT A YARD REQUIREMENTS

DRAWING NUMBER
FIGURE 3.13-3

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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
90% DESIGN

NO.	DATE	DESCRIPTION

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

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1" = 150'
DATE	MARCH 2020
PROJECT	18437.00

DRAWING TITLE
EXISTING YARD REQUIREMENTS

DRAWING NUMBER
FIGURE 3.13-4

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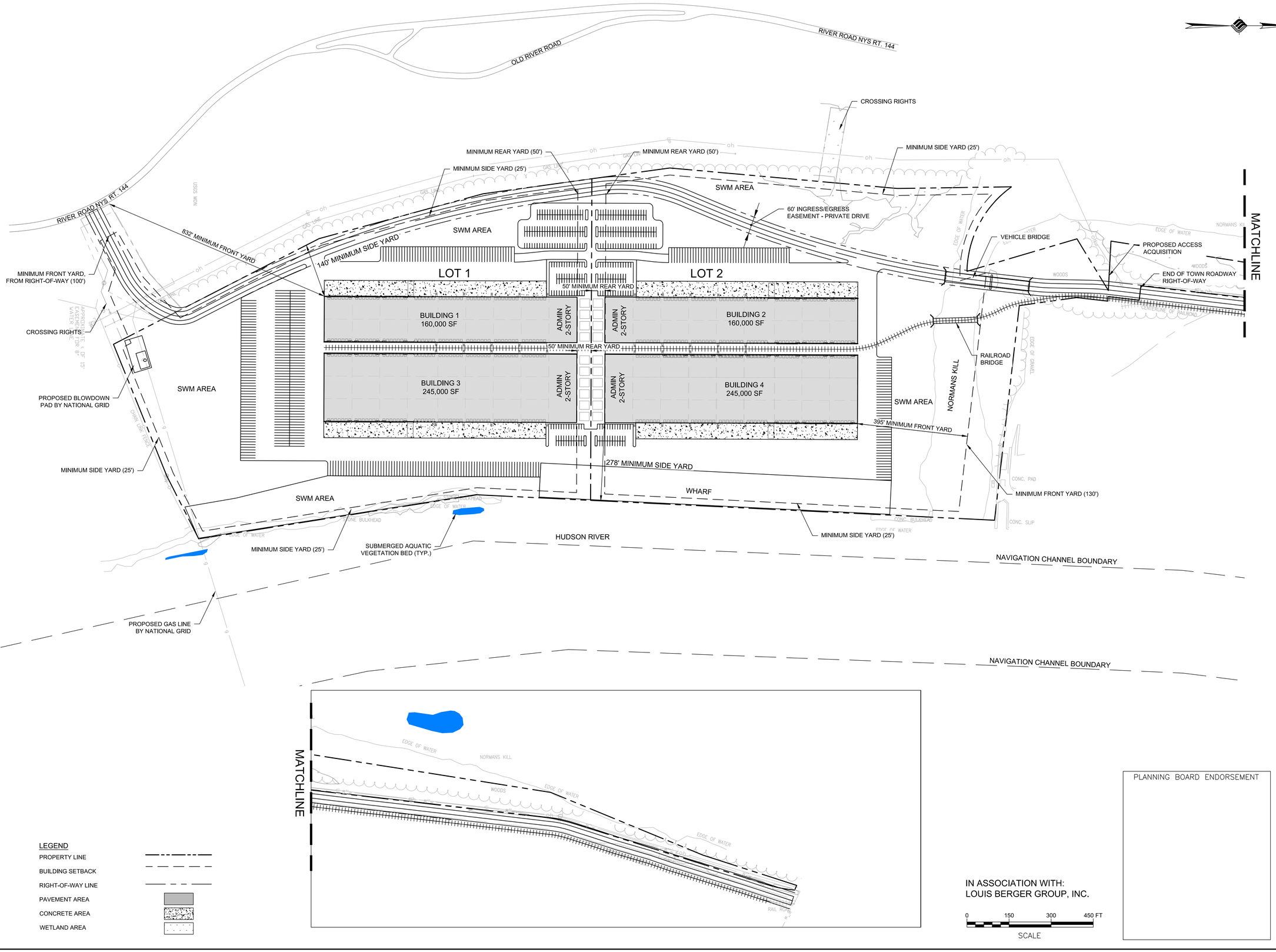

IN ASSOCIATION WITH:
LOUIS BERGER GROUP, INC.

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	NOT TO SCALE
DATE	MARCH 2020
PROJECT	18437.00

DRAWING TITLE
CONCEPT C YARD REQUIREMENTS

DRAWING NUMBER
FIGURE 3.13-5

1 OF 1

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3.13.2. Potential Impacts

The project is proposed to include fabrication, manufacturing, storage, and distribution of products, materials, and cargo to be transported by rail, truck, and/or maritime methods. According to the Town Zoning Code and the Town of Bethlehem's Comprehensive plan, all proposed activities are allowed and are in compliance with Town goals and zoning regulations. Specifically, Section 4.7 of the Comprehensive Plan identifies this Project Site as a Heavy Industrial District with "The purpose of this district is to encourage the development of heavy industrial uses that require trucking or rail transportation to move goods and materials".

The Project will develop the land with uses permitted by site plan and special use permit pursuant to the Town's heavy industrial zoning regulations. The areas adjacent to the Project Site are currently zoned heavy industrial and are occupied with heavy industrial uses. Therefore, the Project Site will have no impact on and will be compatible with the surrounding land uses.

Based on the project development, it is unlikely to influence future development. The Port of Albany Expansion Project will not directly alter the adjacent lands, but there will be an extension of 1,200 linear feet of the Town waterline along River road. This provides an opportunity for adjacent properties to connect to public water that do not currently have access. As proposed, rail access, and maritime access would only be available to the Project Site and would not be available to surrounding properties. The utility infrastructure may be available to adjacent properties.

The building height could potentially be as tall as 85 feet based on building requirements for manufacturing facilities. As stated in **Section 3.13.1**, this would still be in character with the surrounding properties in the area, including the PSE&G Property, located in the Town of Bethlehem adjacent to the north of the Project Site.

The proposed project will not create any significant adverse impacts to residential land uses within the area .

3.13.3. Mitigation Measures

The Project Site will be developed with permitted uses in accordance with the Town's zoning code and will comply with the area, yard and bulk regulations with one exception. The Project proposes a 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. Should the proposed building exceed the 60-foot building height regulation, the applicant would request a variance from the Zoning Board of Appeals during the Site Plan Review process.

Additional proposed mitigation measures to the proposed maximum height is provided in the Visual Impact Assessment found in **Section 3.12**.

The property has been determined to not be visible from the Ezra Prentice community and as such, no mitigation measures are proposed.

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3.14. Community Character and Compatibility with Comprehensive Plan

3.14.1. Environmental Setting

The Town of Bethlehem is comprised of suburban residential neighborhoods, historic hamlets, mixed-use commercial centers, industrial facilities, and rural land. The Project Site is vacant land located in the northeastern portion of the town along the Hudson River and zoned as heavy industrial. The neighboring land uses to the north and south are also industrial. The area west of the Project Site and west of River Road is zoned as rural light industrial and further west as residential. The area west of the Project Site is also characterized as being a mix of forested areas with sparse minor roads and low-density housing, and light industrial businesses. See **Figure 3.13-2** for the "Land Use" from The Town of Bethlehem Local Waterfront Revitalization Plan (LWRP). Land located across the Hudson River in the town of East Greenbush is characterized as a mix of industrial and agriculture. Additional land uses within the area include vacant, residential, industrial, and public services. The nearest residential land use is located approximately 360 feet from the Project Site property line.

The Town's Comprehensive Plan was initially published in 2005 and is currently being reviewed to be updated. The intent of the Comprehensive Plan is to provide a plan and vision for the future development of the town over a 10 to 15-year timespan.

The Town of Bethlehem and the Project Site are located along the Hudson River which is considered a coastal resource by New York State. In 1982, New York State established the New York Coastal Management Program (NYCMP) to manage and protect coastal resources. The NYCMP, which is administered by the New York Department of State (NYSDOS), was developed in compliance with the federal Coastal Zone Management Act (CZMA), which provides assistance and encouragement to coastal states to develop and implement coastal management programs. The NYCMP includes 44 coastal policies, with which all state agencies actions must be consistent. The policies generally fall into three categories: promotion of beneficial use of coastal resources; prevention of impairment of resources; and management of major activities substantially affecting numerous resources. As part of the NYCMP, local governments are encouraged to voluntarily develop local waterfront revitalization plans (LWRP) under the state's Waterfront Revitalization of Coastal Areas and Inland Waterways law (Article 42 of the Executive Law), which in turn provide benefits, such as, financial assistance for implementation of the LWRP, a plan for appropriate protection and future development of the Hudson riverfront, and partnerships between local and state agencies.

The Town of Bethlehem recently completed a revised Draft LWRP (September 2018), which is currently being reviewed by the NYSDOS. The Project Site is located within the coastal area boundary and the proposed Waterfront Revitalization Area (WRA) as outlined in the Town's Draft LWRP. The Proposed Project is analyzed for consistency with the draft LWRP.

3.14.2. Potential Impacts

Town Law §272-a states that the Town's land use regulations must be in compliance with its Comprehensive Plan. In section 4.7 of the Comprehensive Plan, the Project Site is detailed as "located along the Hudson River, just south of the Port of Albany" and mentions that "development within the industrial areas provides much-needed tax base for the Town".

The Town's Draft LWRP discusses the Project Site and the benefits and consistency of development of the Project Site. It states that the northern portion of the WRA, an area containing the Project Site, is mainly industrial and commercial services and a significant component of the town's tax base. The Draft LWRP discusses the expansion of existing industrial and commercial services near and along the riverfront and includes the potential expansion at the Project Site as identified by the APDC. In addition, the Draft LWRP discusses the project as being able to improve and expand the town's commercial and industrial tax base by attracting private tenants to the currently vacant land, and that the property was determined to be an opportunity area for the town in their economic development strategy.

The Proposed Project will likely require federal permit (USACE Section 404 Permit and/ or Section 10 Permit) and therefore, coastal consistency review by the NYSDOS will be required to determine the consistency of the Proposed Project with the 44 NYCMP policies. Coastal consistency review consists of submitting a Federal Consistency Assessment Form and the USACE Individual Permit application simultaneously to the USACE and NYSDOS. The NYSDOS has six months to complete its review of the application and make a determination. Depending on the scope of the project, the consistency review and determination can take between one and six months to complete. Based on the scope of the Proposed Project, consistency review will most likely take six months.

The APDC will encourage the tenant(s) of the facility to use alternative and or renewable energy sources for the final buildings. The APDC will recommend the project follow Leadership in Energy and Environmental Design (LEED) standards as applicable such as bicycle facilities, protection or restoration of habitats on-site, water metering, optimizing energy performance, renewable energy production (solar energy), daylight and other applicable options outlined by LEED. The APDC will recommend the tenant use green infrastructure and other applicable options outlined by the NYSDEC Stormwater Design Manual.

3.14.3. Mitigation Measures

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

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. The Proposed Project will have no significant adverse impacts to the Ezra Prentice community, and therefore will not require any mitigation measures.

3.15. Emergency Services

3.15.1. Environmental Setting

This section will discuss emergency services around the proposed APDC Port of Albany Expansion Project. Emergency services shall include police, fire protection, and emergency health care services. **See Figure 3.15-1 Town of Bethlehem Community Service Map.**

The Site has two proposed access points, one to the north and one to the south. The access point to the north would go over the Normans Kill, connect to Port Street, to South Port Road, and then connect to River Road/NYS Route 144. The connection over the Normans Kill would require a new vehicular bridge to be constructed. The access point to the South would utilize an existing permanent easement from National Grid to connect to River Road/NYS Route 144. All roads proposed would be designed and built to meet local codes and Town standards.

This DGEIS will assume that access to the Site for emergency vehicles will be via South Port Road, or the access road to the North, with secondary access point to the South from River Road/NYS Route 144.

Police

The Proposed Project Site is within the jurisdiction of the Town of Bethlehem Police Department, Albany County Sheriff's Department, and the New York State Police.

The Town of Bethlehem Police Department is located on Delaware Avenue in Delmar. The department supplies safety services to the Town of Bethlehem on a 24-hour, seven-day-a-week basis. The department has been notified of the project and has supplied a "Will Serve" letter, confirming that they will serve the Project Site.

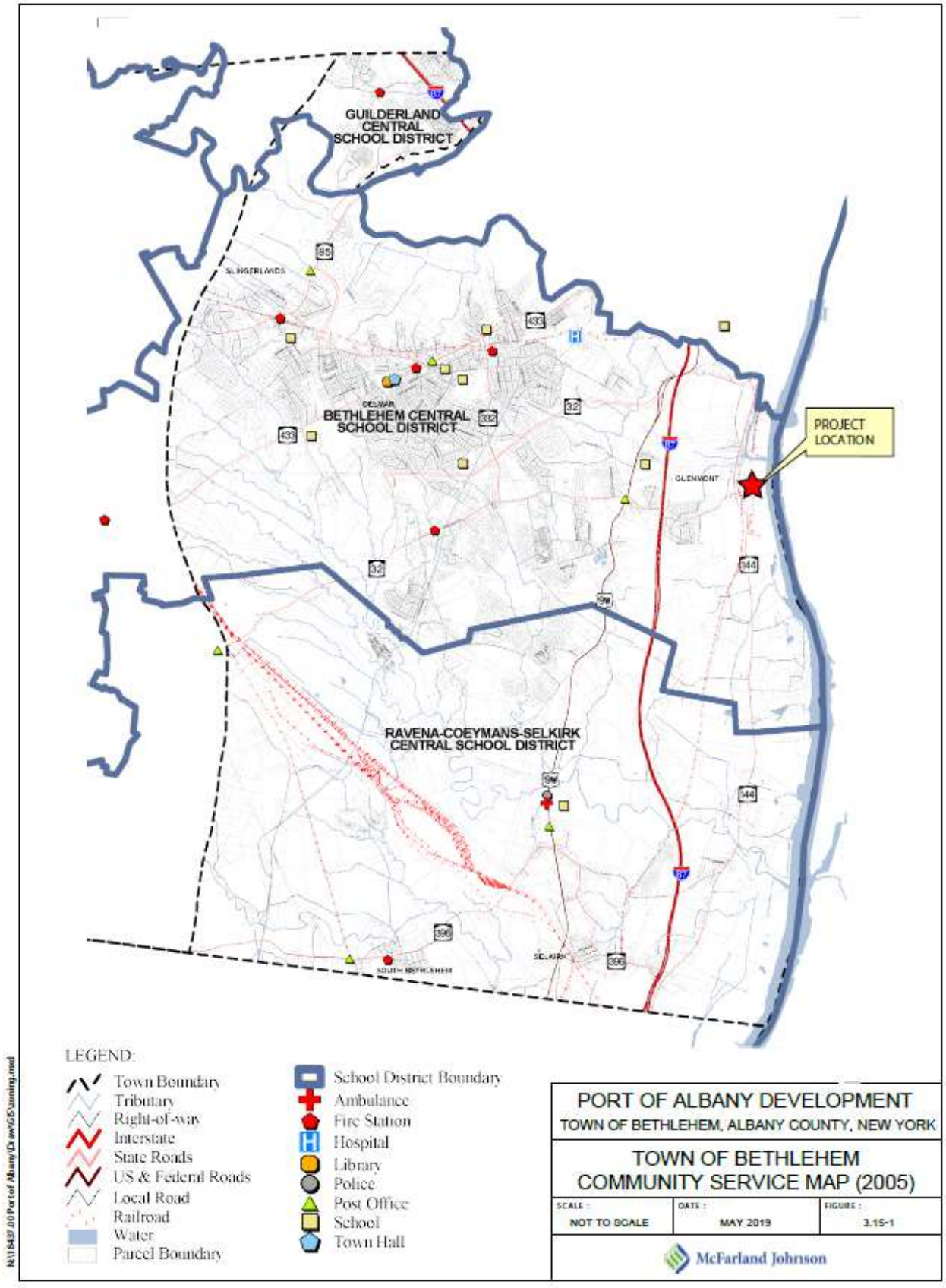
The Albany County Sheriff's Department is located in the City of Albany. The Sheriff's Department has been notified of the project and has been supplied with a project description and concept site sketch. The New York State Police Department has a local Troop in New Scotland and has been supplied with a project description and concept site sketch.

Fire Protection

The Site is located within the Selkirk Fire District service area. The Selkirk Fire District is the largest of the five districts serving the Town of Bethlehem, covering 29.8 square miles, or 60% of the Town's area. The Selkirk Fire District has administrative offices in Selkirk, with fire stations in Selkirk, Glenmont, and South Bethlehem. The Glenmont station, located at 30 Glenmont Road, Glenmont, NY, is the closest station to the Site, but in the event of a call all three stations would respond. The Selkirk Fire Department confirmed they can serve an 85 foot building utilizing their existing mutual aid agreements with other agencies including the City of Albany. The Selkirk Fire Department confirmed they understand the project thresholds for building size, building height, and project location. The Fire Department stated they can serve the facility and provided a "Will Serve" letter.

Emergency Health Care Services

The Delmar-Bethlehem EMS provides emergency medical service and basic life support transport to those in the communities of Delmar, Elsmere, Glenmont, Selkirk, Slingerlands, and South Bethlehem. The Delmar-Bethlehem EMS has full time EMTs staffing three ambulances during the day and predominantly volunteer efforts overnight. There are four (4) hospitals with emergency services located within a ten-mile radius of the Project Site: Albany Medical Center Hospital, South Clinical Campus, Albany Memorial Hospital, and St. Peter's Hospital. Delmar-Bethlehem EMS has been notified of the project and has supplied a "Will Serve" letter, confirming that they will serve the Project Site.


GUILDERLAND CENTRAL SCHOOL DISTRICT
BETHLEHEM CENTRAL SCHOOL DISTRICT
RAVENA-COEYMANS-SELKIRK CENTRAL SCHOOL DISTRICT
PROJECT LOCATION
GLENMONT
SLINGERLANDS
DELMAR
SELKIRK
SOUTH BETHLEHEM
LEGEND:
Town Boundary
Tributary
Right-of-way
Interstate
State Roads
US & Federal Roads
Local Road
Railroad
Water
Parcel Boundary
School District Boundary
Ambulance
Fire Station
Hospital
Library
Police
Post Office
School
Town Hall
PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK
TOWN OF BETHLEHEM COMMUNITY SERVICE MAP (2005)
SCALE : NOT TO SCALE
DATE : MAY 2019
FIGURE : 3.15-1
McFarland Johnson

3.15.2. Potential Impacts

The potential impacts of a 1,130,000-sf building classified under industrial use at the Project Site will have a potential impact of police, fire, and emergency services, but the scope of that impact will vary depending on the final use of the facility. All on site emergency services will be provided as part of the site plan application, once a specific project and building tenant is known.

The Town's Emergency Management Plan has procedures outlined regarding emergencies at a facility. There is general information regarding procedures for dealing with emergencies and does not directly address emergencies at industrial facilities, nor any other specific emergency. The Town of Bethlehem uses the FEMA National Incident Management System (NIMS) as a guide to coordinate the response to emergencies. NIMS addresses aspects of emergencies at industrial facilities. In the event of any emergency at the Project Site or could affect the Project Site, the Town of Bethlehem would follow the procedures within their Comprehensive Emergency Management Plan and NIMS standards.

3.15.3. Mitigation Measures

New York State Uniform Fire Prevention and Building Code (Uniform Coded) provides minimum requirements to safeguard the public safety, health, and general welfare. The Uniform Code has requirements for many aspects of built environments, such as: structural strength, means of egress, stability, adequate light and ventilation, stability, and safety to life and property from fire, and other hazards associated with building. All buildings will be built in accordance the current standards of the Uniform Code.

Construction considerations to mitigate emergency services will include items to follow the Uniform Code and subsequent regulations. All commercially occupied buildings will be sprinklered in accordance with the most current National Fire Prevention Association (NFPA) Code 13: *Standard for the Installation of Sprinkler Systems* requirements. All buildings will have standpipes in accordance with the most current NFPA Code 14: *Standard for the Installation of Standpipe and Hose Systems*. All buildings will be provided with an Underwriters Laboratories (UL) listed backflow prevention device, and a UL listed fire pump will be provided if needed to ensure necessary pressure and flow at the buildings.

All roads constructed in the development will be designed and built to meet local codes and Town requirements, including the ability to accommodate the emergency service vehicles. Landscaping will be completed to not inhibit access to the buildings where necessary for emergency services.

Fire code compliance and uses of private security and monitoring systems will be determined and finalized during the site plan review and approval process, as well as the building permit process.

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 Fiscal and Economic Impact**. This additional revenue is anticipated to offset any costs associated with additional efforts for local emergency services from the Proposed Project.

In the case where the Port owns the building, and the building is not taxable, an agreement to reimburse the Town for the actual cost of emergency services would be established. The agreement would be based on actual cost of emergency services rendered at this project site, based on a specific project, and agreed upon at the time of Site Plan application.

The Ezra Prentice community is located in the City of Albany and is serviced through different emergency service districts than the Project Site and therefore would have no significant adverse impacts. No mitigation measures are proposed as it relates to the Ezra Prentice community.

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3.16. School District

3.16.1. Environmental Setting

The development of the property will result in new taxable valuation that will be subject to the Bethlehem Central School District property tax. As of the 2019-2020 School Year, the property tax rate for the school district is $21.25. Based on this rate, future industrial port development of the property will result in between approximately $303,000 and $1.6 million in annual property tax revenue for the School District. Over ten years, beginning with the first year of full taxation, the Project is estimated to generate between $3.1 million and $16.1 million for the School District, depending on the development concept. The fiscal impacts calculated in this analysis do not assume any potential Payment-in-lieu-of-Taxes (PILOT) agreements that future tenants of the property might receive. If new businesses receive a PILOT, it would decrease the amount of property tax revenue paid by future users of the property.

Estimated School District Tax Revenues (10-Years)						
Year	Est. Tax Rate*	Concept A	Concept B	Concept C	Concept D	Concept D.1
1	21.25	$ 1,574,625	$ 1,332,375	$ 1,312,188	$ 302,813	$ 807,500
2	21.36	$ 1,582,515	$ 1,339,052	$ 1,318,763	$ 304,330	$ 811,546
3	21.46	$ 1,590,445	$ 1,345,762	$ 1,325,371	$ 305,855	$ 815,613
4	21.57	$ 1,598,415	$ 1,352,505	$ 1,332,013	$ 307,388	$ 819,700
5	21.68	$ 1,606,425	$ 1,359,283	$ 1,338,687	$ 308,928	$ 823,808
6	21.79	$ 1,614,475	$ 1,366,094	$ 1,345,396	$ 310,476	$ 827,936
7	21.90	$ 1,622,565	$ 1,372,940	$ 1,352,137	$ 312,032	$ 832,085
8	22.01	$ 1,630,696	$ 1,379,819	$ 1,358,913	$ 313,595	$ 836,254
9	22.12	$ 1,638,867	$ 1,386,734	$ 1,365,722	$ 315,167	$ 840,445
10	22.23	$ 1,647,079	$ 1,393,683	$ 1,372,566	$ 316,746	$ 844,656
10-Year Total		**$ 16,106,108**	**$ 13,628,245**	**$ 13,421,756**	**$ 3,097,328**	**$ 8,259,542**
10-Year Average		**$ 1,610,611**	**$ 1,362,824**	**$ 1,342,176**	**$ 309,733**	**$ 825,954**

**Year 1 Tax Rate based on 2019-2020 tax rate. Assumes an average tax rate increase of 0.5% based on most recent 5-year annual average.*

Source: Camoin 310

When property tax revenues from the off-site economic impacts in the School District are considered, the estimated revenue to the School District is greater. The following table shows the estimated combined on-site and off-site generated property tax revenue for the School District as a result of the Proposed Project.

Total Estimated School District Tax Revenues (On and Off-Site Generated Revenue) (10-Years)					
Year	Concept A	Concept B	Concept C	Concept D	Concept D.1
1	$ 4,328,235	$ 3,458,045	$ 3,120,888	$ 2,076,484	$ 6,577,445
2	$ 4,349,894	$ 3,475,350	$ 3,136,507	$ 2,086,870	$ 6,610,341
3	$ 4,371,661	$ 3,492,741	$ 3,152,204	$ 2,097,308	$ 6,643,401
4	$ 4,393,537	$ 3,510,220	$ 3,167,979	$ 2,107,798	$ 6,676,627
5	$ 4,415,522	$ 3,527,786	$ 3,183,834	$ 2,118,340	$ 6,710,020
6	$ 4,437,617	$ 3,545,440	$ 3,199,768	$ 2,128,935	$ 6,743,579
7	$ 4,459,823	$ 3,563,182	$ 3,215,782	$ 2,139,583	$ 6,777,306
8	$ 4,482,140	$ 3,581,013	$ 3,231,875	$ 2,150,285	$ 6,811,202
9	$ 4,504,569	$ 3,598,933	$ 3,248,050	$ 2,161,039	$ 6,845,267
10	$ 4,527,110	$ 3,616,943	$ 3,264,305	$ 2,171,848	$ 6,879,502
10-Year Total	**$ 44,270,108**	**$ 35,369,652**	**$ 31,921,191**	**$ 21,238,490**	**$ 67,274,689**
10-Year Average	**$ 4,427,011**	**$ 3,536,965**	**$ 3,192,119**	**$ 2,123,849**	**$ 6,727,469**

**Year 1 Tax Rate based on 2019-2020 tax rate. Assumes an average tax rate increase of 0.5% based on most recent 5-year annual average.*

Source: Camoin 310

The property is zoned for Heavy Industrial and the Port of Albany is pursuing industrial developers and tenants for the Project Site. No residential development is anticipated. Therefore, the Bethlehem Central School District is not anticipated to incur any increased enrollment of students as a direct result of future industrial development on the property.

3.16.2. Potential Impacts

Major development projects can potentially result in increased costs to local school districts associated with an increase in school aged children; however, the future development of Beacon Island will be entirely industrial in nature. As stated in **Section 3.16.1** the Port of Albany is pursuing industrial developers and tenants for the Project Site, with no residential development anticipated. Therefore, the Bethlehem Central School District is not anticipated to incur any increased costs associated with increased enrollment of students as a direct result of future industrial development on the property. No significant adverse impacts on the School District are found.

3.16.3. Mitigation Measures

No mitigation measures are necessary due to the finding of no significant adverse impacts on the School District.

The Project Site is in a separate school district than the Ezra Prentice community and will have no impacts on the Ezra Prentice community. No mitigation measures are necessary.

3.17. Fiscal and Economic Impact

3.17.1. Environmental Setting

Potential Fiscal Impacts and Taxation Implications

The analysis examined two fiscal scenarios:

1) Land Remains Tax Exempt; New Buildings Fully Taxable: APDC currently owns the property and as such, the land is currently wholly exempt from property taxes. APDC has expressed its intent to maintain ownership of the land, which will keep it exempt. However, APDC intends to make the land available for private development and any future buildings constructed on the land will be subject to property taxes. The analysis of this scenario also explores potential fiscal implications if a future tenant were to receive a property tax abatement incentive from the Town of Bethlehem Industrial Development Agency (IDA) through a Payment in Lieu of Taxes (PILOT) agreement.

2) Entire Property is Tax Exempt: At the request of the Town of Bethlehem, a second fiscal scenario was analyzed to understand the fiscal impacts of the project if the entire property, both land and buildings are tax exempt in the future. In this case, only the "indirect off-site impacts" of the project are considered.

Fiscal Impact Scenario 1 Results:

The analysis completed in Updated Economic and Fiscal Impact Report located in **FGEIS Appendix J** 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). The fiscal impacts calculated in this analysis do not assume any potential Payment-in-lieu-of-Taxes (PILOT) agreements that future tenants of the property might receive. If new businesses receive a PILOT, it would decrease the amount of property tax revenue paid by future users of the property.

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*	$ 4,330,000	$ 3,460,000	$ 3,120,000	$ 2,080,000	$ 6,580,000
Town of Bethlehem and Other Local Property Tax Revenue*	$ 1,000,000	$ 801,000	$ 723,000	$ 481,000	$ 1,520,000
Total Tax Revenues	**$ 13,000,000**	**$ 10,700,000**	**$ 10,000,000**	**$ 4,650,000**	**$ 14,200,000**

Source: Camoin 310

*Includes both direct on-site impacts and off-site impacts generated from economic impact of development

Fiscal Impact Scenario 2 Results:

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 the Town of Bethlehem. The estimated fiscal benefit to the Town of Bethlehem Taxing Jurisdictions (including Albany County property tax revenue generated within the Town) is approximately $2.5 million to $8.1 million annually. This revenue would occur even if the entire project remains tax-exempt.

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

Estimated Net Increase in Annual Property Tax Revenue (Off-Site)					
Property Tax Type	Concept A	Concept B	Concept C	Concept D	Concept D.1
Albany County (Town of Bethlehem Portion)	$ 492,136	$ 379,908	$ 323,258	$ 316,998	$ 1,031,228
Town of Bethlehem (General Fund)	$ 113,648	$ 87,732	$ 74,650	$ 73,204	$ 238,140
Highway Tax	$ 221,680	$ 171,128	$ 145,610	$ 142,790	$ 464,511
Ambulance/EMS	$ 41,164	$ 31,777	$ 27,038	$ 26,515	$ 86,255
Selkirk Fire Dept.	$ 193,146	$ 149,100	$ 126,867	$ 124,410	$ 404,720
Town Water District	$ 68,289	$ 52,717	$ 44,856	$ 43,987	$ 143,094
Bethelehem Central School District	$ 2,753,610	$ 2,125,670	$ 1,808,700	$ 1,773,672	$ 5,769,945
Total	**$ 3,883,674**	**$ 2,998,031**	**$ 2,550,979**	**$ 2,501,575**	**$ 8,137,893**

Source: 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 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 $113 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 details the annual (ongoing) and one-time economic output, including new jobs, earnings (wages), and sales.

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

Summary of Job Impact by Occupation Type

The following tables detail the number and type of jobs that are expected to be created for each development concept, for both the construction phase and ongoing operations.

Operations Job Impact: Concept A	
Job Type	# of Jobs
Transportation and Material Moving Occupations	521
Office and Administrative Support Occupations	251
Production Occupations	210
Sales and Related Occupations	154
Management Occupations	92
Installation, Maintenance, and Repair Occupations	76
Business and Financial Operations Occupations	66
Arts, Design, Entertainment, Sports, and Media Occupations	55
Food Preparation and Serving Related Occupations	42
Building and Grounds Cleaning and Maintenance Occupations	40
Architecture and Engineering Occupations	27
Computer and Mathematical Occupations	26
Healthcare Practitioners and Technical Occupations	24
Construction and Extraction Occupations	22
Personal Care and Service Occupations	20
Other	43

Source: EMSI; Camoin 310

Construction Job Impact: Concept A	
Job Type	# of Jobs
Construction and Extraction Occupations	653
Management Occupations	102
Office and Administrative Support Occupations	84
Transportation and Material Moving Occupations	48
Sales and Related Occupations	42
Business and Financial Operations Occupations	42
Installation, Maintenance, and Repair Occupations	30
Architecture and Engineering Occupations	27
Production Occupations	22
Building and Grounds Cleaning and Maintenance Occupations	15
Food Preparation and Serving Related Occupations	13
Healthcare Practitioners and Technical Occupations	13
Computer and Mathematical Occupations	9
Personal Care and Service Occupations	7
Arts, Design, Entertainment, Sports, and Media Occupations	5
Other	15

Source: EMSI; Camoin 310

Operations Job Impact: Concept B	
Job Type	# of Jobs
Transportation and Material Moving Occupations	365
Office and Administrative Support Occupations	176
Production Occupations	147
Sales and Related Occupations	108
Management Occupations	64
Installation, Maintenance, and Repair Occupations	53
Business and Financial Operations Occupations	46
Arts, Design, Entertainment, Sports, and Media Occupations	38
Food Preparation and Serving Related Occupations	29
Building and Grounds Cleaning and Maintenance Occupations	28
Architecture and Engineering Occupations	19
Computer and Mathematical Occupations	18
Healthcare Practitioners and Technical Occupations	17
Construction and Extraction Occupations	16
Personal Care and Service Occupations	14
Other	30

Source: EMSI; Camoin 310

Construction Job Impact: Concept B	
Job Type	# of Jobs
Construction and Extraction Occupations	457
Management Occupations	71
Office and Administrative Support Occupations	59
Transportation and Material Moving Occupations	33
Sales and Related Occupations	30
Business and Financial Operations Occupations	30
Installation, Maintenance, and Repair Occupations	21
Architecture and Engineering Occupations	19
Production Occupations	15
Building and Grounds Cleaning and Maintenance Occupations	11
Food Preparation and Serving Related Occupations	9
Healthcare Practitioners and Technical Occupations	9
Computer and Mathematical Occupations	6
Personal Care and Service Occupations	5
Arts, Design, Entertainment, Sports, and Media Occupations	4
Other	11

Source: EMSI; Camoin 310

Operations Job Impact: Concept C	
Job Type	# of Jobs
Transportation and Material Moving Occupations	339
Office and Administrative Support Occupations	163
Production Occupations	137
Sales and Related Occupations	100
Management Occupations	60
Installation, Maintenance, and Repair Occupations	50
Business and Financial Operations Occupations	43
Arts, Design, Entertainment, Sports, and Media Occupations	36
Food Preparation and Serving Related Occupations	27
Building and Grounds Cleaning and Maintenance Occupations	26
Architecture and Engineering Occupations	17
Computer and Mathematical Occupations	17
Healthcare Practitioners and Technical Occupations	16
Construction and Extraction Occupations	15
Personal Care and Service Occupations	13
Other	28

Source: EMSI; Camoin 310

Construction Job Impact: Concept C	
Job Type	# of Jobs
Construction and Extraction Occupations	425
Management Occupations	66
Office and Administrative Support Occupations	55
Transportation and Material Moving Occupations	31
Sales and Related Occupations	27
Business and Financial Operations Occupations	27
Installation, Maintenance, and Repair Occupations	19
Architecture and Engineering Occupations	18
Production Occupations	14
Building and Grounds Cleaning and Maintenance Occupations	10
Food Preparation and Serving Related Occupations	8
Healthcare Practitioners and Technical Occupations	8
Computer and Mathematical Occupations	6
Personal Care and Service Occupations	5
Arts, Design, Entertainment, Sports, and Media Occupations	4
Other	10

Source: EMSI; Camoin 310

Operations Job Impact: Concept D	
Job Type	# of Jobs
Production Occupations	155
Office and Administrative Support Occupations	74
Sales and Related Occupations	44
Management Occupations	36
Transportation and Material Moving Occupations	33
Arts, Design, Entertainment, Sports, and Media Occupations	32
Business and Financial Operations Occupations	24
Installation, Maintenance, and Repair Occupations	18
Architecture and Engineering Occupations	18
Food Preparation and Serving Related Occupations	15
Computer and Mathematical Occupations	12
Building and Grounds Cleaning and Maintenance Occupations	11
Healthcare Practitioners and Technical Occupations	10
Construction and Extraction Occupations	8
Personal Care and Service Occupations	8
Healthcare Support Occupations	4
Other	19

Source: EMSI; Camoin 310

Construction Job Impact: Concept D	
Job Type	# of Jobs
Construction and Extraction Occupations	278
Management Occupations	43
Office and Administrative Support Occupations	36
Transportation and Material Moving Occupations	20
Sales and Related Occupations	18
Business and Financial Operations Occupations	18
Installation, Maintenance, and Repair Occupations	13
Architecture and Engineering Occupations	12
Production Occupations	9
Building and Grounds Cleaning and Maintenance Occupations	6
Food Preparation and Serving Related Occupations	5
Healthcare Practitioners and Technical Occupations	5
Computer and Mathematical Occupations	4
Personal Care and Service Occupations	3
Arts, Design, Entertainment, Sports, and Media Occupations	2
Other	6

Source: EMSI; Camoin 310

Operations Job Impact: Concept D.1	
Job Type	# of Jobs
Production Occupations	492
Office and Administrative Support Occupations	236
Sales and Related Occupations	140
Management Occupations	115
Transportation and Material Moving Occupations	105
Arts, Design, Entertainment, Sports, and Media Occupations	103
Business and Financial Operations Occupations	77
Installation, Maintenance, and Repair Occupations	57
Architecture and Engineering Occupations	57
Food Preparation and Serving Related Occupations	48
Computer and Mathematical Occupations	38
Building and Grounds Cleaning and Maintenance Occupations	35
Healthcare Practitioners and Technical Occupations	33
Construction and Extraction Occupations	26
Personal Care and Service Occupations	25
Healthcare Support Occupations	14
Other	60

Source: EMSI; Camoin 310

Construction Job Impact: Concept D.1	
Job Type	# of Jobs
Construction and Extraction Occupations	359
Management Occupations	56
Office and Administrative Support Occupations	46
Transportation and Material Moving Occupations	26
Sales and Related Occupations	23
Business and Financial Operations Occupations	23
Installation, Maintenance, and Repair Occupations	16
Architecture and Engineering Occupations	15
Production Occupations	12
Building and Grounds Cleaning and Maintenance Occupations	8
Food Preparation and Serving Related Occupations	7
Healthcare Practitioners and Technical Occupations	7
Computer and Mathematical Occupations	5
Personal Care and Service Occupations	4
Arts, Design, Entertainment, Sports, and Media Occupations	3
Other	8

Source: EMSI; Camoin 310

Summary of IDA PILOT Scenarios

The Town of Bethlehem offers real property tax abatements (PILOT) benefits to certain projects that result in an increase in the property tax assessment by the taxing jurisdiction (County, Town and School District). The PILOT (Payment In Lieu of Taxes) consists of an agreed-upon percentage of the improvements that would be otherwise due on the property if the project was completed without IDA tax abatements. The IDA offers a Standard and an Enhanced Abatement and each are awarded on a case-by-case basis.

The Standard Abatement commences at 50% of the increase in assessed valuation resulting from a project and then declines by 5% per year for a ten-year period. This abatement is designed for projects that are eligible for IDA assistance and meet a standard level of economic impact including, job creation, business development and tax generation. This program provides abatement for the Town, County and School District taxes throughout the Town.

The Enhanced Abatement is designed to enhance the regional competitive position of the Town in attracting high quality business development that meets very specific economic benefit criteria.

To be eligible for the enhanced abatement, an applicant must demonstrate the project's ability to substantially meet the following criteria:

- Extraordinary new job creation and capital investment
- Net new business investment in the Capital Region
- Reuse or redevelopment of abandoned or underutilized real estate
- Consistency with the Town's comprehensive plan recommendations
- Market penetration: potential for catalytic effect for subsequent projects
- Consistency with regional target industries
- Business development that promotes diversification

While no PILOT agreement is in place, the fiscal implications of both the Standard and Enhanced PILOTs were analyzed for each of the five concepts for hypothetical purposes. The following chart summarizes the property tax revenue differences under the various abatement scenarios for each concept.

Summary: 12-Year Property Tax Revenue Comparison of IDA PILOT (Abatement) Scenarios*			
Concept	No Abatement	Standard Abatement	Enhanced Abatement
Concept A	$ 28,962,456	$ 22,571,894	$ 13,768,774
Concept B	$ 24,506,694	$ 19,099,295	$ 11,650,501
Concept C	$ 24,135,380	$ 18,809,912	$ 11,473,978
Concept D	$ 5,569,703	$ 4,340,749	$ 2,647,841
Concept D.1	$ 14,852,542	$ 11,575,330	$ 7,060,910

** Includes Sum of County, Town, School District Revenues*

Source: Camoin 310

Analysis Tables

Concept A

Fiscal Analysis - No IDA Abatement - Concept A			
Year	Town Revenue	County Revenue	School District Revenue
1	$364,793	$281,423	$1,574,625
2	$370,264	$285,645	$1,598,244
3	$375,818	$289,929	$1,622,218
4	$381,456	$294,278	$1,646,551
5	$387,178	$298,692	$1,671,250
6	$392,985	$303,173	$1,696,318
7	$398,880	$307,720	$1,721,763
8	$404,863	$312,336	$1,747,590
9	$410,936	$317,021	$1,773,803
10	$417,100	$321,777	$1,800,410
11	$423,357	$326,603	$1,827,417
12	$429,707	$331,502	$1,854,828
Total	$4,757,337	$3,670,101	$20,535,018

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept A				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$182,396	$140,712	$787,313
2	45%	$203,645	$157,105	$879,034
3	40%	$225,491	$173,958	$973,331
4	35%	$247,946	$191,281	$1,070,258
5	30%	$271,024	$209,085	$1,169,875
6	25%	$294,739	$227,380	$1,272,239
7	20%	$319,104	$246,176	$1,377,410
8	15%	$344,134	$265,486	$1,485,451
9	10%	$369,843	$285,319	$1,596,423
10	5%	$396,245	$305,688	$1,710,390
11	0%	$423,357	$326,603	$1,827,417
12	0%	$429,707	$331,502	$1,854,828
Total		$3,707,631	$2,860,294	$16,003,969

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept A				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$37,582	$28,993	$162,222
4	80%	$76,291	$58,856	$329,310
5	70%	$116,153	$89,608	$501,375
6	60%	$157,194	$121,269	$678,527
7	50%	$199,440	$153,860	$860,882
8	40%	$242,918	$187,402	$1,048,554
9	30%	$287,655	$221,915	$1,241,662
10	20%	$333,680	$257,421	$1,440,328
11	10%	$381,021	$293,943	$1,644,675
12	0%	$429,707	$331,502	$1,854,828
Total		$2,261,642	$1,744,769	$9,762,363

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept B

Fiscal Analysis - Enhanced IDA Abatement - Concept B			
Year	Town Revenue	County Revenue	School District Revenue
1	$308,671	$238,127	$1,332,375
2	$313,301	$241,699	$1,352,361
3	$318,000	$245,325	$1,372,646
4	$322,770	$249,005	$1,393,236
5	$327,612	$252,740	$1,414,134
6	$332,526	$256,531	$1,435,346
7	$337,514	$260,379	$1,456,876
8	$342,577	$264,285	$1,478,730
9	$347,715	$268,249	$1,500,911
10	$352,931	$272,273	$1,523,424
11	$358,225	$276,357	$1,546,276
12	$363,598	$280,502	$1,569,470
Total	$4,025,439	$3,105,470	$17,375,784

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept B				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$154,335	$119,064	$666,188
2	45%	$172,315	$132,935	$743,798
3	40%	$190,800	$147,195	$823,588
4	35%	$209,801	$161,853	$905,603
5	30%	$229,328	$176,918	$989,894
6	25%	$249,394	$192,398	$1,076,510
7	20%	$270,011	$208,303	$1,165,501
8	15%	$291,190	$224,642	$1,256,920
9	10%	$312,944	$241,424	$1,350,820
10	5%	$335,284	$258,659	$1,447,253
11	0%	$358,225	$276,357	$1,546,276
12	0%	$363,598	$280,502	$1,569,470
Total		$3,137,227	$2,420,249	$13,541,820

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept B				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$31,800	$24,532	$137,265
4	80%	$64,554	$49,801	$278,647
5	70%	$98,284	$75,822	$424,240
6	60%	$133,010	$102,612	$574,139
7	50%	$168,757	$130,189	$728,438
8	40%	$205,546	$158,571	$887,238
9	30%	$243,401	$187,774	$1,050,637
10	20%	$282,345	$217,818	$1,218,739
11	10%	$322,402	$248,721	$1,391,648
12	0%	$363,598	$280,502	$1,569,470
Total		$1,913,697	$1,476,343	$8,260,461

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept C

Fiscal Analysis - Enhanced IDA Abatement - Concept C			
Year	Town Revenue	County Revenue	School District Revenue
1	$303,994	$234,519	$1,312,188
2	$308,554	$238,037	$1,331,870
3	$313,182	$241,608	$1,351,848
4	$317,880	$245,232	$1,372,126
5	$322,648	$248,910	$1,392,708
6	$327,488	$252,644	$1,413,599
7	$332,400	$256,434	$1,434,803
8	$337,386	$260,280	$1,456,325
9	$342,447	$264,184	$1,478,169
10	$347,583	$268,147	$1,500,342
11	$352,797	$272,169	$1,522,847
12	$358,089	$276,252	$1,545,690
Total	$3,964,448	$3,058,418	$17,112,515

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept C				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$151,997	$117,260	$656,094
2	45%	$169,705	$130,920	$732,529
3	40%	$187,909	$144,965	$811,109
4	35%	$206,622	$159,401	$891,882
5	30%	$225,854	$174,237	$974,896
6	25%	$245,616	$189,483	$1,060,199
7	20%	$265,920	$205,147	$1,147,842
8	15%	$286,778	$221,238	$1,237,876
9	10%	$308,202	$237,766	$1,330,353
10	5%	$330,204	$254,740	$1,425,325
11	0%	$352,797	$272,169	$1,522,847
12	0%	$358,089	$276,252	$1,545,690
Total		$3,089,693	$2,383,578	$13,336,640

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept C				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$31,318	$24,161	$135,185
4	80%	$63,576	$49,046	$274,425
5	70%	$96,794	$74,673	$417,812
6	60%	$130,995	$101,058	$565,439
7	50%	$166,200	$128,217	$717,401
8	40%	$202,432	$156,168	$873,795
9	30%	$239,713	$184,929	$1,034,719
10	20%	$278,067	$214,518	$1,200,274
11	10%	$317,518	$244,952	$1,370,562
12	0%	$358,089	$276,252	$1,545,690
Total		$1,884,702	$1,453,974	$8,135,303

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept D

Fiscal Analysis - Enhanced IDA Abatement - Concept D			
Year	Town Revenue	County Revenue	School District Revenue
1	$70,152	$54,120	$302,813
2	$71,205	$54,932	$307,355
3	$72,273	$55,756	$311,965
4	$73,357	$56,592	$316,644
5	$74,457	$57,441	$321,394
6	$75,574	$58,302	$326,215
7	$76,708	$59,177	$331,108
8	$77,858	$60,065	$336,075
9	$79,026	$60,966	$341,116
10	$80,212	$61,880	$346,233
11	$81,415	$62,808	$351,426
12	$82,636	$63,750	$356,698
Total	$914,873	$705,789	$3,949,042

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept D				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$35,076	$27,060	$151,406
2	45%	$39,163	$30,212	$169,045
3	40%	$43,364	$33,453	$187,179
4	35%	$47,682	$36,785	$205,819
5	30%	$52,120	$40,209	$224,976
6	25%	$56,681	$43,727	$244,661
7	20%	$61,366	$47,342	$264,887
8	15%	$66,180	$51,055	$285,664
9	10%	$71,124	$54,869	$307,004
10	5%	$76,201	$58,786	$328,921
11	0%	$81,415	$62,808	$351,426
12	0%	$82,636	$63,750	$356,698
Total		$713,006	$550,057	$3,077,686

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept D				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$7,227	$5,576	$31,197
4	80%	$14,671	$11,318	$63,329
5	70%	$22,337	$17,232	$96,418
6	60%	$30,230	$23,321	$130,486
7	50%	$38,354	$29,589	$165,554
8	40%	$46,715	$36,039	$201,645
9	30%	$55,318	$42,676	$238,781
10	20%	$64,169	$49,504	$276,986
11	10%	$73,273	$56,527	$316,284
12	0%	$82,636	$63,750	$356,698
Total		$434,931	$335,533	$1,877,378

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept D.1

Fiscal Analysis - Enhanced IDA Abatement - Concept D.1			
Year	Town Revenue	County Revenue	School District Revenue
1	$187,073	$144,320	$807,500
2	$189,879	$146,484	$819,613
3	$192,727	$148,682	$831,907
4	$195,618	$150,912	$844,385
5	$198,553	$153,176	$857,051
6	$201,531	$155,473	$869,907
7	$204,554	$157,805	$882,955
8	$207,622	$160,172	$896,200
9	$210,736	$162,575	$909,643
10	$213,898	$165,014	$923,287
11	$217,106	$167,489	$937,137
12	$220,363	$170,001	$951,194
Total	$2,439,660	$1,882,103	$10,530,778

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept D.1				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$93,537	$72,160	$403,750
2	45%	$104,434	$80,566	$450,787
3	40%	$115,636	$89,209	$499,144
4	35%	$127,152	$98,093	$548,850
5	30%	$138,987	$107,223	$599,936
6	25%	$151,148	$116,605	$652,430
7	20%	$163,643	$126,244	$706,364
8	15%	$176,479	$136,147	$761,770
9	10%	$189,663	$146,318	$818,678
10	5%	$203,203	$156,763	$877,123
11	0%	$217,106	$167,489	$937,137
12	0%	$220,363	$170,001	$951,194
Total		$1,901,349	$1,466,817	$8,207,163

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept D.1				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$19,273	$14,868	$83,191
4	80%	$39,124	$30,182	$168,877
5	70%	$59,566	$45,953	$257,115
6	60%	$80,612	$62,189	$347,963
7	50%	$102,277	$78,903	$441,478
8	40%	$124,573	$96,103	$537,720
9	30%	$147,516	$113,803	$636,750
10	20%	$171,118	$132,011	$738,630
11	10%	$195,395	$150,740	$843,423
12	0%	$220,363	$170,001	$951,194
Total		$1,159,816	$894,753	$5,006,340

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

3.17.2. Potential Impacts

The potential increase in fiscal costs were examined, including potential cost increases for municipal service providers. Representatives of the Bethlehem Police Department, the Selkirk Fire Department, and Delmar-Bethlehem EMS were interviewed. Based on the input provided, minor new costs are expected for the Bethlehem Police Department and Delmar-Bethlehem EMS, as follows:

Summary: Annual Municipal Service Cost Impacts (Concept A)		
Service Provider	Type of Impact	Estimated Annual Cost Increase
Bethlehem Police Department	Increased overtime expenditures associated with incremental call volume	$ 15,743
Delmar-Bethlehem EMS	Incremental net increase in staffing costs associated with incremental call volume	$ 2,558
Total		**$ 18,302**

Source: EMSI; Camoin 310

3.17.3. Mitigation Measures

No mitigation measures are found to be required as a result of the economic and fiscal impacts of the Project since local and County tax revenue is anticipated to be generated from the project and is expected to cover the additional emergency service efforts required. In the case where the Port owns the building, and the building is not taxable, an agreement to reimburse the Town for the actual cost of emergency services rendered at this project site would be established. The agreement would be based on a specific project, actual cost and established at the time of Site Plan application.

Albany County will have benefits from tax revenue as well as job creation. The Proposed Project would not cause any costs or impacts for the Ezra Prentice community and does not require any mitigation measures.

3.18. Recreation and Open Space

3.18.1. Environmental Setting

The Hudson River has been identified as a vital recreational resource in the region, being named an American Heritage River in 1998. The Town of Bethlehem is located along the west bank of the Hudson River, with the entire Town within the boundaries of the Hudson River Estuary. The Hudson River is a freshwater river with tidal flows, which creates a unique estuary habitat for aquatic life.

The Town of Bethlehem currently has eight (8) Town owned public parks and recreation facilities, totaling 326 acres. All eight parks are detailed in **Table 3-18-1** and shown on **Figure 3.18-1: Town of Bethlehem Parks Map.**

The Bethlehem Soccerplex is a privately-owned recreation facility located at the junction of Wemple Road and I-87 in Bethlehem.

The City of Albany has multiple recreational facilities within an accessible distance from the Site. All of these facilities are located within the City of Albany limits.

The Mohawk Hudson Land Conservancy's (MHLC) mission is to preserve the distinct natural, scenic, agricultural and historic landscapes of the Mohawk Hudson region. The MHLC maintains five (5) preserves located within in the Town of Bethlehem, the Phillipinkill Reserve, the Swift Wetland, the Normans Kill Preserve, the Schiffendecker Farm Preserve, and the Van Dyke Spinney Preserve. The preserves are summarized in **Table 3-18-2**.

The NYSDEC's Five Rivers State Environmental Education Center is located in the Town of Bethlehem, in Delmar. The center is a living museum with over 450 acres of fields, forests and wetlands. The center provides a variety of programs and services accessible to individuals, families, and groups. The NYSDEC has parks in the vicinity of the Site including Schodack Island State Park, Thacher State Park, and Thomson's Lake State Park. In addition to parks, the NYSDEC has wildlife management areas in the area including Louise E. Keir Wildlife Management Area, Margaret Burke Wildlife Management Area, and Patridge Run Wildlife Management Area.

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 1 mile from the nearest corner of the property or 1.7 miles from the center of the Project Site.

Popular water boat launch points, including the Henry Hudson Park, offer access to 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 are both approximately 4 miles from the Site.

The Project Site is located approximately 1.7 miles from the Ezra Prentice community. The Ezra Prentice community has a playground within the community, meaning the playground is also approximately 1.7 miles from the Project Site. Since no trucks generated by the project will pass adjacent to this park, the project will not have an impact on this park.

Table 3.18-1: Existing Town Owned Parks and Parks within One (1) mile of Project Site

Recreational Facility	Location	Acres / Area	Description	Located within 1 mile of Project Site
Elm Avenue Park	Elm Avenue, ¼ mile south of Delmar Bypass	160 ac	Pool complex, tennis and basketball courts, pavilions, fitness trail, playing fields, volleyball courts, shuffleboard, dog park, and playground	No
Henry Hudson Park	Off Route 144 in Cedar Hill along Hudson River	56 ac	Boat launch, picnic areas, softball field, playground, volleyball court, horseshoes, gazebo, pavilion, and fishing area	No
Moh-He-Con-Nuck Nature Preserve	Between Simmons Road and the Glenmont Job Corps	55 ac	Walking trails	No
Maple Ridge Park	Elm Avenue East	7 ac	Large grass areas, playground, basketball court, walking path, picnic areas, and sledding hill	No
North Bethlehem Park	Near North Bethlehem Fire House off Russell Road	22 ac	Playground, basketball court, picnic area, walking trails, and mountain bike trails.	No
Selkirk Park	Off Thatcher Street	4 ac	Playground, youth-sized softball field, tennis court, and basketball court	No
South Bethlehem Park	On shores of the Onesquethaw Creek, off South Albany Road at Wylie Lane	11 ac	Playground, softball field, volleyball court, basketball court, picnic area, and fishing access	No
Firefighters Memorial Park	Next to Slingerlands Fire House on New Scotland Road	3 ac	Pocket park	No

Papscanee Island Nature Preserve	East Greenbush / Schodack	156 ac	Tribute to Mohican Tribe 2 miles of Hudson River Shoreline, Hiking trails, picnic	Yes
Albany County Helderberg-Hudson Rail Trail	City of Albany to Village of Voorheesville	9 mi	Paved trail along old Delaware & Hudson (D&H) railroad tracks stretches 9 miles between City of Albany and Village of Voorheesville	Yes
Albany Victory Gardens	Route 9w, Glenmont	Unknown	Community partnership organic sustainable food system to create food access and increase community unity and self-sufficiency.	Yes

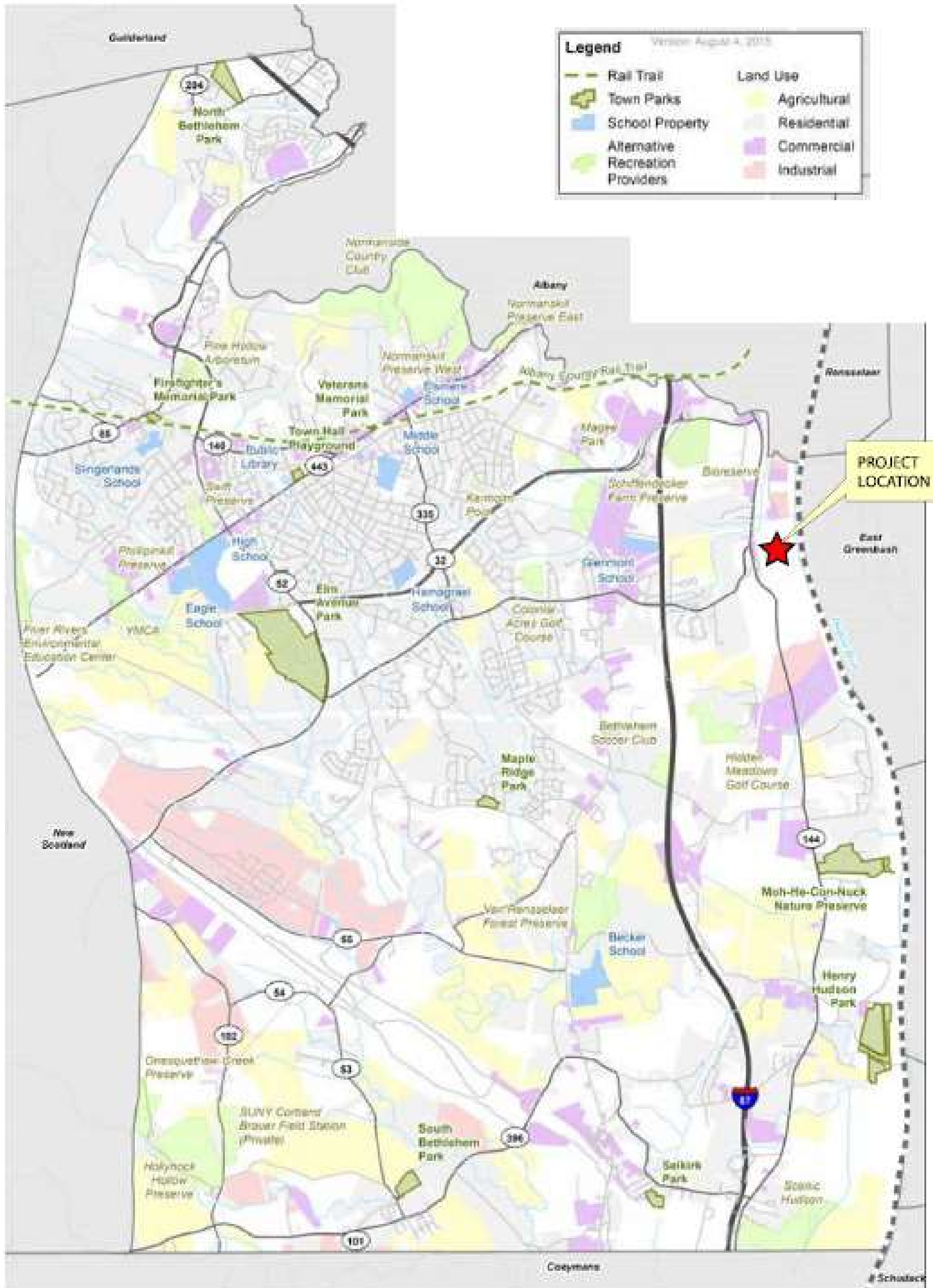
Source: Town of Bethlehem Parks and Recreation Department and Bethlehem's Parks and Recreation Comprehensive Master Plan, November 2015. AllTrails Papscanee Island Nature Preserve. Albany County Welcome to the Rail Trail. Albany.Garden

Table 3-18-2: Mohawk Hudson Land Conservancy Recreation Space

Recreational Facility	Location	Acres	Description
Normans Kill Preserves	Delaware Avenue, eastern parcel before Normans Kill Bridge, western at end of the Normans Kill Boulevard	46 ac	Named East and West, composed of 4 parcels. Combined trails through preserves
Phillipin Kill Preserve	One mile from Bethlehem Central High School, with frontage on Delaware Avenue and Fisher Boulevard	20 ac	Offset impacts of Mansions apartment development. Forested wetland and a marsh
Schiffendecker Farm Preserved	Between Bender Land and Old Kenwood Avenue along Route 32 Bypass	39.8 ac	Wooded land with approx. 1 mi of trails over mixed terrain
Swift Wetland	Across Delaware Avenue from Bethlehem Central High School sports field	21.6 ac	Protection of wetlands from development. Multiple trails within preserve

Van Dyke Preserve	Van Dyke Road, before Meads Lane intersection	33 ac	Forested lands and floodplain along Phillipin Kill stream

Source: Mohawk Hudson Land Conservancy.



Map provided by the Town of Bethlehem

PORT OF ALBANY DEVELOPMENT
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK

TOWN OF BETHLEHEM
PARKS MAP (2015)

SCALE:	DATE:	FIGURE:
NOT TO SCALE	MARCH 2020	3.18-1

McFarland Johnson

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3.18.2. Potential Impacts

The Hudson River Valley Greenway Act authorized the development of an interconnected trail. Titled "Hudson River Greenway Trail". The act includes goals including increase public access to the Hudson River through creation of parks and development of the Greenway Trail as well as economic growth compatible with the preservation of natural and cultural resources along the Hudson River.

The Site would not increase public access to the Hudson River through parks or the Greenway Trail, but it would allow for economic development of lands previously disturbed. Recreational boat activities, including kayaks, are discussed in DGEIS **Section 3.7.2 Maritime**. The Proposed Project could include the addition of 21 ships/barges per year to the Hudson River. Let in or launch locations would not be affected 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. The additional ships/barges will cause no significant impact on existing Hudson River maritime commercial or recreational traffic.

The project is located approximately 1.7 miles from the Ezra Prentice community playground, and will required all trucks to follow the truck route and avoid passing by this park, the project will have no significant adverse impacts on the playground. The project would have no other impacts on recreation and open spaces in the vicinity of the Site.

3.18.3. Mitigation Measures

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 Proposed Project is consistent with the Town's Comprehensive Plan and Zoning Ordinances, no mitigation measures are required for the project.

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

3.19. Solid Waste Disposal

3.19.1. Environmental Setting

Commercial solid waste, including municipal solid waste (MSW) and construction and demolition debris (C&D), handling services in the Town of Bethlehem are provided by permitted private sector waste haulers. The following private sector haulers have permits to recycle and pick up trash in the Town of Bethlehem:

- Allied Waste/Republic Services
- County Waste and Recycling Service, Inc.
- Robert Wright Disposal, Inc.

Depending on the nature of the solid waste and the service provider, locally generated solid wastes are disposed at one of the following facilities:

- City of Albany Rapp Road Landfill
- Town of Colonie Landfill

According NYSDEC MSW landfill capacities, the Rapp Road Landfill is permitted for 275,100 tons/year, while the Town of Colonie Landfill is permitted for 255,840 tons/year. Based on 2018 NYSDEC Active Landfill Annual Report for the Rapp Road Landfill, the landfill has an estimated 87,733 tons of remaining existing and entitled capacity. Based on 2018 NYSDEC Active Landfill Annual Report for the Town of Colonie Landfill, the landfill has an estimated 421,000 tons remaining of existing and entitled capacity, and an estimated 10,090,295 tons of permitted capacity still to be constructed.

During construction it is estimated that approximately 1 ton/ week of solid wastes, primarily C&D, will be generated. Construction activities will be phased and are anticipated to have a duration of approximately 12 to 14 months per phase. Full buildout (all three phases) is anticipated to take up to 10 years. It is estimated that during operations, the project will generate approximately 0.5 ton/ week of solid waste, including C&D and MSW.

3.19.2. Potential Impacts

The generation of substantial additional solid wastes above existing generation rates during construction and operation of a project has the potential to exceed capacities of local existing disposal facilities.

Based on the capacities and estimated life spans of the Rapp Road Landfill and the Town of Colonie Landfill, adequate space for the disposal of solid waste attributable to during construction and operation of the project is available at this time and into the near future. Should waste go to another facility, such as the Dunn C&D site, no waste would be sent there without prior approval and with all required permits and practices. All C& D waste will be disposed of in a legal manor and an approved and permitted disposal location. As outlined in the Capital Region Solid Waste Management Partnership Planning Unit's Solid Waste Management Plan (2014), future disposal of post-recyclable wastes within the region will need to be exported to commercially available disposal facilities.

3.19.3. Mitigation Measures

The Town of Bethlehem has a mandatory residential and commercial recycling policy in place for certain streams of paper, cardboard, plastic, glass, metal, electronics, rechargeable batteries, household hazardous wastes, mercury thermostats, fluorescent bulbs, and yard wastes. The APDC will encourage future tenant(s) compliance with the Town's recycling policy to reduce landfilled solid wastes.

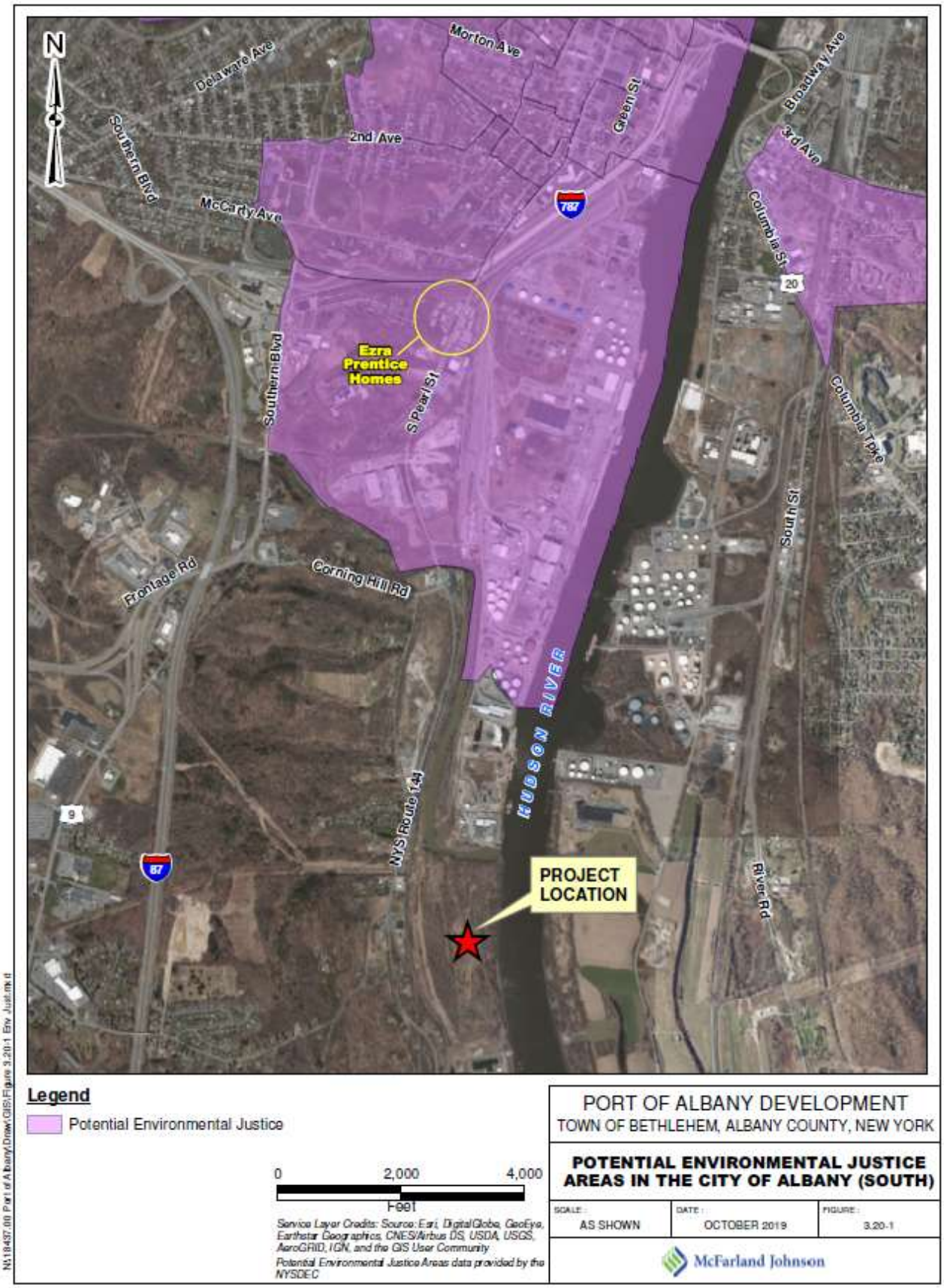
In addition, during construction, individual contractors reserve the right to transport their generated solids wastes directly to commercially available disposal facilities. Since both the Rapp Road and Town of Colonie landfills have adequate capacities to accept the solid waste from this project, there is no impact of this project and no mitigation is necessary.

3.20. Environmental Justice

3.20.1. Environmental Setting

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

Ezra Prentice Homes is a nearby community occupied by low-income predominately minority public housing. Some residents of Ezra Prentice Homes 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 CSX railroad yard to the east.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Delaware Ave
Morton Ave
Broadway Ave
Corban 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
NYS Route 144
9
87
PROJECT LOCATION
River Rd
Legend
Potential Environmental Justice
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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
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3.20.2. Potential Impacts

If the permit applicant did not plan to mitigate the potential environmental concerns, then the Proposed Project would have a potential to impact air quality due to the projected additional truck and rail car traffic. See the **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 District, utilizing the Church Street entrance, and as such would not be traveling through the Ezra Prentice Homes community.

The Port of Albany prepared a Supplemental Draft Generic Environmental Impact Statement (SDGEIS) that evaluated the potential impacts of the Proposed Project including truck traffic and air quality impacts. The analysis as reported in the SDGEIS determined that the Proposed Project will not have an impact on truck traffic and air quality, as discussed in **SDGEIS Section 3.6 and 3.7** respectively.

3.20.3. Mitigation Measures

To date, the APDC 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 APDC 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 required truck routes to avoid further impact on the Ezra Prentiss 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.
- 1/6/20 - Officials from the APDC held a public information meeting for the residence of Ezra Prentice. At this meeting the Port officials presented an overview of the Proposed Project and solicited comments from the residents of Ezra Prentice. Residents and the general public were encouraged to submit comments to the Port officials until January 17, 2020. As discussed at this meeting, the current Proposed Project is generic in nature, with no specific tenant in place. Once a specific tenant is identified, the APDC will hold an additional meeting with the residents of Ezra Prentice and solicit input on the specific project.

Since initial application, the Proposed 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 Proposed Project will include a requirement 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 Proposed Project. Therefore, the Proposed Project will not adversely impact the Ezra Prentice neighborhood via truck traffic.

The Proposed 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 emission impacts 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.

NYSDEC is the governing agency responsible for administering the environmental justice process within SEQR with the Planning Board, as Lead Agency, responsible for complying with SEQR. Environmental Justice 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 Albany 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 APDC 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 Public Participation Plan is included in **Appendix E of the SDGEIS**. 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 timeline 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 DGEIS** for an explanation of the SEQR Generic Review process and when a project will be applying for such permits.

As mentioned above, to further mitigate any potential impacts, once a specific project is identified the APDC 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 to the SDGEIS**. A Public Meeting for the SDGEIS was 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.

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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 site would remain zoned as Heavy Industrial, and if remained undeveloped it would not be compatible with the Town of Bethlehem Comprehensive Plan. 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.

4.2. Site Development as Allowed by Existing Zoning

The Project would develop the site with uses permitted by site plan and special use permit 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. The project sponsor is not proposing to develop the site that does not conform to existing zoning. It should be noted that no specific project has been identified and for the purpose of this DGEIS, only the full build out and corresponding phases of Concept A is 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. Each alternative is summarized below with impacts 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.**

However, the project could be built in phases with various building layouts and site configurations. For the purposes of this DGEIS, Phase 1 consist of all site, utility, roadway infrastructure along with up to 300,000 square foot of building space. Phase 2 consist 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 has been provided in each applicable section of this DGEIS. It should be noted that since Phase 1 includes all site, utility and roadway infrastructure, these impacts are evaluated throughout all sections.

The 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 the each of the concepts allowed by existing zoning follow:

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 has been provided within all sections of this 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 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.

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 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.

This alternative could be built in three phases as outlined above. However, since each phase and the total size of the 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 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.

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 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.

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 project has been outlined such that adverse temporary and permanent environmental impacts will be minimized, avoided or mitigated to 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 District to avoid traveling on South Pearl Street through the Ezra Prentice community.

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.

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

The Project will result in unavoidable impacts, all of which are summarized in **Table 1.3-1:** Potential Impacts and Proposed Mitigation Measures. These impacts include: change in surface coverage such as increasing imperviousness and increasing peak discharge rates for stormwater runoff; changes in landscape including removal of trees; dredging of the Hudson River; small wetland impacts; temporary air and GHG impacts due to construction activities; increased in vehicle and truck trips; increased water demand; potential increased sewer demand; and impact on adjacent communities. All impacts have proposed mitigation measures that would reduce or eliminate the impacts within each discussion area. If the identified mitigation measures are implemented, the Project is expected to result in a positive, long term impact that will offset the adverse effects that cannot be avoided.

Overall, the use of a previously heavily disturbed vacant 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 potentially less disturbed, more natural lands along the Hudson River.

In summary, the implementation of all mitigation measures will be subject to many agency and additional public review to ensure all compliance with the DGEIS.

The subsequent process is as follows:

Once a specific project of building is identified, as part of the site plan application a SEQR compliance document will be included as part of the application materials for review by the Planning Board. The Project will also comply with all applicable federal, state, and local rules and regulations during the design, construction, and operation process. As such, all application materials, engineering reports, detailed site and building plans will be prepared by Professional Engineers and Architects duly licensed in the State of New York.

The environmental review or environmental justice review process is discussed in **Section 3.20,** included within this DGEIS. **Section 3.20** specifically discusses how agency and public correspondence and input would be included in the Project development during permit process. All comments received during the public comment period for the DGEIS have been included and responded to in the FGEIS. Those responses aim to add clarification or additional information as required to ensure the commenter sees their concern addressed.

As a result, mitigation measures will be implemented with the necessary regulatory oversight.

6. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Project will result in the development of currently vacant, and partially 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, 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 service that they have the resources to serve the project.

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

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7. GROWTH-INDUCING ASPECTS OF THE PROPOSED PROJECT

The project is not anticipated to create a significant increase in the populations of local communities such that additional private or public services are required. There will be an extension of 1,200 linear feet of the Town waterline along River road. The project will connect to existing utilities (natural gas and electric) already in place.

The waterline extension provides an opportunity for adjacent properties to connect to public water that otherwise do not currently have access. Additional growth that might occur would be consistent with existing zoning and the Town's Comprehensive Plan.

The 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.

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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 APDC Port of Albany Expansion Project will extend 1,200 linear feet of the Town waterline along River road. The project will connect to existing utilities (natural gas and electric) already in place. The waterline extension provides an opportunity for adjacent properties to connect to public water that otherwise do not currently have access. Additional growth that might occur would be consistent with existing zoning and the Town's Comprehensive Plan. In addition, the project will not alter adjacent lands or accessibility from its current setting.

The development projects described above along with the proposed development discussed herein may have cumulative impacts on traffic within the Town, including a degradation in the level of service. While each project individually will be required to address impacts associated with that project, the Town, through its Local Waterfront Revitalization Program (LWRP), has recognized that this is a broader challenge and has recommended a comprehensive NYS Route 144/River Road corridor study to determine key issues and potential steps to alleviate those issues.

The Port of Albany Expansion 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).

APPENDIX A

WRITTEN COMMENTS

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Wednesday, August 14, 2019 12:07 PM
To: Thomas Goodfellow
Cc: Planning Board; Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; Joel M. Bianchi; Steve Boisvert; Ashley A. Erdmann; Richard Hendrick; Patrick Jordan; Megan Daly
Subject: RE: Albany Port Development Project in Bethelehem

Follow Up Flag: Follow up
Flag Status: Completed

Hi Tom,

Thanks for your email. Tonight's Special Planning Board meeting is only to schedule a public hearing for Sept. 3, 2019 at 6PM. There will not be a presentation at tonight's meeting. Perhaps you may be available to attend on Sept. 3 for the presentation.

Nevertheless, I am forwarding your comments/email to the Town Planning Board, Port of Albany, and Town staff assigned to the project. These comments will be included and addressed in the Final GEIS.

Best,
Rob

Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
Tele. (518) 439-4955, Ext. 1157
Fax. (518) 439-5808
rleslie@townofbethlehem.org

From: Thomas Goodfellow [mailto:tjgood.three@gmail.com]
Sent: Wednesday, August 14, 2019 8:29 AM
To: Robert Leslie <rleslie@townofbethlehem.org>
Subject: Albany Port Development Project in Bethelehem

Hi Rob, I am not going to be able to attend the hearing tonight on the Port Development Project in Bethlehem. I will be sure to watch the video when it is available.

There are two points I would like to make and would make if I were able to attend:

1) I am concerned about mitigating any negative environmental effects of the project on the disparaged communities in the South End and Pastures areas of the City of Albany. These areas already suffer great environmental and social injustice from the volume of diesel traffic in their neighborhoods, the proximity to I-

787 auto emission pollution and proximity to the "bomb train" yards at and adjacent to the Port facilities. Any project developed must consider the impact and mitigate any further deterioration of environmental justice on the neighboring communities.

2) I love the idea of the Port being used to support the wind farms off of Long Island, and elsewhere. The looming catastrophe of climate change demands that any new facility be prohibited from any activity supporting the fossil fuel industry including any manufacture, production, storage or shipping of supplies or materials for fracking, fossil fuel pipelines, refineries, power plants, or storage facilities, etc, except as a temporary response to a temporary declared exception related to a declared emergency, with the approval of the Town Board. Such a provision needs to be included in the scope of this and any other new project.

Thanks for considering and passing on my comments.
--
Thomas Goodfellow
518-424-6776
Twitter: @tga_tgoodfellow

"Inequality doesn't just come out of the blue: it's created by decisions that elites make - usually behind closed doors, so those knocked down don't know what (or who) hit them. " Jim Hightower, Lowdown (November 2017)

Initial Comments of John Smolinsky on DGEIS for the Albany Port District Commission Port of Albany Expansion Project at Beacon island

August 14, 2019

Smolinsky Comment 1 a-g

1) Section 3.1 Soils, Geology and Topography

1**a)** 3.1.2, pages 3-4, para 2 and 3-6, para 1 - Give examples of "further investigations" and the general circumstances when they would be required and the thresholds that trigger them.

1b) 3.1.3 Dynamic Compaction – What are the hours of the dynamic compaction operations? How many days/week?

1c) Will there be off-site monitoring of noise and vibration? Where will it/they be located? How will monitoring be reported and what are the remedial actions if impacts are excessive?

1d) Is dynamic compaction proposed for the entire site? What methods will be used on other parts of the site?

1e) If off-site disposal of cut material is necessary, where is the disposal site? What is the permitting process?

1f) When is an underwater dredging plan submitted? What are the potential upstream and downstream impacts on the Hudson River considering currents, tides and boat traffic and wakes?

1g) Are there alternative site preparation and construction and disposal methods? Are they the same for all four development scenarios?

2) 3.4 Flood plain – Evaluate the range – from worst case to conservatively expected - of climate change scenarios regarding Hudson river flooding, water levels and flow. What consideration has been given to resiliency of the proposals considering the range of climate change scenarios?

3) 3.7 Traffic, Transportation, page 3-51, top – Address the potential circumstances and mitigation of oversize truck loads including routing, closures, delays and frequency.

4) 3.9 Water – address the age and condition of existing water infrastructure that is projected to be used and necessary to support the proposal. As appropriate discuss mitigation.

5) 3.10 Sewer - address the age and condition of existing sewer infrastructure that is projected to be used and necessary to support the proposal and, as appropriate, discuss mitigation. In the discussion of Albany County vs. Bethlehem sanitary sewer options, discuss and compare the potential of sanitary sewage overflow into the Hudson because of inadequate separation of storm water and sanitary waste. Also discuss mitigation of impacts, if any.

6) 3.12 Aesthetic impacts – illustrate the difference between the compliant 60' building height vs. 85 height which requires a variance. Discuss the applicable criteria necessary to justify a variance.

7) 3.15 Emergency services – Describe the adequacy of emergency equipment, and adequacy of stations and their proximity, the expected and desired response times, and availability of on-site emergency services.

8) 3.16 and 3.17 Fiscal Analysis –

8a) These sections should include a discussion of potential IDA applications of tenants and "PILOT" agreements which may provide alternative fiscal/benefit scenarios.

8b) Page 3-87 – Provide a breakdown of the total jobs for each concept; for example: managers, professional, skilled workers, and laborers, etc.

9) 3.18 – Recreation –

9a) The environmental setting discussion needs an introductory description of the recreation in the area of the site; this discussion then provides the basis for evaluating changes and impacts that might occur as a result of the proposal(s). The introductory description should include biking (Inc. Albany County Helderberg Hudson Rail Trail), pedestrian, and water sports and evaluate the impact on them.

9b) Recreation is addressed in various sections of the DGEIS: Section 3.18 should describe the existing condition of the impacts resulting from this proposal – even though there is discussion in several other sections it is preferable to also address the topic in this section. A second-best option is the provide cross references to the other sections where recreation is discussed.

10) 3.19 Solid Waste – Will C& D waste be disposed at the Dunn C&D site in Rensselaer? If disposal is not prohibited at that site then impacts should be discussed and evaluated.

11) 4.0 Alternatives Meeting code for a 60-foot height requirement should be discussed. The requirement for an 85 feet height should be justified and discussed relative to each of the four potential development scenarios.

12) 5.0 Unavoidable Impacts – Discuss the 85-foot height requirement. This section may need further revision depending on final impact analysis and mitigation measures.

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Friday, August 16, 2019 4:35 PM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; Joel M. Bianchi; Megan Daly; Elizabeth Staubach
Subject: FW: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)-Rescheduled Public Hearing on Completed DGEIS

Follow Up Flag: Follow up
Flag Status: Completed

Provided below please see comments from Bethlehem Police Department.

Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
Tele. (518) 439-4955, Ext. 1157
Fax. (518) 439-5808
rleslie@townofbethlehem.org

From: Adam Hornick
Sent: Friday, August 16, 2019 4:32 PM
To: Robert Leslie <rleslie@townofbethlehem.org>
Subject: FW: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)-Rescheduled Public Hearing on Completed DGEIS

Rob,

As a member of the Town's joint traffic safety committee and ex-officio member of the Town bike pedestrian committee, it should be noted that the River Road corridor is specifically one of our highest crash stretches in the Town.

As this is a 55 MPH roadway, any additional entry/exit roads should be carefully vetted for safety recommendations and traffic impacts. As you are aware the River/Glenmont and River/Anders intersections have been approved by the state for additional safety signage. These areas are within our GTSC grant target area and require extra patrols to reduce crashes and mitigate traffic concerns.

The concept of off ramps, or specialized turning roads in these areas or as related to River Road could be extremely beneficial in maintain the safety of the state roadway.

It would be in our best interest to include any traffic changes with the plan, as opposed to formulating them after its inception. Thank you for your consideration.

Commander Adam N. Hornick
Bethlehem Police Department
447 Delaware Avenue
Delmar, New York 12054
518-439-9973 Office

518-439-6965 Department Fax
518-478-0349 Confidential Fax
ahornick@townofbethlehem.org
ahornick@magloclen.riss.net

From: Elizabeth Staubach
Sent: Thursday, August 15, 2019 1:35 PM
To: Elizabeth Staubach <estaubach@townofbethlehem.org>
Cc: Ashley A. Erdmann <aerdmann@mjinc.com>; Robert Leslie <rleslie@townofbethlehem.org>; Steve Boisvert <sboisvert@mjinc.com>
Subject: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)-Rescheduled Public Hearing on Completed DGEIS

Good afternoon,
On August 14th 2019 the Town of Bethlehem Planning Board adopted a resolution **rescheduling the August 20th, 2019 Public Hearing on the Albany Port District Commission Industrial Park Project (Port of Albany Expansion) Completed DGEIS to September 3rd, 2019 at 6:00pm in Bethlehem Town Hall (445 Delaware Avenue, Delmar).** This public hearing was rescheduled to ensure compliance with the notice provisions for public hearings under SEQRA at 6 NYCRR Part 617.9(a)(4)(ii). **The public comment period on the Draft GEIS has been extended to 09/14/2019.**

Attached please find the SEQR Notice of Completion and Public Hearing Form and Town of Bethlehem Resolution rescheduling the Public Hearing and extending the Public Comment Period. The full DGEIS document can be found here.

Questions and written comments related to the project can be directed to Robert Leslie, Director of Planning at rleslie@townofbethlehem.org.

Sincerely,
Liz Staubach

Elizabeth Staubach
Economic Development Coordinator
Town of Bethlehem IDA / DEDP
445 Delaware Avenue
Delmar, New York 12054
518-439-4955 x 1189
estaubach@townofbethlehem.org

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Monday, August 19, 2019 3:53 PM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Megan Daly; Patrick Jordan; Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; Joel M. Bianchi; Elizabeth Staubach
Subject: Gyory Initial Comments on Albany Port Expansion DGEIS

Follow Up Flag: Follow up
Flag Status: Completed

Ashley,

Attached please find comments from PB Member Brian Gyory.

-Rob

Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
Tele. (518) 439-4955, Ext. 1157
Fax. (518) 439-5808
rleslie@townofbethlehem.org

From: Brian Gyory
Sent: Monday, August 19, 2019 3:48 PM
To: Robert Leslie <rleslie@townofbethlehem.org>
Cc: John Smolinsky <jsmolinsky@townofbethlehem.org>; Elizabeth Staubach <estaubach@townofbethlehem.org>; Planning Board <PlanningBoard@townofbethlehem.org>; Mark Sweeney <msweeney@townofbethlehem.org>
Subject: Re: Smolinsky Initial Comments on Albany Port Expansion DGEIS

Attached please find my comments. They are more general in nature, but They summarize what was discussed at previous meeting. In addition I may have more comments after the public comment meeting.

Recreation: I believe this topic has been discussed enough at our meeting on 8/6, but to clarify the Recreation chapter should reference all of the other sections to tie in information about the recreational impacts within a one mile radius. This should include: traffic, visual analysis, maritime, etc.

Drainage: Commented earlier about green infrastructure. No mention of these comments-in terms of viability of it. It is mentioned in the report, but due to fly ash the system would need to be lined. This should be mentioned and considered as to whether this type of stormwater management is practicable on site. General threshold

information should be provided here, for the design at hand how much stormwater will be managed and how would it be managed (size of practices, etc)

Emergency (3.15): Additional information needed on staffing equipment and how the proposed project would potentially impact these services. Camoin appendix starts to answer these questions, but they are not in the report body and should be referenced and discussed in further detail.

Sewer: Additional information what the maximum threshold for daily flow from the facility will be as well as what the capacity at the Albany County facility and Town of Bethlehem facility are. In addition it was mentioned that onsite treatment was also an option. Additional detail should be included to indicate the size of this and whether it would work with existing site subsurface conditions.

Traffic:

- General confusion as to the "intended route". Applicant indicated that 100% of traffic at exit 23 would be flowing through and not turning onto 9w, but the figures don't reflect that. In addition it as indicated that the Ezra Prentice neighborhood will not be experiencing any additional truck traffic, but the figures shown do not show this.
- Provide a clear concise narrative showing the number of trucks and cars expected to use the site (threshold) and the route map showing intended traffic route and how the project would enforce this.
- Report states no impact on pedestrian and bicycle network, please provide backup documentation as to what was looked at here and explain how this project will not impact pedestrians and bikes both within the project site limits as well as the entire network

Brian Gyory, RLA
Town of Bethlehem Planning Board Member

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2069 | F: (518) 357-2460
www.dec.ny.gov

August 30, 2019

Robert Leslie, Director of Planning
Town of Bethlehem
445 Delaware Avenue
Delmar, NY 12054
rleslie@townofbethlehem.org

RE: Draft Generic Environmental Impact Statement
Port of Albany Expansion
Town of Bethlehem, Albany County

Dear Mr. Leslie:

Thank you for the opportunity to comment on the Draft Generic Environmental Impact Statement for the proposed Port of Albany Expansion. The project will require the following permits and approvals from our Department.

- Protection of Waters Permit (for Hudson River work and the proposed bridge over the Normans Kill).
- Water Quality Certification
- Approval of the cap over the remediation area/site
- Sewer and Water district extensions/approvals

Potential Article 15 (Protection of Waters) impacts

Bridge proposal over Normans Kill

The bridge design proposal should have enough hydraulic opening to allow passage for anticipated high flows (vessel traffic may need to be a consideration as well), span the entirety of the Creek without any pier structures, and be designed so that the abutments are placed at a distance of at least 1.25 x's stream bed width.

Hudson River Shoreline Stabilization

Proposals to significantly alter the existing condition of the shoreline (sheet pile or concrete vertical walls, elevation increases, etc.) are not generally compatible with Article 15 standards and alternative considerations should be evaluated and presented with an application for permit, discussing justification for the chosen alternatives. Work windows (September 1 – November 30) to reduce impacts to naturals resources will likely be incorporated if a permit is issued.

Dredging

Dredging along the Hudson shoreline is under consideration in conjunction with the Wharf option. The shoreline of the property along the Hudson River is currently comprised of native

rock, stone rip rap, and concrete grouted sloped banks. The slope is gentle and naturally vegetated in many locations.

Alternatives to the impacts of dredging must be considered and presented as part of any application to dredge. Proposals must also be reduced to the minimum extent necessary and the need justified. Work windows (September 1 -November 30) to reduce impacts to naturals resources will likely be incorporated if a permit is issued.

Plant and Animal Species

Short nose Sturgeon
Several of the projects currently under consideration have the potential to impact protected sturgeon species known to occupy the area. Potential impacts must be avoided and minimized. For unavoidable impacts, mitigation may be necessary.

Freshwater Mussels
Freshwater Mussel species have been documented to potentially exist within the proposed project area. Potential impacts must be avoided and minimized. Surveys and relocation efforts may be required dependent upon the selected project.

Submerged Aquatic Vegetation
Dependent on the selected project proposal SAV surveys may be required and any potential impacts avoided and minimized.

Bald Eagles
The Department's Threatened & Endangered Species staff confirm that eagles are no longer present on the island, and therefore, impacts to eagles is unlikely.

Northern Long-Earred Bats
Tree removal is suggested to occur between November 1 and March 31 in order to protect potential long-earred bat habitats.

Dredging/Sampling
Any material that will be dredged from the Hudson River must be sampled and analyzed for contaminants of concern – especially PCB's. Recommended sampling methods and the list of contaminants are both contained in TOGS 5.1.9 Chapter II. Table 1 of the TOGS is outdated as far as the most applicable EPA Methods. Instead of the listed method, the applicant should choose the method with a practical quantification limit (PQL) that is sufficiently sensitive to allow a meaningful comparison to the Class A threshold for that parameter. If there is no sufficiently sensitive analytical method, then choose the method with the lowest PQL. There are additional procedures that should be followed in order to qualify for upland management of any dredge material (BUD) on the property.

Coal Ash Remediation

For commercial or industrial use at Brownfield Cleanup, Environmental Remediation and State Superfund sites (of which this site is not currently), the Department would typically require a cover system over remaining contaminated soil. Language for the standard remedial element of a cover system at a commercial or industrial site is as follows:

> *"A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs."*

The Department has no further comments related to the DGEIS and appreciates the opportunity to review it. Please feel free to contact me at (518) 357-2452 or by e-mail at nancy.baker@dec.ny.gov if you have any questions.

Sincerely,

Nancy M Baker

Nancy M. Baker
Regional Permit Administrator

cc: Rich Hendrick, Port of Albany
Steve Boisvert, McFarland Johnson
File

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Tuesday, September 3, 2019 9:00 AM
To: Steve Boisvert; Ashley A. Erdmann
Cc: Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; Joel M. Bianchi; Megan Daly; Patrick Jordan; Richard Hendrick; Elizabeth Staubach
Subject: FW: Port presentation

Follow Up Flag: Follow up
Flag Status: Completed

Ashley, please see comments below.

Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
Tele. (518) 439-4955, Ext. 1157
Fax. (518) 439-5808
rleslie@townofbethlehem.org

From: Gianna Aiezza
Sent: Sunday, September 1, 2019 9:02 PM
To: Robert Leslie <rleslie@townofbethlehem.org>
Cc: Planning Board <PlanningBoard@townofbethlehem.org>
Subject: Port presentation

Hi Rob

I am compiling my comments for the Port on the EIS but in anticipation of the presentation on Tuesday I wanted to make sure I sent my comments on traffic ASAP. I am requesting that they come prepared with maps to illustrate their assumptions and to have clearly marked the routes and residential neighborhoods including Ezra Prentice. It is clear that traffic will impact them contrary to what Steve said at the meeting when we accepted the EIS as complete. The EIS says nothing about not allowing traffic to go by that neighborhood as he stated so they need to be prepared to fully discuss the traffic section in relation to that neighborhood as well as other residential neighborhoods. Furthermore, they did not take into account and discuss the traffic study conducted by CDTC in May 2018. I specially asked during scoping that they discuss that study in the EIS. They claim in the report the data from the DEC report is too old however the CDTC report was issued in

May 2018 and extremely relevant and it was not done by the DEC. Furthermore the CDTC study focuses on the exact area they are looking to increase truck traffic. A link to the report is below. I am requesting that the Port review it and be ready to discuss it at the meeting. I am also requesting that they revise their report (obviously not before Tuesday) to discuss the findings and how they relate to their findings and the proposed increases in trick traffic. I would like them to be prepared to discuss it for Tuesday. This is not a new request so they should have already reviewed it as I specifically asked during scoping that they review all of the studies done in this neighborhood and discuss them in the EIS.

https://www.cdtcmpo.org/images/freight/S-Pearl-HV-Draft-May-25-2018_rev.pdf

I'll send the rest of my comments soon. I will have the same comment on the air quality section. They did not discuss the results of the DEC's air quality study. It has been going on for the last few years and the data is not too old to consider. It is a comprehensive study with actual data and it is important to be considered when looking at project impacts in the Port. Thank you

Gianna

Gianna Aiezza, PE
Planning Board Member

Get Outlook for iOS

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Thursday, September 5, 2019 9:53 AM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Megan Daly; Patrick Jordan; Richard Hendrick; Elizabeth Staubach; Joel M. Bianchi; Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.
Subject: FW: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)- DGEIS

Please see email from ACOE.

Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
Tele. (518) 439-4955, Ext. 1157
Fax. (518) 439-5808
rleslie@townofbethlehem.org

-----Original Message-----
From: Dangler, Andrew C CIV USARMY CENAN (USA) [mailto:Andrew.C.Dangler@usace.army.mil]
Sent: Thursday, September 5, 2019 7:24 AM
To: Elizabeth Staubach <estaubach@townofbethlehem.org>
Cc: Robert Leslie <rleslie@townofbethlehem.org>
Subject: RE: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)- DGEIS

Hi Elizabeth,

I have no specific comments on this project to date. My office conducted a site visit to review the wetland line earlier this year. I the project will require any dredging, discharge of fill or placement of any structures over, under or within the Hudson River, then an authorization from my office pursuant to Section 10 of the Rivers and Harbors Act would be required. In addition, should the project require the placement of fill into the any other waters and/or wetlands, then an authorization pursuant to Section 404 of the Federal Clean Water would be required.

Please let me know if you have any questions regarding this matter.

Thank you,
Andy

Andrew Dangler
Biologist/Senior Project Manager, Upstate New York Section DEPARTMENT OF THE ARMY US Army Corps of Engineers, ATTN: CENAN-OP-RU
1 Buffington St., Bldg. 10, 3rd Fl. North Watervliet, NY 12189
Office: (518) 266-6356

In order for me to better serve you, please complete the Customer Service Survey located at the link below: https://gcc01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.nan.usace.army.mil%2FMissions%2FRegulatory%2FCustomerSurvey.aspx&data=02%7C01%7Crleslie%40townofbethlehem.org%7C96df446d5790451e042908d731f387a0%7C7a0e20da687e484593ee37fa87ea1950%7C0%7C0%7C637032794353338943&sdata=Ax8WzbQUWJhO6%2BNY%2FbLM2Bc5tzufSx3lo2Og7SjV3Wg%3D&reserved=0

-----Original Message-----
From: Elizabeth Staubach [mailto:estaubach@townofbethlehem.org]
Sent: Wednesday, September 04, 2019 3:25 PM
To: Dangler, Andrew C CIV USARMY CENAN (USA) <Andrew.C.Dangler@usace.army.mil>
Cc: Robert Leslie <rleslie@townofbethlehem.org>
Subject: [Non-DoD Source] Albany Port District Commission Industrial Park Project (Port of Albany Expansion)- DGEIS

Good afternoon Andrew,

I wanted to check in to make sure we had not missed any comments from you regarding the DGEIS on the Albany Port District Commission Industrial Park Project (Port of Albany Expansion).

Questions and written comments on the DGEIS can be directed to Robert Leslie, Director of Planning at rleslie@townofbethlehem.org <mailto:rleslie@townofbethlehem.org> and will be accepted until September 14th 2019 . The DGEIS can be found here <Blockedhttp://bethlehemtownny.iqm2.com/Citizens/FileOpen.aspx?Type=4&ID=11661&MeetingID=1772> .

Thanks,

Liz Staubach

Elizabeth Staubach

Economic Development Coordinator

Town of Bethlehem IDA / DEDP

445 Delaware Avenue

Delmar, New York 12054

518-439-4955 x 1189

estaubach@townofbethlehem.org <mailto:estaubach@townofbethlehem.org>

****
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****
****

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Tuesday, September 10, 2019 7:05 PM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Megan Daly; Richard Hendrick; Patrick Jordan; jbianchi@mjels.com; Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; Elizabeth Staubach
Subject: Fwd: Port of Albany Expansion Project DGEIS Public Comment

Sent from my iPhone

Begin forwarded message:

> **From:** Lisa Ford <lisfo4168@aol.com>
> **Date:** September 10, 2019 at 6:57:03 PM EDT
> **To:** rleslie@townofbethlehem.org
> **Subject: Port of Albany Expansion Project DGEIS Public Comment**
>
> Mr. Leslie,
>
> As a property owner in Bethlehem, I oppose the Port of Albany Expansion Project.
>
> I think it unwise to continue to expand fossil fuel transportation routes when humans should be doing the exact opposite, for a number of reasons including health, safety, the environment, and future generations. The rail industry has yet to upgrade to the more safe tanker cars. When there is a catastrophic incident, and there most assuredly will be, our community will bare the brunt of damages and require a huge effort to attempt to control the damage. Emissions will certainly increase. Those with, or the potential for, air quality related health issues will suffer and/or perhaps increase their rate of expiration. The health of the riverfront, in the event of a catastrophic incident, may never recover. The fact that the Hudson is a tidal water body essentially means allowing bomb trains to unload oil onto ships means that inevitable spills poison the ocean. All fish and water fowl become targets. Perhaps drinking water, for who truly knows how many, is impacted? There will be increased traffic in town due to this project. Have the proper and necessary traffic analyses been completed This also increases greenhouse gas emissions as well as all of the health and safety issues mentioned previously. Noise and light pollution will increase. None of this is welcomed news nor good for the environment. People want to own property and live in this town, it is a very desirable area for so many wonderful reasons. We should do nothing to jeopardize that uniqueness in the Capital Region.
>
> If Bethlehem property owners are the last line of defense, and this email is the only recourse to let my feelings on the matter be known, I am against the project. I do not feel that the benefits will outweigh all of the actual and potential risks. I am not a gambling person. The risks are too grave and innumerable to specifically mention them all.
>
> Thank you for the opportunity to comment.
>
> Lisa A. Ford
> Bethlehem Property Owner
> 4 Beverly Drive
> Albany, NY 12203

Follow-up Comments of John Smolinsky on DGEIS for the Albany Port District Commission Port of Albany Expansion Project at Beacon island

September 13, 2019

The following comments aren't necessarily new, but are elaborations of several comments the Planning Board heard at the September 3 Public Hearing.

1) **Water Quality Monitoring** – What is the potential for leachate or run-off from the site during soil compaction, land disturbance, construction, and post-construction? Fully describe the measures necessary to monitor and evaluate any discharges during each phase of site development.
2) **Traffic** – Evaluate the moves required for truck traffic to access I-787 via Thruway Exit 23 or 9W ramp and to travel onto the Port Exit Ramp. Address the adequacy and safety of the required maneuvers to accomplish the applicant's preferred truck route. Comments from NYS DOT and NYS Thruway Authority would also be useful information.
3) **Traffic and Recreation** – The applicant's preferred truck route may parallel and cross the proposed bicycle path connecting the Albany County Helderberg Hudson Rail trail and the Hudson Mohawk bike trail in Corning Park. The routes and proximity of the of the Truck and bike routes should be discussed and any mitigation or other measures to ensure safe operation of both should be discussed.

As a general proposition, in considering the comments on the DGEIS, I think it is useful to consider placing important discussions into the DGEIS proper rather than solely relying on information in the appendices that catalogues comments and responses. It is also useful to cross-reference material that is evaluated in more than one section ,e.g. traffic and recreation.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2069 | F: (518) 357-2460
www.dec.ny.gov

September 13, 2019

Robert Leslie, Director of Planning
Town of Bethlehem
445 Delaware Avenue
Delmar, NY 12054
rleslie@townofbethlehem.org

RE: **Revised Comment Letter**
Draft Generic Environmental Impact Statement
Port of Albany Expansion Project
Town of Bethlehem, Albany County

Dear Mr. Leslie:

On August 30, 2019, the New York State Department of Environmental Conservation ("the Department") submitted comments on the Draft Generic Environmental Impact Statement (DGEIS) for the proposed Albany Port District Commission - Port of Albany Expansion Project ("Project"). Upon further review of the DGEIS and after consultation with additional Department staff, we are hereby submitting revised comments which serve to supersede our prior comment letter. The following provides a summary of our project understanding; list of potential permits from the Department; and a discussion of environmental permitting considerations.

Project Understanding

It is our understanding that the Albany Port District Commission proposes to develop an approximately 81.62-acre property formerly known as Beacon Island, located east of River Road along the Hudson River. The DGEIS evaluated a full build out scenario of the property referred to as "Concept A," which maximizes the development permitted under current zoning. Concept A includes an approximately 1.13 million square feet two-story industrial facility, access roads, parking, rail access over the Normans Kill and a bulkhead/wharf along the Hudson River. Several other concept plans were developed for the property including various warehouse configurations and offshore wind fabrication/staging, all of which were evaluated for the purpose of the DGEIS as having the same or fewer impacts than the Concept A scenario.

Permits and Approvals

Based on our understanding of the Project and depending on the ultimate development plan proposal, it is anticipated the following permits and approvals may be required from the Department:

- Article 15[1] Protection of Waters Permit (for Hudson River work and the proposed bridge over the Normans Kill);
- Clean Water Act (CWA) Section 401 Water Quality Certification;
- Part 182[2] Incidental Take Permit;
- State Pollutant Discharge Elimination System (SPDES) Permits:
  - Multi-Sector General Permit (MSGP)
  - Stormwater General Permit for Construction Activity;
- Approval of the cap over the remediation area/site; and
- Sewer and Water district extensions/approvals.

Environmental Permitting Considerations

Article 15 Protection of Waters Impacts

Bridge Proposal over Normans Kill
The bridge shall be designed to have sufficient hydraulic opening to allow passage for anticipated high flows (vessel traffic may need to be a consideration as well); span the entirety of the stream without any pier structures; and with abutments placed a distance of at least 1.25x stream bed width.

Hudson River Shoreline Stabilization
Proposals to significantly alter the existing condition of the shoreline (sheet pile or concrete vertical walls, elevation increases, etc.) are not generally compatible with Article 15 standards for permit issuance and alternative considerations should be evaluated and presented with an application for permit, discussing justification for the chosen alternatives. Time of year restrictions for in-water work (to reduce impacts to natural resources will likely be incorporated if a permit is ultimately issued.

Dredging
Dredging along the Hudson shoreline is under consideration in conjunction with proposals involving bulkhead/wharf construction. The shoreline of the property along the Hudson River is currently comprised of native rock, stone rip rap, and concrete grouted sloped banks. The slope is gentle and naturally vegetated in many locations.

Alternatives to the impacts of dredging must be considered and presented as part of any application to dredge. Proposals must also be reduced to the minimum extent necessary and the need justified. Time of year restrictions for in-water work to reduce impacts to natural resources will likely be incorporated if a permit is ultimately issued.

Plant and Animal Species

[1] Article 15 of the Environmental Conservation Law (ECL).
[2] Part 182 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of York (6 NYCRR Part 182 or "Part 182").

Shortnose and Atlantic Sturgeon
Several of the projects currently under consideration have the potential to impact protected sturgeon species known to occupy the area, including shortnose and Atlantic sturgeon. ECL Article 11 and 6 NYCRR Part 182 applies to any proposal that cannot fully avoid impacts to protected sturgeon species, to the extent practicable. If impacts are demonstrated to be unavoidable, then applicants must provide appropriate and effective mitigation, resulting in a net conservation benefit to sturgeon. Early consultation with the Department is recommended if any in-water work is proposed within the Hudson River to determine the appropriate studies, monitoring, minimization measures and/or mitigation that may be required.

Freshwater Mussels
Freshwater Mussel species have been documented to potentially exist within the proposed project area. Potential impacts must be avoided and minimized. Surveys and relocation efforts may be required dependent upon the selected project.

Submerged Aquatic Vegetation
Depending on the selected project proposal, submerged aquatic vegetation (SAV) surveys may be required and any potential impacts avoided and minimized.

Bald Eagles
The Department's Division of Fish and Wildlife staff confirmed that eagles are no longer present on the island, and therefore, impacts to eagles are unlikely, however, updated information should be obtained from the NYS Natural Heritage Program when a proposal is selected.

Northern Long-eared Bats (NLEB)
ECL Article 11 and 6 NYCRR Part 182 applies to any proposal that cannot fully avoid impacts to protected NLEB, to the extent practicable. To fully avoid impacts to NLEB, tree removal is recommended to occur between November 1 and March 31.

Dredging/Sampling
Any material that will be dredged from the Hudson River must be sampled and analyzed for contaminants of concern – especially polychlorinated biphenyls (PCBs). Recommended sampling methods and the list of contaminants are both contained in the Department's Technical & Operational Guidance Series (TOGS) 5.1.9 Chapter II. Table 1 of the TOGS is outdated as far as the most applicable EPA Methods. Instead of the listed method, the applicant should choose the method with a practical quantification limit (PQL) that is sufficiently sensitive to allow a meaningful comparison to the Class A threshold for that parameter. If there is no sufficiently sensitive analytical method, then choose the method with the lowest PQL. There are additional procedures that should be followed in order to qualify for upland management of any dredge material on the property (i.e., the applicant should seek a beneficial use determination from the Department, pursuant to 6 NYCRR 360.12).

Coal Ash Remediation

For commercial or industrial use at Brownfield Cleanup, Environmental Remediation and State Superfund sites (of which this site is not currently), the Department would typically require a cover system over remaining contaminated soil. Language for the standard remedial element of a cover system at a commercial or industrial site is as follows:

> *"A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs."*

Community Risk and Resiliency Act (CRRA)

The Community Risk and Resiliency Act (CRRA) was signed on September 22, 2014. CRRA applies to all major permit applications under Article 15 (Protection of Waters), and adds mitigation of sea level rise, storm surge, and flooding to Smart Growth Public Infrastructure Policy Act criteria and guidance.

CRRA requires consideration of sea level rise, storm surge and flooding in specified facility-siting regulations, permits and funding programs. An evaluation of the location, design, risk analysis and operational considerations to address sea level rise and create greater resiliency for communities, infrastructure and ecosystems shall be addressed in permit applications to the Department.

Vessel Traffic

The DGEIS discusses potential increases in vehicle traffic utilizing the Port expansion area. A discussion of anticipated increased vessel traffic should be included in the DGEIS, as well as any anticipated impacts on river traffic, sturgeon (i.e., vessel strikes), climate related or other potential impacts.

Summary

This letter provides comments on the Department's review of the DGEIS for the Project. Due to the generic nature of the environmental review, additional studies and/or a Supplemental EIS may be required to fully assess environmental impacts once a proposal is selected.

Please feel free to contact me at (518) 357-2452 or by e-mail at nancy.baker@dec.ny.gov if you have any questions.

Sincerely,

Nancy M. Baker
Regional Permit Administrator

cc: Rich Hendrick, Port of Albany
Steve Boisvert, McFarland Johnson
File

BETHLEHEM
Chamber of Commerce

September 13, 2019

John Smolinsky
Bethlehem Planning Board
Town Hall Room 203
445 Delaware Ave
Delmar, NY 12054

Dear Mr. Smolinsky,

On behalf of the Bethlehem Chamber and its 430 member businesses that employ 11,000 people I write to express the Chamber's support of the Albany Port Commission District's Expansion Project.

The expansion of the Port of Albany in the town of Bethlehem would allow Bethlehem to play a major role in the offshore wind industry. This clean, renewable form of energy will be a significant source of affordable power for New Yorkers in the next decade. This industry is poised to bring a substantial number of jobs to our community creating a robust long term economic impact.

The Port Commission is a government entity that works on a daily basis ensuring state and federal rules and regulations are followed. The leadership of the Port Commission are recognized for their expertise around the country. We are confident this project will be done with integrity. It is also important to note that the Port of Albany was the first port in New York State to be certified in the Green Marine Program. This is another indication of the importance environmental stewardship is to Port leadership.

As other communities are vying for this industry let's do what we can to make Bethlehem an important part of the wind energy supply chain.

Sincerely,

Maureen McGuinness
President

Cc: Megan Daly

Engineering and
Land Surveying, P.C.

1533 Crescent Road
Clifton Park, NY 12065
Phone: 518.371.0799
Fax: 518.371.0822
mjelspc@mjels.com
mjels.com

September 13, 2019

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Via email only: rleslie@townofbethlehem.org

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Technical Review of DGEIS

Dear Mr. Leslie:

MJ Engineering and Land Surveying (MJ) has completed a technical review of the Draft Generic Environmental Impact Statement (DGEIS) dated August 7, 2019 for the above referenced project. The purpose of this review is to determine if the information and mitigation measures identified in the DGEIS are adequately addressed and outline substantive comments to be addressed in Final Generic Environmental Impact Statement (FGEIS). The public comment period for the DGEIS is scheduled from August 7, 2019 to September 14, 2019 and a public hearing is scheduled for September 3, 2019.

Based on our review of the DGEIS, MJ offers the following technical review comments:

1. **Section 1.1. Executive Summary**
   a. Project improvements are categorized as proposed private and public. Confirm under public improvements that the off-site water system and potentially sanitary sewer would not also be considered public if all or portions of that work would be conveyed to the utility provider.

2. **Section 1.2. Proposed Action**
   a. First paragraph should include a description of the proposed three phases of development (the phase descriptions will need to be consistent with Section 2.3. Proposed Action and phases evaluated in Section 3.7 Traffic and Transportation).

3. **Section 1.3.2. Potential Significant Adverse Impacts**
   a. This section shall be expanded to include all impacts, even if the project proposed appropriate mitigation measures, not just impacts that cannot be avoided.
   b. For ease of review by the general public it may be better suited to list all potential impacts by topical area in tabular form.

4. **Section 1.4: Proposed Mitigation Measures**
   a. For ease of review by the general public it may be better suited to list all mitigation measures and thresholds triggering those mitigation measures being considered by topical area in tabular form.

5. **Section 1.4.5. Groundwater**
   a. In the first sentence of the paragraph delete "State Department of Conservation" and replace with NYSDEC as it is an acronym identified within the DGEIS.

6. **Section 1.4.8. Drainage**
   a. The first sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.

b. It is understood the project will seek coverage under GP-0-15-002 and shall be stated. It shall be noted that GP-0-15-002 will expire in January of 2020 and replaced with GP-0-20-001. The NYSDEC has yet to define a transition period and there is a potential that this project may need to seek coverage under the new General Permit.

7. Section 1.5 – Considered Alternatives

a. Provide a table summarizing all alternatives evaluated. This table may include alternative name, description of anticipated uses, square footage of structure, etc.

8. Section 1.5.1. Considered Alternatives – No Build

a. There is reference that under this alternative that the site would remain as Heavy Industrial. This is an erroneous statement since the development plan does not ask for a change in the site's current zoning designation.

9. Section 1.6. Matters To Be Decided

a. Include "Planning Board" after Town of Bethlehem in the first sentence for clarity of which regulatory body at the Town level is the Lead Agency.
b. Modify text to reflect that the Planning Board will issue a Statement of Findings in accordance with SEQRA upon completion of the FGEIS. Once SEQRA has been completed, the Planning Board will conduct a preliminary site plan review.

10. Section 1.6.1. Involved Agencies

a. Delete Town of Bethlehem Engineering Department as they are a subset of the Department of Public Works. This edit shall be made globally in the DGEIS.

11. Section 1.6.3. Lists of Required Permits and Approvals

This section will restate the information presented in Section 2.6. There are discrepancies between the two section, missing permits required, or actions listed under the incorrect agency:

a. Under USACE, if the project site is not within the Town of Bethlehem's approved water supply service area, then a Joint Application will be necessary. Add this approval if deemed necessary.
b. Under NYSDEC, delete "Stormwater MS4 Permit". It is correctly listed under Town of Bethlehem Engineering.
c. Under NYSDEC, if the project site is not within the Town of Bethlehem's approved water supply service area, then a Water Withdrawal Application Supplement WW-1 will be necessary from the NYSDEC. Add this approval if deemed necessary.
d. Under NYSDEC, for the individual Wastewater Permit, state the applicable General Permit number.
e. Under NYSDEC, list the need to gain coverage under General Permit GP-0-15-002 for Stormwater Discharges from Construction Activities.
f. Under Albany County Health Department, this approval appears to be for public water systems improvement pursuant to the scope of work outlined in the Engineering Department memorandum. As such, this should be reworded to state "Application for Approval of Plans for Public Water Supply Improvements Form DOH-348".
g. Under Town of Bethlehem Engineering, retitle to Town of Bethlehem Department of Public Works.
h. Under Town of Bethlehem Engineering (retitled to Town of Bethlehem Department of Public Works), delete "Stormwater MS4 Permit" and replace with "MS4 SWPPP Acceptance Form".
i. Under Town of Bethlehem Engineering (retitled to Town of Bethlehem Department of Public Works), add "5-acre Disturbance Waiver Request.
j. In the event the Town's existing water district needs to be extended to include the site, Town of Bethlehem Town Board acceptance of a Map, Plan and Report and approval of the district extension will be necessary and shall be noted.
k. Add the Town of Bethlehem Town Board for the acceptance of water system infrastructure improvements planned to supply the project.

l. Add Albany County Planning Board for issuance of a recommendation under a 239 M and N referral.
m. In the event the Town's existing sewer district needs to be extended to include the site for treatment of sewage by the Town of Bethlehem, Town of Bethlehem Town Board acceptance of a Map, Plan and Report and approval of the district extension will be necessary and shall be noted.
n. If the Owner decides to pursue the approach of sending sewage to the Albany County facility, please note the need for an intermunicipal agreement between the County and the Town of Bethlehem.

12. Section 2.1. Project Location

a. Provide a site location map within the text for easy reference.

13. Section 2.2. Site Description

a. In the first sentence, the term "natural" is unclear. If this is intended to mean "undeveloped" state as such.

14. Section 2.3. Description of Proposed Action

a. Three phases of development are mentioned but not explained (i.e. square footage for each phase). Each phase should be clearly described as this is important to establishing thresholds for possible future mitigation.
b. The maximum development scenario directs the reader to Figure 2.3-1 to view this site concept. There should also be a reference to where the alternate site concepts can be viewed (Appendix O).
c. Figure 2.3-1 should follow section 2.3-1.
d. Identify the existing zoning designation for the site pursuant to the most current zoning map for the Town of Bethlehem. This would be suitable prior to the listed permitted use discussed in this section.

15. Section 2.5. Construction Activities

a. In the first sentence of the second paragraph "1.1.3" should be replaced with "1.13".
b. The second paragraph mentions the project may be constructed in a single phase or up to three phases. For the phased approach, a graphic example would be beneficial to understand location and whether it is achievable/realistic.
c. The section notes that a 5-acre disturbance waiver will be required. This statement shall be rewritten indicating that a 5-acre disturbance waiver request will be submitted to the Town of Bethlehem DPW for review and approval. This is a discretionary decision of the Town that may or may not be approved based upon the merits of the request. Further, if approved, it may be rescinded at any time based upon observed performance.
d. There needs to be a discussion of construction phase noise impacts, reference to the Town of Bethlehem's Town Code, Chapter 81 and the project will comply with this chapter.

16. Section 2.6: Required Approvals

This section will restate the information presented in Section 1.6.3. There are discrepancies between the two section, missing permits required, or actions listed under the incorrect agency.

a. Under Town of Bethlehem Planning Board, acceptance of new water and sewer mains are listed as being under their jurisdiction. This is an action subject to Town of Bethlehem Town Board approval.
b. Under Town of Bethlehem Planning Board, 5-acre Waiver approval is listed as being under their jurisdiction. This is an approval considered by and issued by the Town of Bethlehem Department of Public Works.
c. Under Town of Bethlehem Department of Public Works, add issuance of MS4 SWPPP Acceptance Form and approval of 5-acre Disturbance Waiver.
d. Under Albany County Planning Board, b should be rewritten to state 239 M and N referral.

e. Under New York State Department of Environmental Conservation, identify whether a Water Supply Application is necessary for the extension of the Town of Bethlehem's water supply area.

17. Section 2.7: Purpose and Process of SEQRA

a. Expand to identify what process steps have occurred for this project and when – preparation of EAF, determination of significance, lead agency, public scoping, public hearing, public comment period, etc.
b. Include a list/table of all steps in the SEQRA process specific to this project, including dates.

18. Section 3.1.2. Soil, Geology and Topography – Potential Impacts (Terrestrial Land)

a. The discussion presented in Section 3.1.3 in its entirely provides substantive discussion of the dynamic compaction process and that there will be no vibration that would reach damaging levels effecting adjacent structures. This discussion provides both the potential impact and a technical data that there will be no adverse impact relating to excess vibration. While the Scoping Document requests this discussion in Section 3.1.4, it may be more appropriate in Section 3.1.2.
b. There should also be a discussion if dynamic compaction will achieve the audible ranges for parcels in proximity to the site.
c. 3.1.2 states "…the project will be designed to balance earthwork and therefore no on-site soil will be removed from the project site." While 3.1.3 states "It is possible that some coal ash may need to be transported off-site…" Clarify which statement is accurate.

19. Section 3.1.3. Soil, Geology and Topography – Mitigation Measures (Terrestrial Land)

a. There should be mention of the need to prepare a SWPPP that addresses both construction phase site disturbances as well as long term stormwater management practices, then referring to the appropriate section of the DGEIS for the technical discussion of the stormwater practices.

20. Section 3.2.2. Vegetation and Wildlife – Mitigation Measures (Threatened and Endanger Species)

a. List the NYSDEC and USFW conservation measures specific to the Northern Long-eared Bat, which may include but are not limited to installing barriers to identify tree clearing limits, not performing site construction activities after sunset or other identified BMPs.
b. Identify the available mitigation measures planned to protect the Small's Knotweed and Cobra Clubtail.

21. Section 3.3.1. Regulated Wetlands and Surface Waters – Environmental Setting (Wetlands)

a. Within the text of this section identify whether the USACOE has issued a Jurisdictional Determination on the delineated freshwater wetlands located on the site. If they have, correspondences from the USACOE shall be provided as an appendix.

22. Section 3.4.2. Floodplains and Floodways – Potential Impacts

a. This section notes the project will use floodplain design standards that meet or exceed floodplain development requirements and building codes. Provide a list of the measures that will meet or exceed the referenced standards.
b. Reference should be made that a Floodplain Development Permit application pursuant to Bethlehem Town Code Chapter 69-Flood Damage Prevention will need to be provided to the Town Building Division for review and approval by the Town Building Inspector.

23. Section 3.7 – Traffic and Transportation

a. Provide a summary of the methodologies, findings and conclusions from the Traffic Impact Study (TIS) rather than copying the TIS language.
b. See TIS (Appendix I) for comments pertaining to the content.
c. Related to oversized load transports, provide any correspondence from NYSDOT that confirms the CHA referenced Traffic Control Plan is the preferred travel route. How are the procedures in the Plan applicable to this project? Describe the travel route for oversize load transports, origin and destination, associated with the Port of Albany project and identify roadways in the Town of Bethlehem that may be affected.

d. The Feura Bush Road/Glenmont Road intersection is currently in the design phase for a roundabout, as identified in the traffic impact study, and currently under review by NYSDOT. Describe how any oversized load transport route through this intersection can be accommodated by the roundabout design. Are modifications necessary?
e. River Road will serve as the major north-south route for vehicles to access the site as identified by the trip distribution figures. Describe the existing conditions/environment along River Road, ownership, daily traffic volume, posted speed limit, 85th %-ile speed, percentage of daily truck traffic, accident patterns, etc.
f. South Port Road will serve as the major access location for traffic entering/exiting the site. Describe the existing conditions/environment of South Port Road including but not limited to pavement conditions, roadway width, travel lanes, shoulders, ownership, etc. Is the road fully owned by the Town or is it a highway by use roadway and adjacent property owners have rights to the land? What are the impacts to the current roadway condition due to the proposed increase in traffic (vehicle and truck) and what is the mitigation? Does the road need to be widened? Identify distance? What entity will own and maintain new roadway improvements?
g. All concept maps identify "Proposed Access Acquisition" along a triangular shaped area along west side of Port Road South just north of the new bridge. Identify current ownership and acquisition options.

24. Section 3.8.2. Drainage – Potential Impacts

a. In the first paragraph, fourth sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.

25. Section 3.8.3. Drainage – Mitigation Measures

a. Within this section, following the first paragraph, mitigate measures are listed. Further explanation of how the project will mitigate increased peak runoff rate during and after construction is necessary. The Existing and Proposed Hydrology tables do not support this statement as Drainage Area 3 and 4 have substantial increases in runoff for all storm events under the developed site condition.
b. The DGEIS notes the water quality practices being proposed including bioretention and stormwater ponds. Provide the NYSDEC designation for each practice proposed. (e.g. Bioretention is a F-5 designation).

26. Section 3.9.1. Water Service – Environmental Setting

a. The section provides discrete discussion of work the Town DPW did to evaluate the technical feasibility of providing water to the project. The section needs to be expanded to talk about the Town's overall water system including source, treatment, storage, distribution, permitted and/or design capacities (storage, treatment), amount supplied, and system demands. Much of this information may be obtained from a recent Town of Bethlehem Water Quality Report.
b. It should be stated that the project site is not fully within an existing Town of Bethlehem approved water service area and a district extension would be required to service the project site.

27. Section 3.9.2. Water Service – Potential Impacts

a. There should be discussion of the source of water during construction, not just source during operation.
b. The fire flow demand is stated as being 2,300 gpm at 20 psi. State whether this is a needed fire flow at on-site hydrants or demands associated with an automatic fire sprinkler system.
c. Option 1 identifies the need for a tank to supply the buildings fire suppression system. Confirm Option 2 and 3 do not also require this tank. If not required, state as such. Further, the general geometry of this tank should be discussed, most importantly its height and whether it triggers any special approvals not already identified for that height or if it will be visible from identified vantage points.

d. Option 2 discusses two points of connection to the Town's water system and looping of a water main through the project site. The looped water main would be dedicated to the Town as part of their distribution system. The Town does not desire to take this dedication due to the water mains location and complications of access for potential maintenance. As such, it shall be revised to state all on-site water mains shall be owned and operated by the project sponsor. The 2 points of connection shall require a hot box with metering and backflow prevention. Additionally, pressure reducing valves will need to be installed for both Options 2 and 3.
e. It should be identified which of the two offsite water distribution system improvement options is preferred by the Town and that provides the least impact to its system In discussions with the Town, they prefer Option 3 as it provides the benefit of town system redundancy. However, the 1,200 feet of 12" water line shall be considered to be run down Old River Road instead of River Road. The second to last paragraph identifies the water demands for the alternatives being evaluated. Clarify if each demand by phase is average day, maximum day or peak hourly demands. A table presenting this data may be more appropriate covering all demand conditions for each development option being considered.

28. Section 3.9.3. Water Service – Mitigation Measures

a. State that all off-site water distribution system improvements will be completed by the project sponsor, entirely at their expense and will be offered to the Town of Bethlehem following installation at no cost to the Town of Bethlehem. This paragraph should also state that water system infrastructure after the master meters and/or hot boxes shall be privately owned and operated.

29. Section 3.10.1. Sanitary Sewer – Environmental Setting

a. This section identifies the connection to the Albany County Water Purification District as he preferred option and further indicates that the Port of Albany is coordinating with the Albany County Sewer District to determine the capacity to treat waste form the project. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis. This would include a hydraulic analysis of existing infrastructure and determination if the alignment would need to cross private property not under control by the project sponsor. If this is the preferred option, appropriate analysis shall be included in the DGEIS. Further, a "will serve" letter should be obtained from the Albany County Sewer District indicating their ability and willingness to serve the project. This section also needs to discuss the possible need for out of district use by Albany County. This may require a municipal agreement.
b. The section identifies two potential options for connecting to the Town of Bethlehem's sewer system. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis. This would include a hydraulic analysis of existing infrastructure and determination if the alignment would need to cross private property not under control by the project sponsor. This option will also require the analysis of the existing Glenmont Road pump station and the elevated pipe crossing at the thruway.
c. There is an on-site option presented for a soil based septic system. The DGEIS appears to suggest this option may be technically infeasible due to poor soil conditions. If in fact this option is not technically feasible, the DGEIS should state as such, rather than stating it is "not considered favorable".
d. There is a second on-site option presented for an on-site package treatment plant. In its present form, the DGEIS does not make any determination whether this option is viable through a technical analysis.

30. Section 3.10.2. Sanitary Sewer – Potential Impacts

a. This section only discusses the potential impacts from the preferred connection to the Albany County Sewer District. All options discussed in Section 3.10.1, if considered technically feasible, also need to be discussed in Section 3.10.2.
b. Since the preferred option is stated as being the connection to the Albany County Sewer District, until an appropriate technical analysis is completed, the potential impacts can not be fully defined. When a "will serve" letter is received from the Albany County Sewer District, it should be referenced in this section.

31. Section 3.10.3. Sanitary Sewer – Mitigation Measures

a. This section only discusses the mitigation measures for the preferred connection to the Albany County Sewer District. All options discussed in Section 3.10.1, if considered technically feasible, also need to be discussed in Section 3.10.3. The port should have the same language about the project sponsor installing the sewer infrastructure to town standards at no cost to the town. Same language should be added in the water mitigation measures.

b. Since the preferred option is stated as being the connection to the Albany County Sewer District, until an appropriate technical analysis is completed, the mitigation measures cannot be fully defined. When a "will serve" letter is received from the Albany County Sewer District, it should be referenced in this section.

32. Section 3.12.1. Visual and Aesthetic Resources – Environmental Setting

a. In the first paragraph, correct the issue date of the NYSDEC Program Policy - Assessing and Mitigating Visual Impacts.

33. Section 3.13.1. Land Use and Zoning – Environmental Setting

a. In the first sentence, the term "natural" is unclear. If this is intended to mean "undeveloped" state as such.

b. This section mentions the potential subdivision of the parcel. It should be noted that if there is a subdivision, it may present future regulatory approvals specific to the on-site water and sewer systems. When two parcels are serviced by a water and/or sewer main, these mains need to be listed under Section 1.6.3 and 2.6 of the DGEIS as potential additional permits/approvals being necessary.

c. Table 3.13-1 identifies 2,140 feet of proposed highway frontage. Where is this highway frontage located on the parcel? If this area is the linear strip of land along existing Port Road South, it does not meet the definition of both highway frontage and lot depth. It appears the parcel may be considered a pre-existing non-conforming lot due to its irregular shaped nature along Port Road South.

d. Provide a plan sheet showing the existing property front, side and rear yard setbacks. This will establish the existing condition of the site related to area and yard requirements.

e. Concept plans should show the location of the proposed Town roadway right-of-way terminus along Port Road South. Identify any change in highway frontage of the parcel.

f. This section mentions if the project site were to be subdivided, the on-site roadway would become a public roadway owned by the Town or County. The Town Highway Superintendent has indicated he does not wish to own and maintain the road within the Port site. Provide any correspondence from the County indicating their acceptance of a future roadway. Should the roadway be owned and maintained by the Port of Albany as a private street address if the Town Zoning Law and Subdivision Regulations permit lots to be created with frontage on private streets serving as the minimum highway frontage.

g. Should a private street travel through the site, identify on plan sheet any subdivided lots would meet the front, side, rear setbacks and all area, yard, and bulk requirements.

34. Section 3.13.2. Land Use and Zoning – Potential Impacts

a. Add text explaining the proposed building height of 85', which exceeds the maximum allowable height of 60 feet in the zoning district as a potential impact.

35. Section 3.13.3. Land Use and Zoning – Mitigation Measures

a. Clearly identify proposed mitigation (if any) and any necessary permits, approvals or variances required should the height of a proposed structure exceed the maximum allowable height. Include any required permits or approvals under Section 1.6.3 and 2.6 as potential additional permits/approvals being necessary.

36. Section 3.15.1. Emergency Services – Environmental Setting

a. The DGEIS notes that the responding fire department has been notified of the project. Considering the planned height of the building, it will be important that the District provide input regarding their ability to appropriately respond to an event at the site.

37. Section 3.17 – Fiscal and Economic Impact

a. The analysis should also examine the local impact under a scenario where the Port of Albany constructs and owns the building(s). As the property owner, the Port of Albany land is exempt from local property taxes (County, School, Town) and this comparison should be provided. Further, privately owned building(s) would be eligible for tax abatements through the Town of Bethlehem Industrial Development Agency. A comparison of fiscal impacts for local property taxes (County, School, Town) associated with applying the IDA's Standard and Enhanced abatements should be provided.

38. Section 3.18 - Recreation and Open Space

a. Table 3-18-1: Existing Town Owned Parks and the Town of Bethlehem Recreational and Cultural Resources map should be included in Section 3.18.1 – Environmental Setting as an overview of existing conditions, not in Section 3.18.3 – Mitigation Measures.

b. Provide discussion on the expected increase in ships to the site and impacts to recreational boaters, kayakers, etc. who utilize the adjacent recreational lands and the Hudson River. Henry Hudson Park serves as a put-in location for boats and kayaks. Other City of Albany recreation areas that serve as put-ins that may also be impacted by increased ship volume (21/day).

39. Section 4. Reasonable Alternatives to be Considered – Site Development as Allowed by Existing Zoning

a. For each of the alternatives presented, there needs to be a discussion of the independent impacts each creates and what level of mitigation is needed to offset those impacts. This serves the purpose of establishing specific thresholds.

b. It may be beneficial to present an alternatives development scenario such as the prior Beacon Harbor project that also had an Environmental Impact Statement. This will illustrate the impacts associated with a project that sought to develop the site in a way that did not conform to the existing zoning district.

40. Section 5. Adverse Environmental Impacts Which Cannot Be Avoided

a. There needs to be a discussion of environmental impacts that will be temporary from construction activities (e.g. noise, dust, traffic).

b. This section needs to be further expanded to discuss long-term unavoidable impacts associated with operation of the project which may include localized and intermittent increases in traffic on local roadways, loss of existing terrestrial and forested habitat, increase demands on municipal water and sanitary sewer service, consumption of petroleum hydrocarbon fuels and the subsequent release of air pollutants and GHGs. All of these impacts relate to the increased intensity of use of the site that translates to additional population arriving to and departing from the site both during the construction phase and operational phase. It should be stated whether these impacts are anticipated to be significant and if significant whether they can be minimized through various general or site-specific avoidance and mitigation measures. It should also be stated that if the identified mitigation measures are implements, the project is expected to result in a positive, long term overall impact that will be offset the adverse effects that cannot otherwise be avoided.

c. A discussion of general mitigation measures should be provided. This may include but is not limited to:

   i. Discussing how agency and public input is solicited and appropriately addressed as part of the environmental review process.

   ii. That response to comments and preparation of a GFEIS will provide the information necessary for the lead agency to draw conclusions (Findings Statement) regarding the project's overall environmental impact, and impose conditions on SEQRA approval, if necessary.

   iii. Discussion that compliance with other applicable federal, state and local regulations/guidelines governing the construction and design of the proposed project will serve to minimize adverse impacts.

   iv. Discussion of local experts being engaged for the preparation of critical plans as well as to provide third party technical reviews to assure impacts are avoided to the maximum extent practicable.

d. A discussion of site-specific mitigation measures should be provided. This would be restating of any mitigation measures already identified in Section 3, by topic.

41. Appendix I. Traffic Impact Study

a. List of Tables and Figures; Update titles and page numbers per the report. There are numerous errors in these tables.
b. Page 2, Figure 1; This is referenced as Project Location Map in the text of the report.
c. Page 11, No-Build Conditions, Paragraph 1; Provide backup documentation/support that CDTC was consulted to confirm the 0.5% growth rate is consistent with the regional travel demand STEP model.
d. Page 11, No-Build Conditions, Paragraph 2; The last sentence contains "study competed". Competed should be changed to completed.
e. Page 11, No-Build Conditions, Paragraph 3; Include the trip generation rates from the CME study in the appendix.
f. Page 13, Build Conditions, Trip Distribution; Provide backup documentation/support that CDTC was consulted to see if the distributions are consistent with the regional travel demand STEP model.
g. Page 13, Build Conditions, Trip Generation, Paragraph 1; Explain how the trip generation rate was calculated. I.E. were the calculations performed utilizing the turning movement counts, ATR counts or other data?
h. Page 13, Build Conditions, Trip Generation, Paragraph 1; The conclusion that "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." was made. This is a single site within the Port and should be analyzed as such. If a single large manufacturer is the future tenant, the trip generation has the potential to almost double. Explain why the current trip generation for the Port is most appropriate.
i. Page 14, Paragraph 2; The trip generation rate calculations are not included in Appendix B. Please provide.
j. Page 23, Traffic Operations; Reference is made to the 2010 Highway Capacity Manual (HCM). A new 6th Edition of the HCM was issued in 2016. Why was this edition not utilized?
k. Page 24, Intersection No. 1; The applicant is responsible for the coordination of any monitoring of traffic signal timing with the agency responsible for the signal. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.
l. Page 24, Intersection No. 2; The applicant is responsible for the coordination of any monitoring of traffic signal timing with the NYSDOT. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.
m. Page 24, Intersection No. 3; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.
n. Page 24, Intersection No. 3; Reference the guidelines utilized to determine "adequate levels of service".
o. Page 25, Intersection No. 3; The applicant is responsible for the follow up traffic study. Explain how the applicant will perform this study and any mechanisms or procedures that would be utilized or implemented.
p. Page 25, Intersection No. 5; Include discussion that signal warrant analysis will need to be revised and submitted as part of the site plan review process with the Town of Bethlehem.
q. Page 25, Intersection No. 6; Include type of existing control at this intersection.
r. Page 25, Intersection No. 6; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.

s. Page 25, Intersection No. 6; The analysis on this page concludes a traffic signal is recommended and provides direction that the signal should be installed prior to Phase II. However, page 43 states "Consider installation of a traffic signal…" Clarify when consideration of this signal will occur. During Site Plan Review through Town of Bethlehem, etc.?
t. Page 26, Intersection No. 8; Include the LOS from the CME report for the proposed roundabout.
u. Page 26, Intersection No. 9; Reference the guidelines utilized to determine "acceptable level of service".
v. Page 26, Intersection No. 10; Expand on why no quantitative analysis was performed.
w. Page 26, Intersection No. 10; Include the year the NYSDOT data was collected that was utilized to evaluate this interchange.
x. Page 26, Intersection No. 10; Provide reference for the "typical daily fluctuation at this type of urban high-volume intersection which will typically be around ±10%".
y. Page 26, Intersection No. 11; Provide more detail as to how the access to NYS Route 144 will be restricted.
z. Page 27, Table 4; Check LOS letter designation and delays for all. Specifically, for the NYS Route 144/Glenmont Road intersection overall LOS for 2029 Build Phase III.
aa. Page 29, Truck Impact Analysis, Paragraph 4; Provide a proposed conclusion regarding whether or not trucks should be allowed to use the NYS Route 144 access.
bb. Page 29, Truck Impact Analysis, Paragraph 3; Figure 14a and 15a are not in Appendix B. Please provide.
cc. Page 29, Truck Impact Analysis, Truck Volume Assessment, Paragraph 1; Explain why the data from the other studies is not relevant.
dd. Page 29, Truck Impact Analysis, Truck Volume Assessment, Paragraph 2; Explain how the trip generation rate was calculated. I.E. were the calculations performed utilizing the turning movement counts, ATR counts or other data?
ee. Page 30, Table 5; It appears that a note associated with the ITE Code in the title is missing (if not missing, remove the asterisks).
ff. Page 30, Table 5; Are the AM and PM peak hours for the trucks and passenger vehicles the same? If yes, then include in discussion for clarification.
gg. Page 30, Paragraph 3; Explain why was data from the South Albany Traffic Report utilized instead of data collected as part of the TIS for this project.
hh. Page 30, Paragraph 3; Quantify how significantly less the overall traffic volumes are during the midday hours.
ii. Page 30, Table 6; Check the math for the % increase. Calculation should be:
jj. (proposed – existing) / existing.
kk. Page 30, Table 6; Identify what the two columns under Existing Truck Volume and Proposed Truck Volume represent.
ll. Page 30, Paragraph 5; The third sentence is confusing. It appears that trucks will be using the southern driveway although it is stated this will be restricted to passenger vehicles only.
mm. Page 31, Paragraph 1; It should be noted that the traffic control plan will need to be coordinated and approved by any other agencies with jurisdiction of the roadways traveled.
nn. Page 31, Truck Sensitivity Analysis, Paragraph 1; A reference is made to the Synchro printouts included in Appendix B. While they are located there, per the table of contents and appendix covers, these should be included in Appendix C.
oo. Page 31, Truck Sensitivity Analysis, Paragraph 1; The results table is not included in Appendix B. Please provide.
pp. Page 31, Truck Sensitivity Analysis, Paragraph 3; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.
qq. Page 31, Truck Sensitivity Analysis, Paragraph 4; The applicant is responsible for any improvements along with the coordination with the agency responsible for the roadway or

intersection. Include discussion explaining how the applicant proposes to accomplish this and any mechanisms or procedures that would be utilized or implemented.

rr. Page 35, Figure 16; This figure does not match the figure presented at the public hearing. Public Hearing reflected the Northbound/Eastbound route along I787/Exit 2 and I787/I87 Exit 23. Explain why and revise figure and analysis if necessary.

ss. Page 35, Figure 16; Legend representation of "( )", "[ ]" should be consistent with symbol on routes.

tt. Page 35, Figure 16; There is no text reference to this Figure. What is the Figure intended to show? Provide discussion.

uu. Page 36, Signal Warrant Analysis, Paragraph 2; Provide a conclusion whether a signal is recommended. The signal warrant worksheet says a signal should be considered for both scenarios analyzed.

vv. Page 37, Paragraph 2; Change "elevate" to alleviate.

ww. Page 37, Site Distance Analysis; Site should be Sight.

xx. Page 37, Site Distance Analysis, Paragraph 1; Table 7 is wrong table reference.

yy. Page 37, Table 8; Confirm that EB 17-007 was reviewed for modified perception reaction time used in calculating standard distance.

zz. Page 37, Table 8; Provide a figure that shows the available distances from the proposed access driveway.

aaa. Page 37, Table 8; It appears the available intersection sight distances are overestimated. There is a vertical curve on the Route 144 bridge over the railroad tracks to the north and the vegetation on the west side of NY Route 144 to the south appear to restrict available intersection sight distances to values below what was reported. Intersection sight distances should be provided for AASHTO Cases B1 and B2 for passenger vehicles only based on the restriction of no heavy vehicles using this access. Verify the standard intersection sight distances and ensure any adjustments for grade of the roadway are included. Discussion should include a description of the cases and any adjustments including references to design standards and other publications. Include discussion on standard versus available stopping sight distance for both passenger vehicles and trucks that are traveling on NY Route 144 approaching the proposed access.

bbb. Page 39, Public Transportation Analysis; Figure 16 is the wrong figure reference.

ccc. Page 39, Public Transportation Analysis; What are the impacts to public transportation travel in the study area if the mitigation measures previously noted are not implemented.

ddd. Page 42, Conclusions and Recommendations; Summarize who is responsible for mitigation measures and any mechanisms or procedures that would be utilized or implemented to complete the mitigation.

eee. Appendix B; Review volume inputs to ensure they match the figures in the report and modify either as required.

fff. Appendix C; No data included. This was included in Appendix B.

ggg. Appendix D; Include NYS Route 32 with Corning Hill Road.

hhh. Appendix D; Include scenario on page 1 for which the warrants were performed.

iii. Appendix D; MUTCD Section 4C.01, paragraph 17 states data analyzed should be for 12 hours and contain the greatest percentage of the 24-hour data. Identify why only 4 hours is provided for the last four warrant evaluations.

jjj. Appendix D; It appears the 8-hour warrant was not analyzed. Please identify how the determination of if a signal is or is not recommended was made.

kkk. Provide an assessment of overall accident types (rear end, right-angle, etc.) occurring on River Road. According to the Bethlehem Police Department, the River Road corridor is one of the Town's highest crash stretches. Identify the reasons for not providing a separate southbound left-turn lane or northbound right-turn lane along River Road that would allow turning vehicles to move out of the through travel lane to access the site.

42. Appendix J. Stormwater Report

a. Section I.B shall also reference the extensive soil investigation completed and their findings as it may relate to stormwater management.
b. Section III, In the first paragraph, first sentence states "and a full State Pollution Discharge Elimination System…". The term "full" is misleading suggesting there are levels of permit coverage. Reword the sentence indicating a full SWPPP is required that conforms to Part III. A through C of the General Permit. It may be necessary to note that water quantity controls do not need to be addressed due to the project's proximity to a 5th order water body / tidal marsh.
c. Section III indicates that the SWPPP will be prepared meeting various objectives. Further explanation of how the project will mitigate increased peak runoff rate during and after construction is necessary. The Existing and Proposed Hydrology tables found in the Section 3.8.3 of the DGEIS do not support this statement as Drainage Area 3 and 4 have substantial increases in runoff for all storm events under the developed site condition.
d. Section III.B shall list all available green infrastructure practices available and then identify why each has not been selected.
e. Section III.B identifies the water quality practices being proposed including bioretention and stormwater ponds. Provide the NYSDEC designation for each practice proposed. (e.g. Bioretention is a F-5 designation).

43. Appendix O. Site Layout Concepts

a. On Boundary Survey - Label metes and bounds in darker font.
b. On all concepts, the property line that parallels the Normans Kill should reflect a front yard setback of 130-ft.

44. General Applicability for DGEIS document

a. For clarity purposes, all tables and maps should be located immediately after reference in the text.
b. Create bookmarks for each section in the pdf for ease of viewing.

MJ recommends that the applicant address these comments as well as substantive comments received from other agencies and the public and submit a Final GEIS for review.

Should you have any questions, please do not hesitate to contact myself or Ms. Jackie Hakes at (518) 371-0799.

Sincerely,

Joel Bianchi, P.E.
Senior Associate
Municipal Engineering
Group Manager

ecc: Jaclyn Hakes, AICP, Planning Group Manager
Chad Schneider, PE, Traffic Engineer
Elizabeth Staubach, Town of Bethlehem Economic Development Coordinator
File

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

LETITIA JAMES
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

September 13, 2019

Town of Bethlehem Planning Board
c/o Robert Leslie, Director of Planning
Town of Bethlehem
445 Delaware Avenue
Delmar, NY 12054

Re: Port of Albany Expansion Project - Draft Generic Environmental Impact Statement

Dear Mr. Leslie and Members of the Planning Board:

It has come to our attention that the Town of Bethlehem Planning Board is currently accepting comments on a Draft Generic Environmental Impact Statement ("DGEIS") for the proposed Port of Albany Expansion Project ("Project"). In May 2019, prior to the release of this DGEIS, residents of the nearby Ezra Prentice Homes Community, a low-income and predominately minority-occupied public housing project located about one mile north of the Project site, asked our office for assistance in addressing their concerns over air quality, public health, and quality-of-life impacts from existing operations and traffic related to the Port and nearby facilities. In light of this request for assistance from the Ezra Prentice community, and in the interest of ensuring that concerns from members of all nearby communities are appropriately considered, our office reviewed the DGEIS in order to understand whether the Project might adversely affect nearby low-income communities of color. Our office also attended the Town's public hearing for the Project held on September 3. Based on those actions we bring the following items to your attention and submit the attached comments on the DGEIS for your consideration.

1. The Ezra Prentice Homes and nearby South End residential communities would be disproportionately impacted by the Project

As proposed, the Project has the potential to exacerbate air pollution, health, and quality of life impacts at Ezra Prentice and nearby communities by significantly increasing truck and car traffic along South Pearl Street and by increasing adjacent rail operations. However, the DGEIS improperly discounts those impacts by largely ignoring local air quality and public health conditions at Ezra Prentice. A recent health survey of Ezra Prentice residents disclosed very

high asthma rates – in particular for children – when compared to the national asthma rates. The New York State Department of Environmental Conservation ("DEC") -- Albany South End Community Air Quality Study has preliminarily identified local truck traffic as accounting for a disproportionate share of traffic related air pollution at Ezra Prentice. The Project as proposed would increase the number of trucks and cars traveling on South Pearl Street, and increase the number of locomotives and/or rail cars traveling through the Port of Albany. Those sources emit particulate matter emissions – which can cause or exacerbate asthma and other respiratory problems, and benzene – a hazardous air pollutant, and are a source of noise to nearby residents. These adverse impacts to Ezra Prentice residents from the Project would be disproportionate when compared to impacts to other affected areas.

2. The Planning Board should require the project sponsor to perform an environmental justice analysis under SEQRA

It does not appear that the project sponsor or the Planning Board have made affirmative efforts to secure the involvement or participation of the approximately 400 residents of the Ezra Prentice community, either at the conceptual Project development phase or in developing the DGEIS. In addition, no analysis of the disproportionate impacts of the Project on Ezra Prentice or other potential environmental justice areas are included in the DGEIS. To cure these omissions, the Attorney General's Office requests that the Planning Board require the Albany Port District Commission to implement a public participation plan to include Ezra Prentice and other nearby communities within the decision-making process, and that the Commission prepare a Supplemental Generic Draft Environmental Impact Statement (SGEIS), subject to further public comment, to address environmental justice concerns. That supplemental review should incorporate the results of the DEC's ongoing air quality study of Albany's South End as well as any health-related surveys or studies of the Ezra Prentice community. As discussed further in our attached comments, DEC's Environmental Justice Policy, entitled *Commissioner Policy 29, Environmental Justice and Permitting* (March 2003) provides guidance for incorporating environmental justice concerns into SEQRA review and DEC's permit process that relies on that environmental impact review.

3. The SGEIS should include alternatives to mitigate adverse environmental impacts on Ezra Prentice and nearby South End communities

Due to the community's location adjacent to the Port and to South Pearl Street, and its close proximity to Interstate 787, the residents of Ezra Prentice already suffer from disproportionate environmental, health and quality of life injuries. Unfortunately, the Project as proposed would only make matters worse. The Attorney General's Office requests that the Planning Board identify in its supplemental analysis alternatives to mitigate impacts from the Project to Ezra Prentice residents. These alternatives should include an analysis of truck routing to the Project site that would avoid South Pearl Street, as well as an analysis of constructing a new highway interchange and road from the Thruway to serve the Port. Additionally, an indoor air quality analysis of Ezra Prentice homes might identify opportunities to mitigate infiltration of outdoor air pollutant into interior living quarters by weatherizing or providing enhanced filtration.

In conclusion, we thank you in advance for your consideration of our concerns on the DGEIS. We acknowledge the important local job and economic development opportunity that the Project presents to the community. In order to provide additional meaningful input and feedback, we request that you please add the New York State Office of the Attorney General as an interested agency for the Project, and that include our office on all future correspondence about the Project. Our full comments on the DGEIS are attached. If you would like to discuss this matter further, please contact Assistant Attorney General Philip Bein at 212-416-8797.

Very truly yours,

Lemuel M. Srolovic,
Bureau Chief
Environmental Protection Bureau

cc:
Town of Bethlehem Planning Board
Albany Port District Commission
City of Albany
Albany County
NYSDEC
NYSDOH

Comments of the New York State Attorney General's Office on the Proposed Port of Albany Expansion Project

Bethlehem Town Planning Board
September 13, 2019

The New York Attorney General's Office is pleased to submit these comments on the Draft Generic Environmental Impact Statement ("DGEIS") for the Albany Port District Commission Port of Albany Expansion Project ("Project") pursuant to the State Environmental Quality Review Act, ECL Article 8 ("SEQRA"). The purpose of these comments is to ensure that important environmental justice concerns relating to the Ezra Prentice Homes ("Ezra Prentice") and nearby South End communities are addressed in the SEQRA process.[1]

Summary

Ezra Prentice is a low-income public housing project in Albany's South End, consisting of 16 buildings, 179 units, and over 400 predominantly minority residents, many of whom are children.[2] It is a potential environmental justice area because it suffers from disproportionate adverse environmental impacts when compared to other communities. Six of its buildings, along with a children's playground, front directly on South Pearl Street, a busy thoroughfare noted for its heavy automobile and truck traffic. The Ezra Prentice community is exposed to noise and air pollution not only from traffic along South Pearl Street, but also from traffic along Interstate 787, which is located between 200 and 850 feet of Ezra Prentice, from the adjacent rail yard, an Albany County wastewater treatment plant, and from a nearby bulk petroleum storage and marine transfer facility. *See* Figure 1, depicting Ezra Prentice and its surroundings, and Figure 2a, depicting a large truck driving past the playground. The rail yard directly abuts several of the homes, and its operations have the potential for noise and quality of life disruptions if its use is expanded by the Project. *See* Figure 2b, depicting a railroad train parked only yards from Ezra Prentice. Along with Ezra Prentice, there are other residential, commercial, community and health care facilities either on South Pearl Street or nearby in the South End with varying degrees of exposure to air emissions, noise, and other disturbances from adjacent industrial activities.

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[1] Pursuant to her authority under Executive Law § 63[1], the New York Attorney General has standing to enforce SEQRA. *Abrams v. Love Canal Area Revitalization Agency*, 134 A.D.2d 885 (4th Dep't 1987).

[2] A recent survey found that African Americans accounted for about 75 percent of Ezra Prentice's population. Stacy Pettigrew, Ph.D., *Ezra Prentice Homes Health Project: Preliminary Observations* at 2 (May 14, 2019) ("*Health Survey*").

As discussed below, the Project has the potential to exacerbate air pollution and quality of life problems at Ezra Prentice by increasing car and truck traffic along South Pearl Street and increasing adjacent rail operations. Moreover, as the Albany Port District Commission's analysis makes clear, these adverse impacts are disproportionate when compared to impacts to other affected areas. Nevertheless, as of yet, affirmative efforts apparently have not been made to include Ezra Prentice as a participant in the development and review of the Project. And the DGEIS does not include any environmental justice analysis of the Project's effects on Ezra Prentice or consideration of alternatives to mitigate or eliminate those impacts.

To cure these omissions, the Attorney General's Office requests that the Planning Board implement a public participation plan to include Ezra Prentice within the decision-making process, and require the Project sponsor to prepare a Supplemental Generic Draft Environmental Impact Statement, subject to further public comment, to address environmental justice concerns. That supplemental review should incorporate the results of the State Department of Environmental Conservation's ("DEC's") ongoing air quality study of Albany's South End. It should also consider alternatives to mitigate or eliminate Ezra Prentice's exposure to Project-related air emissions and quality of life impacts. Alternatives to examine should include (1) requiring that vehicles approaching from the North bypass Ezra Prentice by travelling directly through the Port of Albany's northern access road to and from the Project site or by traveling along the New York Thruway, using a proposed new access point that could be constructed between exits 22 and 23, and (2) identifying opportunities to mitigate the infiltration of outdoor air pollution and improve the indoor air quality at Ezra Prentice.

The Project

The Albany Port District Commission has proposed to expand the Port of Albany by acquiring and developing about 82 acres of land consisting of Beacon Island and an access parcel in the Town of Bethlehem at the Town's northern boundary with the City of Albany. Draft Generic Environmental Impact Statement ("DGEIS") at 2-1. As part of the Project, a railway/motor vehicle bridge over the Normans Kill would be constructed to facilitate access to the expanded Port area. Figure 1 shows the location of the Port expansion parcels in relation to the existing Port facilities. The Project is anticipated to generate tax revenues of between $4.65 million to $14.2 million (presumably on an annual basis) depending on the extent of buildout. Most of those revenues are to be realized by Albany County. The Project is expected to generate tax revenues of between $800,000 and $4.2 million for the Town of Bethlehem. *Id.* at 1-2 to 1-3. The potential economic impact of the Project at maximum buildout is about $295 million dollars, including up to 1,670 new jobs and a one-time construction impact of between $48.1 million and $113 million to the local economy. *Id.*

The DGEIS for the Project identifies five conceptual layouts for the expansion of the Port. Environmental impacts were assessed based on "Concept A," which represents the maximum amount of development permitted under current zoning law. It includes an approximately 1.13 million square foot two-story industrial use facility with associated access roads, employee parking, trailer parking, refurbished rail access over the Normans Kill and a bulkhead wharf along the Hudson River. DGEIS 1-1. Concept A would allow for the following uses: warehouse, manufacturing, assembly, industrial park, distribution, packaging, business, and commercial storage. *Id.* The four other concepts involve smaller warehouse capacity or use of the site for light fabrication or manufacturing of offshore wind products. *Id.* at 1-8.

Truck, Rail, and Automobile Traffic Affecting Ezra Prentice

All of the conceptual layouts would provide for movement of raw materials and products by rail along the rail line that abuts Ezra Prentice and by truck along South Pearl Street (Route 32) that passes through the middle of Ezra Prentice. Although a new access road is proposed to connect the Project site to Route 144, it is not to be used by trucks in order to "further discourage trucks from utilizing Glenmont Road and other primarily residential side roads to the south and west" in Bethlehem. DGEIS at 3-49. This restriction would therefore require all trucks to access the Project at either the southern Port entrance on South Port Road or at the Port's northern entrance.

The DGEIS truck impact analysis estimates that at least 40 percent of trucks traveling from the North will enter the Project site via the southern entrance, which would necessitate travelling on South Pearl Street though Ezra Prentice. DGEIS at 3-50. However, the DGEIS does not identify the Ezra Prentice community in this analysis or attempt to mitigate or restrict truck traffic away from this residential community. *See* Figure 3, depicting Ezra Prentice in relation to access roads and the southern and northern entrances to the Port. No explanation is given as to why the northern Port entrance should not be required to avoid truck traffic through the residential Ezra Prentice area as well as residential areas in Bethlehem. As with trucks, under the Project increased car traffic attributable to commuting by employees from the North (Interstates 90 and 787) would pass through Ezra Prentice before entering the Project site (through a newly constructed road off of Route 144). The vast majority of employees are expected to commute to work by car. DGEIS App. I (Traffic Impact Study) at I-39.

The DGEIS acknowledges a disproportionate burden to Ezra Prentice from additional truck traffic on the portion of South Pearl Street that bisects Ezra Prentice. It estimates a 25.4 to 27.1 percent increase in mid-day peak hour truck traffic on South Pearl Street passing through Ezra Prentice. That amounts to an

increase of between 25 and 26 trucks during peak hours. DGEIS 3-50. To better appreciate the quality of life implications of truck traffic through Ezra Prentice, it is worthy to note again the presence of a playground just a few feet from South Pearl Street where large trucks drive by. *See* Figure 2a.[3]

The Lack of an Environmental Justice Analysis

On September 3, 2019, the Bethlehem Town Planning Board, lead agency under SEQRA, held a public hearing in Bethlehem on the Project's Draft Generic Environmental Impact Statement. It does not appear that any affirmative efforts were made to secure the involvement or participation of Ezra Prentice or other nearby South End communities in the hearing or in the project development phase that preceded it. No analysis of the disproportionate impacts of the Project on Ezra Prentice or other potential environmental justice areas are included in the DGEIS.

The DGEIS Should be Supplemented with an Environmental Justice Analysis Under SEQRA Using Guidance from DEC

SEQRA applies to government "actions," defined to include "activities involving the issuance to a person of a lease, permit, license, certificate or other entitlement for use or permission to act by one or more agencies." ECL *§* 8-0105(4). Initially, the SEQRA "lead agency" must decide whether an environmental impact statement ("EIS") is needed. ECL § 8-0109(4). "Type I" actions are those "'more likely to require the preparation of an EIS," and are listed in 6 NYCRR § 617.4. The Port of Albany Expansion Project is a Type I project because it involves physical alteration of more than 10 acres of land and more than 100,000 square feet of gross floor area in a town having a population of 150,000 persons or less. 6 NYCRR § 617.4(b)(6). In light of the project's Type I status, the Town of Bethlehem Planning Board, as lead agency for SEQRA review, decided to prepare a DGEIS.

Through SEQRA,"[t]he State has made protection of the environment one of its foremost policy concerns." *E.F.S. Ventures Corp. v. Foster,* 71N.Y.2d359, 371 (1988) (citation omitted). "SEQRA's fundamental policy is to inject environmental considerations directly into governmental decision-making; thus, the statute mandates that 'social, economic, and environmental factors shall be considered together in reaching decisions on proposed activities.'" *Coca-Cola Bottling Co. of New York, Inc. v. Bd. of Estimate of the City of New York,* 72 N.Y.2d 674 (1988) (citations omitted). Under SEQRA, the "environment" is defined broadly to include "existing patterns of population concentration, distribution or growth, existing

[3] Because proximity to areas of traffic pollution causes or exacerbates asthma, the Los Angeles County Health Department recommends that residences and parks be located no closer than 500 feet from a freeway. *County of Los Angeles Public Health Air Quality Recommendations for Local Jurisdictions* (rev. Jan. 22, 2013). A substantial portion of Ezra Prentice is within 500 feet of Interstate 787.

community character, and human health." 6 NYCRR § 617.2(l). Accordingly, socioeconomic impacts, including a project's impacts on low income and minority populations, should be taken into account under SEQRA. *See Matter of Chinese Staff and Workers Ass'n v. City of New York,* 68 N.Y.2d 359, 362-67 (1986).

DEC is an involved agency in SEQRA review of the Project because it has approval and regulatory authority over the Project under Article 15 of the ECL, Section 401 Clean Water Act Water Quality Certification, Stormwater MS4 and Stormwater Construction General Permits, individual ECL Article 17 wastewater discharge permit, Sediment Sampling and Analysis Plan, and Site Management Plan. DGEIS at 1-9 to 1-10. DEC's Environmental Justice Policy, entitled *Commissioner Policy 29, Environmental Justice and Permitting* (March 2003) ("CP-29"), provides guidance for incorporating environmental justice concerns into its permit review process and SEQRA review. Because the impact of a project on Environmental Justice is an appropriate part of environmental review under SEQRA, and given DEC's important role as an involved agency in the Project with jurisdiction over many permits, CP-29 provides helpful guidance for environmental justice review of the Project.

CP-29 addresses historic problems faced by environmental justice communities in participating in the permit review process: their lack of meaningful public participation, the unavailability or inaccessibility of certain relevant information to the public early in the permit process; and the failure of the permit process to address disproportionate adverse environmental impacts on minority and low-income communities. In order to address these concerns, CP-29 establishes "the general policy of DEC to promote environmental justice and incorporate measures for achieving environmental justice into its programs, policies, regulations, legislative proposals and activities." CP-29 at 2.

Environmental justice is defined as "the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies." *Id*. at 3.

Environmental justice review starts with a "preliminary screen" to determine whether "the proposed action is in or near a potential environmental justice area(s) and determine whether potential adverse environmental impacts related to the proposed action are likely to affect" such areas. *Id.* at 7. DEC has already determined that the Ezra Prentice Homes and nearby areas are "potential

environmental justice" communities under CP29. This designation is indicated by the purple area that encompasses Ezra Prentice in Figures 1 and 3 below.
A potential environmental justice area is defined to mean "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences" of a project. *Id.* at 4. U.S. Census data are used for identifying these areas. A "minority population" is a population recognized by the U.S. Census Bureau as "Hispanic, African-American or Black, Asian and Pacific Islander or American Indian." *Id.* For an urban area, a "minority community" means a census block group or groups with a 51.1 percent or more minority population. *Id.* at 3. A "low-income population" means a population having an annual income less than the poverty level, as established by the U.S. Census. *Id.* A "low income community" is a census block group or groups having a low income population equal or greater than 23.59 percent of the total population, as demonstrated by U.S. Census data. *Id.*

CP-29 has both procedural and substantive aspects. Procedurally, it requires enhanced public participation for actions affecting a potential environmental justice area. The policy provides that "[w]here a potential environmental justice area is identified by the preliminary screen, the applicant shall submit a written public participation plan as part of its complete application." *Id.* at 8. The policy requires that, at a minimum, the public participation plan identify stakeholders, including nearby residents, local elected officials, community-based organizations, and community residents; provide for distribution and posting of written information on the proposed action and permit review process; provide for public information meetings to keep the public informed about the proposed action and permit review process; and establish easily accessible document repositories in or near the potential environmental justice area to make available pertinent information. *Id.* The applicant is also required to submit a report summarizing progress on implementing the plan, all substantive concerns raised, all resolved and outstanding issues, the components of the plan yet to be implemented, and an expected time line for completing the plan. Upon completion of the plan, the applicant must submit a written certification that is has complied with the plan, including an updated status report. *Id.*

In performing environmental justice review, consideration of existing sources of pollution in the "airshed, watershed, or wasteshed" of the project should take place. *Id.* at 8. As with other elements of environmental review, if it is determined that there will be no adverse environmental impacts from an environmental justice perspective, an EIS would not be required. If significant adverse impacts cannot be ruled out, then an EIS addressing environmental justice should be prepared. A draft EIS should "describe the existing environmental burden on the potential environmental justice area and evaluate the additional burden of any significant adverse environmental impact on the potential environmental justice area." *Id.* at 9.

The Project Will Cause Disproportionate Adverse Environmental Impacts to Ezra Prentice and Nearby Communities

Ezra Prentice faces environmental and human health challenges. It is located in the midst of significant air pollution sources - traffic from South Pearl Street and Interstate 787, the railyard literally in its back yard, and its proximity to petroleum storage tank farms, a wastewater treatment plant, and a marine transfer facility across the tracks. Preliminary results from a recent survey of residents found very high asthma rates, 30 percent for children under 12, 46 percent for children between 12 and 18, and 33 percent for adults. *Health Survey* at 3. In comparison, the national rate of asthma for African American adults and children has been estimated at about 11 percent and 14 percent, respectively. The asthma rate for white adults and children are lower still, 7 and 9 percent respectively. *Id.* at 3-4. In the survey, 13 percent of Ezra Prentice residents reported suffering from other respiratory health problems, 35 percent had hypertension and 23 percent had diabetes, all well above that of nonminority communities. *Id.* at 4.

Local car and truck traffic is a significant source of air pollution at Ezra Prentice, as shown by preliminary results from DEC's South End Air Pollution Study. *South End Study Progress Update* (DEC January 10, 2018) ("*Preliminary Results*") at 5-6. The proximity of South Pearl Street and Interstate 787 contribute to air pollution problems as emission concentrations observed are characteristic of those found within 300 feet of roadways in other cities throughout the United States, indicating that motor vehicles are a major source. *Id.* at 17. Variability in emissions at Ezra Prentice correlates with traffic. *Id.* at 14. Preliminary results indicate that truck traffic appears to account for a disproportionate share of traffic related air pollution at Ezra Prentice. *Id.* at 28-32. Accordingly, the Project's increase in car and truck traffic is likely to exacerbate benzene, particulate matter, and other air pollution problems at Ezra Prentice, as would new operations at the railyard right next to the community. *See* Michael Rizzo *et al.*, *Cicero Rail Yard Study Final Report* (EPA Region 5 and ORD Feb. 2014) (diesel emissions at rail yard contribute to elevated pollution levels in adjacent neighborhoods). The number of trains and/or rail cars travelling through the Port of Albany past Ezra Prentice would increase, thereby adding to the noise and diesel emissions from the railyard. DGEIS at 3-54.

Concentrations of the toxic pollutant benzene in the air at Ezra Prentice already are high. Air sampling from March 2015 through December 2017 disclosed average concentrations of benzene at almost .7 micrograms per cubic meter in Albany's South End. *Albany South End - Benzene Results: Air Monitoring Results from NYSDEC's Air Toxics Monitoring Network* ("*Benzene Results*").[4] Preliminary results of an ongoing study by DEC show benzene in residential areas in the South End at concentrations of between .12 and .30 parts per billion, which is equivalent

[4] https://www.dec.ny.gov/chemical/107858.html

to about .4 to .9 micrograms per cubic meter. *Preliminary Results* at 37. These results are several times more than DEC's annual guideline concentration of .13 micrograms per cubic meter for benzene, the concentration deemed by DEC necessary to be protective of long-term exposure to the pollutant, *Appendix B. Benzene Cancer Risk Estimates.*[5] While benzene concentrations are high in many parts of the State, they are higher in the South End than the other urban and suburban areas that the State monitors. *See Benzene Results.*

Benzene is a hazardous air pollutant regulated in New York under the federal Clean Air Act and Article 19 of the ECL. Benzene emissions are generated by "combustion of fuels used in passenger cars, heavy-duty trucks, marine vessels and planes. It is also released into the air when petroleum-based fuels (such as crude oil, gasoline, home heating oil) evaporate during storage or when the fuel is moved or transferred to and from storage terminal tanks, trucks, railcars and barges." *Albany South End - Benzene Results: Air Monitoring Results from NYSDEC's Air Toxics Monitoring Network*.[6] Acute exposure to benzene may cause respiratory tract irritation, along with drowsiness, headaches, eye irritation and, at high levels, unconsciousness. *Benzene EPA Fact Sheet*.[7] Chronic exposure to benzene may cause various blood disorders and leukemia. *Id.* EPA has classified benzene as a known human carcinogen for all routes of exposure. *Id.* "More than 100 studies show there is no safe level of benzene; all concentrations contribute to cancer risk." Earthea Nance, *et al., Ambient air concentrations exceeded health-based standards for fine particulate matter and benzene during the Deepwater Horizon oil spill,* 66:2 Journal of the Air & Waste Management Association (Jan. 15 2016). Combustion of gasoline and diesel fuel from the added car and truck traffic and rail operations would increase the already excessive benzene emissions and exacerbate the associated health risks.

Particulate matter pollution can cause or exacerbate asthma and other respiratory problems. In its ongoing study, DEC has indicated that local sources, primarily diesel trucks, are responsible for large increases in particulate matter concentrations over baseline levels at Ezra Prentice. On average during weekdays, particulate matter less than 10 microns in diameter (PM_{10}) concentrations were 47 percent higher than baseline due to local traffic. *Preliminary Results* at 19. One recent study has indicated that increases in PM10 concentrations over just a few days triggers asthma attacks and increases the number of emergency room visits. Katherine A. James, *et al*., *Health Services Utilization in Asthma Exacerbations and PM_{10} Levels in Rural Colorado,* 15:8 Annals of the American Thoracic Society (Aug. 1, 2018). Accordingly, the Project has the potential to exacerbate the already significant asthma problem at Ezra Prentice.

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[5] http://www.epa.gov/ncea/iris/subst/0276.htm#suminhal

[6] https:/www.dec.ny.gov/chemical/107858.html

[7] https:/www.epa.gov/sites/production/files/2016-09/documents/benzene.pdf.

The DGEIS improperly discounts air quality impacts by ignoring local conditions at Ezra Prentice, including the high incidence of asthma in the community, and focusing instead on DEC's Loudonville air monitoring station ten miles away that is in compliance with the National Ambient Air Quality Standards ("NAAQS"). DGEIS at 3-38. But the NAAQS do not apply to benzene emissions, and the applicable standard for benzene is severely exceeded in the South End.[8] Moreover, the DGEIS presents nothing to contradict the scientific evidence that increases in particulate matter emissions over a matter of a few days triggers asthma attacks and hospital admissions regardless of whether the NAAQS are met.

It should be presumed that these potential adverse impacts to Ezra Prentice are disproportionate given the already disproportionate environmental, health, and quality of life injuries suffered by that community. Under the Project as presently proposed, matters would get worse. Truck traffic from Interstates 90 and 787 north of the Project Site would obtain access to the Project site by travelling though Ezra Prentice before entering the southern entrance to the Port of Albany at South Port Road - for the express purpose of avoiding traffic in residential areas in the Town of Bethlehem, which is not an environmental justice community, thereby placing an unfair burden on Ezra Prentice. And Ezra Prentice would also bear the environmental burden of enhanced rail traffic in its back yard.

Project Alternatives to Mitigate Adverse Environmental Impacts on Ezra Prentice

Disproportionate adverse environmental impacts on Ezra Prentice can be avoided and mitigated. Instead of channeling traffic from Interstates 90 and 787 from the north through that community, the Project can require that all traffic be channeled through the northern Port entrance where trucks could be routed within the Port south to the Project site. *See* Figure 3.

Alternatively, a new Thruway interchange, Exit 23A, can be constructed that would include a road leading directly into the Project site. *See* Figure 3. This alternative can be a win-win because the Town of Bethlehem has long recognized its benefits in (1) lowering traffic demand on the northern section of US 9W and NY 144, (2) providing a more attractive route for travel to/from Glenmont and Delmar, especially for neighborhoods and businesses along the Feura Bush Road and Elsmere Avenue corridors, (3) improving access to South Bethlehem, and (4) providing a more direct route to transport freight to the CSX rail yard in Selkirk. A more detailed discussion of this alternative is found in Appendix A.

[8] In similar fashion, the DGEIS's reference to the Air Quality Index for the South End does not contradict or excuse the exceedances of the benzene standard that would only be worsened by the Project as currently devised.

The Planning Board should also consider in its mitigation alternatives any opportunities to improve indoor air quality at Ezra Prentice. In prior meetings with the Attorney General's Office, residents of Ezra Prentice with units that front South Pearl Street described seeing soot in the interior of their residences around openings to the outside. According to EPA, infiltration can bring outside air pollutants into homes through openings, joints and cracks in walls, floors and ceilings, and around windows and doors. A structural and indoor air quality analysis at Ezra Prentice might identify opportunities to mitigate the infiltration of any outside air pollutants into interior living quarters. Such an analysis might also identify opportunities to improve the heating, ventilation, and air conditioning systems at Ezra Prentice in order to improve indoor air quality.

Conclusion

The DGEIS should be supplemented and made available for further public comment to address the significant environmental justice concerns raised by the Albany Port Expansion Project. The process should accord with DEC's Environmental Justice Policy, CP-29, and require preparation of a Public Participation Plan to ensure that the voices from Ezra Prentice are heard. The final results of DEC's Air Quality study for the South End should also be incorporated to better inform the analysis. Alternatives to routing traffic through Ezra Prentice should be considered and adopted to mitigate the Project's disproportionate adverse environmental, human health, and quality of life impacts to that community.

LETITIA JAMES
Attorney General of the
State of New York

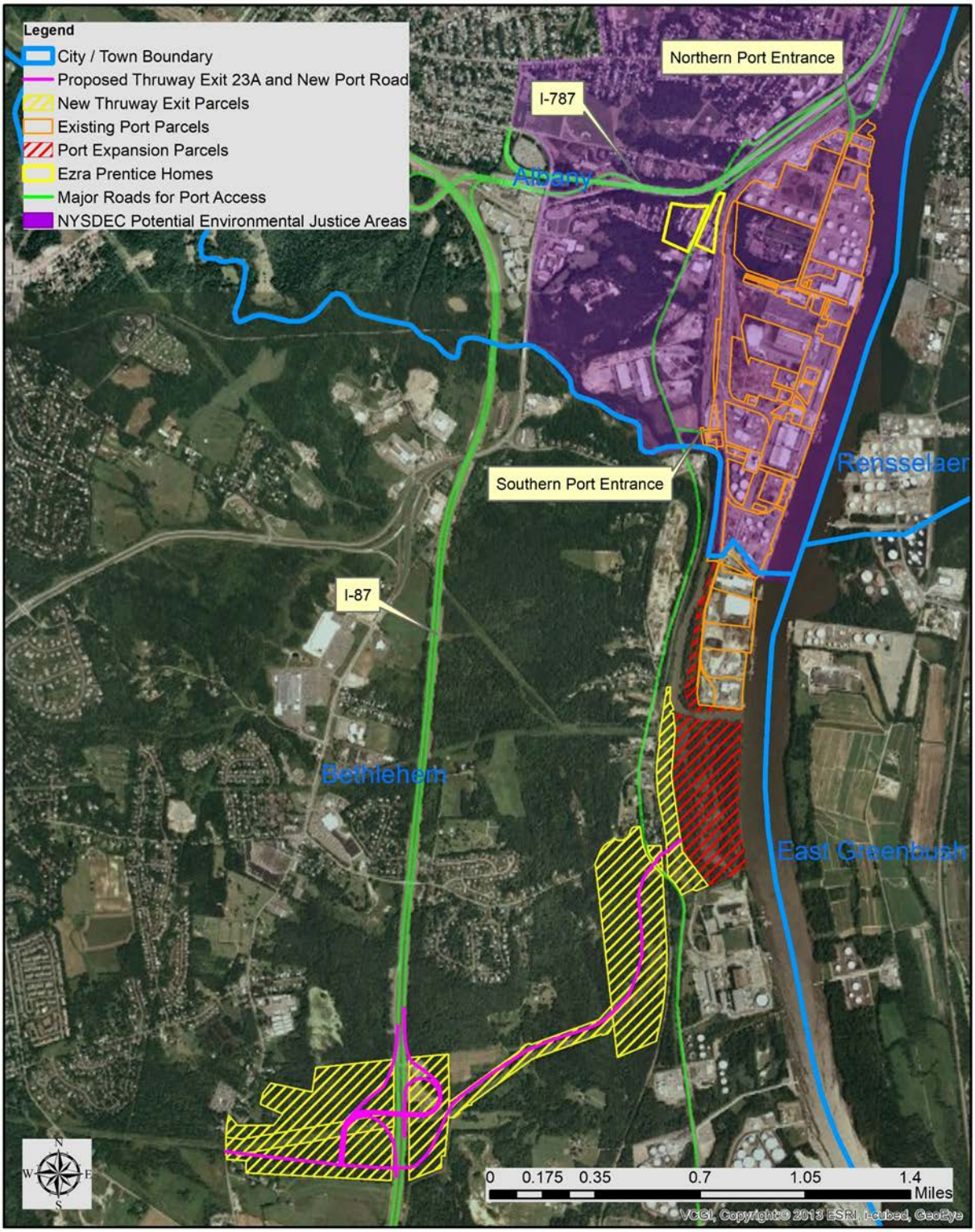
Philip Bein
Lemuel Srolovic
Assistant Attorneys General
Jeremy Magliaro
Policy Analyst
Joseph Haas
Environmental Scientist
Environmental Protection Bureau
28 Liberty Street, 19th floor
New York, New York 10007
(212) 416-8797
Philip.bein@ag.ny.gov

Figure 1: Ezra Prentice Homes and Close by Environmental Impacts

Figure 2a: A truck on South Pearl Street just a few feet from the children's playground at Ezra Prentice Homes

Figure 2b: Railroad traffic several yards from Ezra Prentice Homes

Figure 3: Ezra Prentice Homes and the Port of Albany Expansion



APPENDIX A

Alternative Proposing New Road and New York State Thruway Exit "23A"

Without either internal or external road development, the planned expansion of the Port of Albany brings with it increased truck traffic along Route 32 and Route 144. This increased traffic will affect the residence of the Ezra Prentice Homes, in a manor inconsistent with environmental justice policy.

One alternative to address this problem is to construct a new road and interchange on the New York State Thurway in the vicinity of Wemple Road, in the Town of Bethlehem. The proposed interchange and road would provide, among other benefits, a direct route between the New York State Thurway and the newly developed parcels comprising the expanded Port of Albany, thus mitigating any increase in traffic on existing roads utilized for Port access stemming from the expansion of the Port.

A new NYS Thruway interchange in the vicinity of Wemple Road has been under study for more than a decade. In December 2008 Wilber Smith Associates (WSA), on behalf of the Town of Bethlehem and the Capital District Transportation Committee (CDTC), prepared a report entitled *US 9W Corridor Transportation Planning Assessment, Advancing the Town of Bethlehem's Comprehensive Plan and Economic Development Goals*. In the report, WSA list the following benefits of such an interchange and new connecting road:

- A new road and interchange in the vicinity of Wemple Road would be expected to lower traffic demand on the northern section of US 9W and NY 144.

- A new NYS Thruway interchange in the vicinity of Wemple Road will make the NYS Thruway a more attractive route for travel to/from Glenmont and Delmar, especially for neighborhoods and businesses along the Feura Bush Road and Elsmere Avenue corridors. The model shows that traffic will increase on Feura Bush and Wemple Roads.

- To a lesser degree, access to South Bethlehem via the NYS Thruway will improve as well, shifting traffic to the southern portion of US 9W.

- Trucks currently using Maple Avenue are primarily oriented to South Bethlehem and the CSX rail yard. Making this new road the truck route will shift freight traffic to a more direct route. Based on the information available to the study team, vehicle miles traveled (VMT) will decrease by about 11 percent from current travel conditions. Vehicle hours traveled (VHT) would

decrease by about 50 percent. Decreasing VMT and VHT will lower freight operating costs in the corridor.

The new road and interchange proposed to address the environmental justice issues at the Ezra Prentice Homes would be located 3.2 miles south of the existing Thruway interchange #23. The new road connecting the new interchange with the US 9W and Route 144 and the adjacent Port expansion parcels would be approximately 11,375 feet in length and constructed to NYS Highway specifications. The new interchange would have a layout, architecture and construction costs similar to that of Thruway interchange #18 at New Paltz.

Both the new road and the new interchange could be constructed on portions of five separate parcels of real property identified below. Two of the parcels are owned by private entities, Glenmont Development Associates and Beacon Heights LLC. Beacon Heights LLC. is believed to be associated with Beacon Harbor LLC. who is believed to be the owner of the two parcels slated for development during the expansion of the Port of Albany. The other three parcels are owned or controlled by public utilities or authorities. Two of the three are utility corridor owned or controlled by Niagara Mohawk Power Corp. and the other is already owned by the New York Thruway Authority.

Additional specifics regarding the parcels identified for sighting of the new road and new Thruway interchange are provide ion the table below:

CITYTOWN_N	LOC_STREET	MARKE VALUE	ACRES	PRIMARY OWNER	MAIL_ADDR	PO_BOX	MAIL_CITY	STATE	MAIL_ZIP	SWIS_PRINT
Bethlehem	River Rd	$146,526.00	18.4	Niagara Mohawk Power Corp	300 Erie Boulevard Wes		Syracuse	NY	13202	01220098.00-2-10.21
Bethlehem	River Rd	$1,253,263.00	91.5	Beacon Heights LLC		932	Latham	NY	12110	01220098.00-2-10.22
Bethlehem	Land	$371,368.00	0.01	Niagara Mohawk Power Corp	300 Erie Boulevard Wes		Syracuse	NY	13202	01220097.00-3-1
Bethlehem	Route 9W	$91,789.00	88	Glenmont Development Assoc	560 Route 9W		Glenmont	NY	12077	01220097.00-2-18.1
Bethlehem	Thruway	NA	31.7	New York State Thruway Auth	200 Southern Blvd	189	Albany	NY	12201	NA

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Friday, September 13, 2019 8:58 PM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; jbianchi@mjels.com; Patrick Jordan; Richard Hendrick; Megan Daly; Elizabeth Staubach
Subject: Fwd: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)- Rescheduled Public Hearing on Completed DGEIS

Sent from my iPhone

Begin forwarded message:

From: Edith Carson-Supino - NOAA Federal <edith.carson-supino@noaa.gov>
Date: September 13, 2019 at 8:18:09 PM EDT
To: rleslie@townofbethlehem.org
Cc: Karen Greene - NOAA Federal <karen.greene@noaa.gov>
Subject: Re: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)- Rescheduled Public Hearing on Completed DGEIS

D
ear Mr. Leslie:

We received your email on August 15, 2019, regarding the proposed Port of Albany Expansion Project located along the Hudson River. We offer the following comments.

Endangered Species Act

Atlantic Sturgeon

Atlantic sturgeon are present in the waters of the Hudson River and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPSs) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Transient adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area to opportunistically forage. Depending on the time of year and the bottom substrate in the area, the project site could be in Atlantic sturgeon spawning habitat and early life stages could be present. Atlantic sturgeon prefer to spawn in freshwater and on hard bottom substrate. Spawning occurs from April 15 to August 31. Eggs and yolk-sac larvae could be present from April 15 to September 30. Post yolk-sac larvae could be present from April 15 to October 31. Young-of-the-year and juvenile Atlantic sturgeon could also be present in the project area.

On August 17, 2017, NOAA Fisheries published a final rule designating critical habitat for the Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon (82 FR 39160). The effective date of the rule was September 18, 2017. The action you have proposed will occur in an area that is designated as critical habitat.

Shortnose Sturgeon

Shortnose sturgeon are present in the waters of the Hudson River and could occur in their adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. Transient juvenile and adult individuals could occur in the proposed project area to opportunistically forage. Depending on the time of year and the bottom substrate in the area, the project site could be in shortnose sturgeon spawning habitat and early life stages could be present. Shortnose sturgeon prefer to spawn in freshwater and on hard bottom substrate. Spawning occurs from March 15 to May 15. Eggs and yolk-sac larvae could be present from March 15 to June 15. Post yolk-sac larvae could be present from March 15 to July 15. Young-of-the-year and juvenile shortnose sturgeon could also be present in the project area.

As project details develop, we recommend you consider the following effects of the project on sturgeon:

- For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work.
- For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
- Consider the related effects to water quality if any outfalls are built (i.e., will the standards still be met, will the effluent volume change, and will there be any effects to the species).
- For pile driving or other activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon.

Organism	**Injury**	**Behavioral Modification**
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS

Depending on the amount and duration of work that takes place in the water, listed species of sturgeon and designated critical habitat may occur within the vicinity of your proposed project. The federal action agency will be responsible for determining whether the proposed action may affect listed species. If they determine that the proposed action may affect a listed species, they should submit their determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, NMFS, Greater Atlantic Regional Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 or nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See - http://www.greateratlantic.fisheries.noaa.gov/section7. After receiving a complete, accurate comprehensive request for consultation, in accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact me (978-282-8490; Edith.Carson-Supino@noaa.gov).

Magnuson-Stevens Fishery Conservation and Management Act - Essential Fish Habitat

The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with us on any action or proposed action authorized, funded, or undertaken, by such agency that may adversely affect essential fish habitat (EFH) identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905. The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. The project area has not been designated as Essential Fish Habitat for an federally managed species.

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated EFH.

The project area identified in the DGEIS has not been designated as EFH for any federally managed species. The area does provide habitat for other NOAA trust resources covered by the FWCA including American shad, alewife, blueback herring and striped bass. In addition, wetlands, submerged aquatic vegetation and shallow water habitat provide a wide range of ecological services for a wide variety of fish and wildlife. The Clean Water Act Section 404 (b)(1) Guidelines required that impacts to these aquatic habitat be avoided and minimized to the maximum extent practicable. Compensatory mitigation should then be provided for all unavoidable impacts.

If this project is authorized, funded or undertaken by a federal agency, the lead federal agency will be required to consult with us under authorities listed above. If you have any questions regarding these comments, please contact Karen Greene (732-872-3023; Karen.Greene@noaa.gov).

Thank you,

Edith

Edith Carson-Supino, M.Sc.
Section 7 Fish Biologist
NOAA Fisheries
U.S. Department of Commerce
Greater Atlantic Regional Fisheries Office
Phone: 978-282-8490
edith.carson-supino@noaa.gov

For ESA Section 7 guidance please see:
https://www.greateratlantic.fisheries.noaa.gov/section7

---------- Forwarded message ---------
From: **Elizabeth Staubach** <estaubach@townofbethlehem.org>
Date: Thu, Aug 15, 2019 at 1:35 PM
Subject: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)- Rescheduled Public Hearing on Completed DGEIS
To: Elizabeth Staubach <estaubach@townofbethlehem.org>
Cc: Ashley A. Erdmann <aerdmann@mjinc.com>, Robert Leslie <rleslie@townofbethlehem.org>, Steve Boisvert <sboisvert@mjinc.com>

Good afternoon,

On August 14th 2019 the Town of Bethlehem Planning Board adopted a resolution **rescheduling the August 20th, 2019 Public Hearing on the Albany Port District Commission Industrial Park Project (Port of Albany Expansion) Completed DGEIS to September 3rd, 2019 at 6:00pm in Bethlehem Town Hall (445 Delaware Avenue, Delmar).** This public hearing was rescheduled to ensure compliance with the notice provisions for public hearings under SEQRA at 6 NYCRR Part 617.9(a)(4)(ii). **The public comment period on the Draft GEIS has been extended to 09/14/2019.**

Attached please find the SEQR Notice of Completion and Public Hearing Form and Town of Bethlehem Resolution rescheduling the Public Hearing and extending the Public Comment Period. The full DGEIS document can be found here.

Questions and written comments related to the project can be directed to Robert Leslie, Director of Planning at rleslie@townofbethlehem.org.

Sincerely,

Liz Staubach

Elizabeth Staubach

Economic Development Coordinator

Town of Bethlehem IDA / DEDP

445 Delaware Avenue

Delmar, New York 12054

518-439-4955 x 1189

estaubach@townofbethlehem.org

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Saturday, September 14, 2019 10:45 AM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Elizabeth Staubach; Megan Daly; Richard Hendrick; Patrick Jordan; Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; jbianchi@mjels.com
Subject: Fwd: Port Comments

Ashley, please see comments from Planning Board member Gianna Aiezza.

Sent from my iPhone

Begin forwarded message:

> **From:** Gianna Aiezza <gaiezza@townofbethlehem.org>
> **Date:** September 13, 2019 at 11:27:30 PM EDT
> **To:** Robert Leslie <rleslie@townofbethlehem.org>
> **Cc:** Planning Board <PlanningBoard@townofbethlehem.org>
> **Subject: Port Comments**
>
> Hi Rob -
>
> I gave the majority of my comments at the public hearing. I tried to summarize below and I had a few additional comments. Thank you
>
> Air Quality - This section did not address potential VOC emissions, potential combustion emissions (NOx, etc) or PM. In addition, it did not discuss the DEC's air quality study as requested - it said there was a study that showed no impacts but that is not accurate. There were black carbon and PM measurements related to truck traffic and this should be discussed in relation to the anticipated increase in trucks. It showed that Ezra Prentice had emissions similar to a city, yes, but it was not proportionate to the size of the city. They definitely had impacts related to traffic.
>
> The potential for odors should be discussed and a threshold identified for odor. Emissions from the potential tenant would be handled under an air permit with DEC with the exception of mobile sources and odors. Mobile sources are not permitted and odor is not necessarily covered in an air permit.
>
> Section 3.6.3 - It cannot be assumed that the emissions increases from trucks are considered to be low if a trucking facility was to be the tenant. A threshold needs to be identified for this section. Also, under Air Quality it says odors are unlikely, but this cannot be known if a tenant is unknown. A threshold for potential odor needs to be identified. What if an asphalt storage facility became the tenant? It would potentially meet the other thresholds but could create an odor problem.
>
> The thresholds for each section need to be added to the DGEIS so it is clear what they are. I know there was a table at the presentation but it needs to be incorporated into the Report.

I know I asked them to add who would be response for the fly ash remediation and to to discuss 6 NYCRR Part 375, but also on Page 3-6, it says construction would be completed under a Site Management Plan. This is not correct, construction would be completed through a Work Plan approved by DEC. A SMP is after the site is completed for future construction or maintenance once the site is "closed" with DEC. The wording in this section should be changed to say it will be completed under an approved work plan with DEC.

Section 3.4 - When discussing and evaluating projected seal level rise, the DGEIS should use the medium projection for analysis, not the low projection. There are five levels of projection - low, low-medium, medium, high-medium and high. The medium projection is the amount of sea-level rise that is about as likely as not and is a more appropriate projection to be using for analysis than the low projection - it is not conservative enough to use the low projection. Also, is the discussion on the impact to the flood plain taking into consideration the 1' cover that would be required for the fly ash? This should be clarified and should be taken into account if it is not.

Section 3.7

- Page 3-49 in the traffic section said it is assumed that no trucks would use Glenmont Road. This assumption is not realistic, as the Cumberland Farms is in this direction and it is likely that some trucks would go this way for fuel and the amenities. From Cumberland Farms it is easy to get back on the highway - both 787 and the Thruway. This is the closest store of this kind and there is a high volume of trucks there at any given time of day. This location was a former Tuck Stop and it is unrealistic to say no trucks will go this way.
- Please add a map showing the roads being discussed to this section of the Report. It is helpful to have in this section.
- Signal Warrant Analysis - if Glenmont Rd & 144 meets the criteria for a signal, it should be considered regardless of the gap analysis. Especially considering that it is unrealistic to think no trucks will use this route given the access to Cumberland Farms and the truck fueling station located there.
- Please address my comments on the rail I made at the public hearing and address my comment that this is not necessarily the most conservative scenario for truck traffic. A smaller building with a trucking facility and truck storage would be a worse scenario for truck traffic.
- As discussed at the public hearing, please revise the Report to say they will require tucks go through the Port and how they will do that including how they will check compliance with the requirement. Also discuss the Port road upgrades that will make that feasible.
- Add a discussion of the traffic study conducted by CDTC in May 2018 and discuss relevant information from that study in this section where appropriate.

As discussed at the public hearing, I requested they add a discussion of the possible tax implications of different type of lease agreements. They need to discuss all the possible tax outcomes and how each affect the financial benefit to the Town.

As discussed at the public hearing, please address the location of Ezra Prentice and the potential need to follow the DEC's Environmental Justice Policy.

At the public hearing I think I had additional comments. I captured what I could here but I am not sure I got everything. I assume McFarland will summarize our comments and will provide specific responses?

Thank you

Gianna Aiezza, PE
Planning Board Member

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Saturday, September 14, 2019 10:48 AM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Elizabeth Staubach; Jaclyn Hakes - M.J. Engineering and Land Surveying, P.C.; jbianchi@mjels.com; Megan Daly; Patrick Jordan; Richard Hendrick
Subject: Fwd: Port Comments

Ashley, please see comments from Planning Board member Brian Gyory.

Sent from my iPhone

Begin forwarded message:

> **From:** Brian Gyory <bgyory@townofbethlehem.org>
> **Date:** September 14, 2019 at 7:35:50 AM EDT
> **To:** Robert Leslie <rleslie@townofbethlehem.org>
> **Cc:** Scott Lewendon <slewendon@townofbethlehem.org>, John Smolinsky <jsmolinsky@townofbethlehem.org>, Gianna Aiezza <gaiezza@townofbethlehem.org>, Mark Sweeney <msweeney@townofbethlehem.org>
> **Subject: Re: Port Comments**
>
> Rob,
>
> Here is a summary of my comments from September 3, I'm not sure if these officially made it into the record.
>
> 1. Green Infrastructure-It is mentioned that the site is contaminated with Fly Ash. Please elaborate on factors/considerations for stormwater management on site (no infiltration, just filtration)
> 2.Traffic-How is the "intended route" followed. Is this the current way the port is working with tenants. Please provide additional details on current traffic from port and how this will affect the surrounding neighborhoods (including Ezra Prentice)
> 3. Traffic-new intersections should be looked at to the same level as original intersections identified in draft scoping document. All ramps/portions of exit 23 as well as intersection of Wemple and River Road (144)
> 4. Traffic-Bike network. How does this project impact the Albany South End Bikeway connector which is set to be constructed soon (along the same route as trucks are supposed to take for this project)
> 5. Emergency Services-Can the fire department handle a 85' building with current equipment?
>
> Best,
>
> Brian

attachments.
****
****

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

ANDREW M. CUOMO
Governor

MARIE THERESE DOMINGUEZ
Commissioner

PATRICK S. BARNES, P.E.
Regional Director

September 14, 2019

Mr. Robert Leslie, AICP
Director of Planning
Town of Bethlehem
445 Delaware Ave
Delmar, NY 12054

Re: SEQRA: 2019.1-1.003
Notice of Intent to Declare Lead Agency
Town of Bethlehem, Albany County
Albany Port District Industrial Park Extension

Dear Mr. Leslie:

The New York State Department of Transportation (NYSDOT) has reviewed the subject SEQR documentation received per the correspondence dated August 6, 2019 and offers the following:

1. The NYSDOT acknowledges that the Town of Bethlehem will be designated as the Lead Agency for this environmental review. NYSDOT believes we are an involved agency under SEQR given that access to the proposed extension is provided by State Route 32.

2. The NYSDOT recommends an expanded discussion regarding existing Environmental Justice concerns along Route 32 (South Pearl Street) corridor north of the proposed expansion.

3. A NYSDOT Highway Work Permit would be required for any work proposed within the State Row-of-Way.

4. With respect to the Region 1-Traffic comments on the Traffic Study provided and including our crash analysis of the Route 32/144 Intersection:

a) Route 32 @ Route 144: recommendation is to install a traffic signal

b). Signal warrant analysis in Appendix D, page 313 indicates Warrant 1B is met

c) Warrant 1B 70% volume is to be used, *"...if the posted or statutory speed limit or 85% speed on the major street exceeds 40 MPH, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000..."* **Neither of these conditions apply.**

d). The "Should Signal Be Considered" row in the "Warrants Met" table on page 313 is shown as NO.

e). Warrant 2: Four Hour Vehicular Volume, Figure 4C-1 on page 315 plots all 4 points below "2 OR MORE LANES & 1 LANE", yet concludes 3 out of the four hours meet warrant 2. No hours meet warrant 2.

f). Warrant 3: All three items in paragraph A are not met, therefore this warrant is not met. Also, paragraph A2: volume on minor street approach exceeds 150 vph for two moving lanes. None of the minor street volumes shown in the traffic volume data table on page 313 are over 150.

g). Crash analysis was not completed.

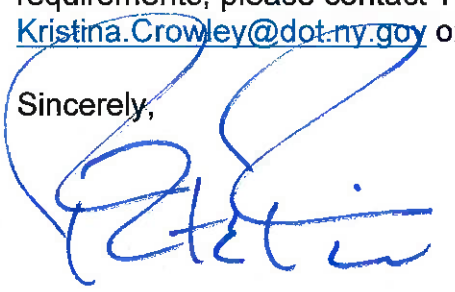
h). The Department evaluated the most recently available 5 years of crash data from the intersection. Warrant 7, Crash Experience is not met.

i). Level-of-service is not a warrant for traffic signals

The Department does not concur with the consultant's recommendation for the installation of a traffic signal at the intersection of Route 32 and Route 144.

If you have any questions pertaining to the Highway Work Permit process or requirements, please contact Tina Crowley, Regional Permit Engineer, at Kristina.Crowley@dot.ny.gov or (518) 457-6645.

Sincerely,



Robert E. Rice Jr, P.E.
Regional Program and Planning Manager

cc: Tina Crowley, Region 1 Traffic
John Izzo, Resident Engineer, Albany County
Tanya Thorne, Region 1 Design

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

LETITIA JAMES
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

September 16, 2019

Town of Bethlehem Planning Board
c/o Robert Leslie, Director of Planning
Town of Bethlehem
445 Delaware Avenue
Delmar, NY 12054

Re: Port of Albany Expansion Project – Draft Generic Environmental Impact Statement

Dear Mr. Leslie and Members of the Planning Board:

It has come to our attention that the Town of Bethlehem Planning Board is currently accepting comments on a Draft Generic Environmental Impact Statement ("DGEIS") for the proposed Port of Albany Expansion Project ("Project"). In May 2019, prior to the release of this DGEIS, residents of the nearby Ezra Prentice Homes Community, a low-income and predominately minority-occupied public housing project located about one mile north of the Project site, asked our office for assistance in addressing their concerns over air quality, public health, and quality-of-life impacts from existing operations and traffic related to the Port and nearby facilities. In light of this request for assistance from the Ezra Prentice community, and in the interest of ensuring that concerns from members of all nearby communities are appropriately considered, our office reviewed the DGEIS in order to understand whether the Project might adversely affect nearby low-income communities of color. Our office also attended the Town's public hearing for the Project held on September 3. Based on those actions we bring the following items to your attention and submit the attached comments on the DGEIS for your consideration.

1. The Ezra Prentice Homes and nearby South End residential communities would be disproportionately impacted by the Project

As proposed, the Project has the potential to exacerbate air pollution, health, and quality of life impacts at Ezra Prentice and nearby communities by significantly increasing truck and car traffic along South Pearl Street and by increasing adjacent rail operations. However, the DGEIS improperly discounts those impacts by largely ignoring local air quality and public health conditions at Ezra Prentice. A recent health survey of Ezra Prentice residents disclosed very

high asthma rates – in particular for children -when compared to the national asthma rates. The New York State Department of Environmental Conservation ("DEC") -- Albany South End Community Air Quality Study has preliminarily identified local truck traffic as accounting for a disproportionate share of traffic related air pollution at Ezra Prentice. The Project as proposed would increase the number of trucks and cars traveling on South Pearl Street, and increase the number of locomotives and/or rail cars traveling through the Port of Albany. Those sources emit particulate matter emissions – which can cause or exacerbate asthma and other respiratory problems, and benzene – a hazardous air pollutant, and are a source of noise to nearby residents. These adverse impacts to Ezra Prentice residents from the Project would be disproportionate when compared to impacts to other affected areas.

2. The Planning Board should require the project sponsor to perform an environmental justice analysis under SEQRA

It does not appear that the project sponsor or the Planning Board have made affirmative efforts to secure the involvement or participation of the approximately 400 residents of the Ezra Prentice community, either at the conceptual Project development phase or in developing the DGEIS. In addition, no analysis of the disproportionate impacts of the Project on Ezra Prentice or other potential environmental justice areas are included in the DGEIS. To cure these omissions, the Attorney General's Office requests that the Planning Board require the Albany Port District Commission to implement a public participation plan to include Ezra Prentice and other nearby communities within the decision-making process, and that the Commission prepare a Supplemental Generic Draft Environmental Impact Statement (SGEIS), subject to further public comment, to address environmental justice concerns. That supplemental review should incorporate the results of the DEC's ongoing air quality study of Albany's South End as well as any health-related surveys or studies of the Ezra Prentice community. As discussed further in our attached comments, DEC's Environmental Justice Policy, entitled *Commissioner Policy 29, Environmental Justice and Permitting* (March 2003) provides guidance for incorporating environmental justice concerns into SEQRA review and DEC's permit process that relies on that environmental impact review.

3. The SGEIS should include alternatives to mitigate adverse environmental impacts on Ezra Prentice and nearby South End communities

Due to the community's location adjacent to the Port and to South Pearl Street, and its close proximity to Interstate 787, the residents of Ezra Prentice already suffer from disproportionate environmental, health and quality of life injuries. Unfortunately, the Project as proposed would only make matters worse. The Attorney General's Office requests that the Planning Board identify in its supplemental analysis alternatives to mitigate impacts from the Project to Ezra Prentice residents. These alternatives should include an analysis of truck routing to the Project site that would avoid South Pearl Street, as well as an analysis of constructing a new highway interchange and road from the Thruway to serve the Port. Additionally, an indoor air quality analysis of Ezra Prentice homes might identify opportunities to mitigate infiltration of outdoor air pollutant into interior living quarters by weatherizing or providing enhanced filtration.

In conclusion, we thank you in advance for your consideration of our concerns on the DGEIS. We acknowledge the important local job and economic development opportunity that the Project presents to the community. In order to provide additional meaningful input and feedback, we request that you please add the New York State Office of the Attorney General as an interested agency for the Project, and include our office on all future correspondence about the Project. Our full comments on the DGEIS are attached. If you would like to discuss this matter further, please contact Assistant Attorney General Philip Bein at 212-416-8797.

s/s *Lemuel M. Srolovic*
Lemuel M. Srolovic
Bureau Chief
Environmental Protection Bureau

cc:
Town of Bethlehem Planning Board
Albany Port District Commission
City of Albany
Albany County
NYSDEC
NYSDOH

Comments of the New York State Attorney General's Office on the Proposed Port of Albany Expansion Project

Bethlehem Town Planning Board
September 16, 2019

The New York Attorney General's Office is pleased to submit these comments on the Draft Generic Environmental Impact Statement ("DGEIS") for the Albany Port District Commission Port of Albany Expansion Project ("Project") pursuant to the State Environmental Quality Review Act, ECL Article 8 ("SEQRA"). The purpose of these comments is to ensure that important environmental justice concerns relating to the Ezra Prentice Homes ("Ezra Prentice") and nearby South End communities are addressed in the SEQRA process.[1]

Summary

Ezra Prentice is a low-income public housing project in Albany's South End, consisting of 16 buildings, 179 units, and over 400 predominantly minority residents, many of whom are children.[2] It is a potential environmental justice area because it suffers from disproportionate adverse environmental impacts when compared to other communities. Six of its buildings, along with a children's playground, front directly on South Pearl Street, a busy thoroughfare noted for its heavy automobile and truck traffic. The Ezra Prentice community is exposed to noise and air pollution not only from traffic along South Pearl Street, but also from traffic along Interstate 787, which is located between 200 and 850 feet of Ezra Prentice, from the adjacent rail yard, an Albany County wastewater treatment plant, and from a nearby bulk petroleum storage and marine transfer facility. *See* Figure 1, depicting Ezra Prentice and its surroundings, and Figure 2a, depicting a large truck driving past the playground. The rail yard directly abuts several of the homes, and its operations have the potential for noise and quality of life disruptions if its use is expanded by the Project. *See* Figure 2b, depicting a railroad train parked only yards from Ezra Prentice. Along with Ezra Prentice, there are other residential, commercial, community and health care facilities either on South Pearl Street or nearby in the South End with varying degrees of exposure to air emissions, noise, and other disturbances from adjacent industrial activities.

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[1] Pursuant to her authority under Executive Law § 63[1], the New York Attorney General has standing to enforce SEQRA. *Abrams v. Love Canal Area Revitalization Agency*, 134 A.D.2d 885 (4th Dep't 1987).

[2] A recent survey found that African Americans accounted for about 75 percent of Ezra Prentice's population. Stacy Pettigrew, Ph.D., *Ezra Prentice Homes Health Project: Preliminary Observations* at 2 (May 14, 2019) ("*Health Survey*").

As discussed below, the Project has the potential to exacerbate air pollution and quality of life problems at Ezra Prentice by increasing car and truck traffic along South Pearl Street and increasing adjacent rail operations. Moreover, as the Albany Port District Commission's analysis makes clear, these adverse impacts are disproportionate when compared to impacts to other affected areas. Nevertheless, as of yet, affirmative efforts apparently have not been made to include Ezra Prentice as a participant in the development and review of the Project. And the DGEIS does not include any environmental justice analysis of the Project's effects on Ezra Prentice or consideration of alternatives to mitigate or eliminate those impacts.

To cure these omissions, the Attorney General's Office requests that the Planning Board implement a public participation plan to include Ezra Prentice within the decision-making process, and require the Project sponsor to prepare a Supplemental Generic Draft Environmental Impact Statement, subject to further public comment, to address environmental justice concerns. That supplemental review should incorporate the results of the State Department of Environmental Conservation's ("DEC's") ongoing air quality study of Albany's South End. It should also consider alternatives to mitigate or eliminate Ezra Prentice's exposure to Project-related air emissions and quality of life impacts. Alternatives to examine should include (1) requiring that vehicles approaching from the North bypass Ezra Prentice by travelling directly through the Port of Albany's northern access road to and from the Project site or by traveling along the New York Thruway, using a proposed new access point that could be constructed between exits 22 and 23, and (2) identifying opportunities to mitigate the infiltration of outdoor air pollution and improve the indoor air quality at Ezra Prentice.

The Project

The Albany Port District Commission has proposed to expand the Port of Albany by acquiring and developing about 82 acres of land consisting of Beacon Island and an access parcel in the Town of Bethlehem at the Town's northern boundary with the City of Albany. Draft Generic Environmental Impact Statement ("DGEIS") at 2-1. As part of the Project, a railway/motor vehicle bridge over the Normans Kill would be constructed to facilitate access to the expanded Port area. Figure 1 shows the location of the Port expansion parcels in relation to the existing Port facilities. The Project is anticipated to generate tax revenues of between $4.65 million to $14.2 million (presumably on an annual basis) depending on the extent of buildout. Most of those revenues are to be realized by Albany County. The Project is expected to generate tax revenues of between $800,000 and $4.2 million for the Town of Bethlehem. *Id.* at 1-2 to 1-3. The potential economic impact of the Project at maximum buildout is about $295 million dollars, including up to 1,670 new jobs and a one-time construction impact of between $48.1 million and $113 million to the local economy. *Id.*

The DGEIS for the Project identifies five conceptual layouts for the expansion of the Port. Environmental impacts were assessed based on "Concept A," which represents the maximum amount of development permitted under current zoning law. It includes an approximately 1.13 million square foot two-story industrial use facility with associated access roads, employee parking, trailer parking, refurbished rail access over the Normans Kill and a bulkhead wharf along the Hudson River. DGEIS 1-1. Concept A would allow for the following uses: warehouse, manufacturing, assembly, industrial park, distribution, packaging, business, and commercial storage. *Id.* The four other concepts involve smaller warehouse capacity or use of the site for light fabrication or manufacturing of offshore wind products. *Id.* at 1-8.

Truck, Rail, and Automobile Traffic Affecting Ezra Prentice

All of the conceptual layouts would provide for movement of raw materials and products by rail along the rail line that abuts Ezra Prentice and by truck along South Pearl Street (Route 32) that passes through the middle of Ezra Prentice. Although a new access road is proposed to connect the Project site to Route 144, it is not to be used by trucks in order to "further discourage trucks from utilizing Glenmont Road and other primarily residential side roads to the south and west" in Bethlehem. DGEIS at 3-49. This restriction would therefore require all trucks to access the Project at either the southern Port entrance on South Port Road or at the Port's northern entrance.

The DGEIS truck impact analysis estimates that at least 40 percent of trucks traveling from the North will enter the Project site via the southern entrance, which would necessitate travelling on South Pearl Street though Ezra Prentice. DGEIS at 3-50. However, the DGEIS does not identify the Ezra Prentice community in this analysis or attempt to mitigate or restrict truck traffic away from this residential community. *See* Figure 3, depicting Ezra Prentice in relation to access roads and the southern and northern entrances to the Port. No explanation is given as to why the northern Port entrance should not be required to avoid truck traffic through the residential Ezra Prentice area as well as residential areas in Bethlehem. As with trucks, under the Project increased car traffic attributable to commuting by employees from the North (Interstates 90 and 787) would pass through Ezra Prentice before entering the Project site (through a newly constructed road off of Route 144). The vast majority of employees are expected to commute to work by car. DGEIS App. I (Traffic Impact Study) at I-39.

The DGEIS acknowledges a disproportionate burden to Ezra Prentice from additional truck traffic on the portion of South Pearl Street that bisects Ezra Prentice. It estimates a 25.4 to 27.1 percent increase in mid-day peak hour truck traffic on South Pearl Street passing through Ezra Prentice. That amounts to an

increase of between 25 and 26 trucks during peak hours. DGEIS 3-50. To better appreciate the quality of life implications of truck traffic through Ezra Prentice, it is worthy to note again the presence of a playground just a few feet from South Pearl Street where large trucks drive by. *See* Figure 2a.[3]

The Lack of an Environmental Justice Analysis

On September 3, 2019, the Bethlehem Town Planning Board, lead agency under SEQRA, held a public hearing in Bethlehem on the Project's Draft Generic Environmental Impact Statement. It does not appear that any affirmative efforts were made to secure the involvement or participation of Ezra Prentice or other nearby South End communities in the hearing or in the project development phase that preceded it. No analysis of the disproportionate impacts of the Project on Ezra Prentice or other potential environmental justice areas are included in the DGEIS.

The DGEIS Should be Supplemented with an Environmental Justice Analysis Under SEQRA Using Guidance from DEC

SEQRA applies to government "actions," defined to include "activities involving the issuance to a person of a lease, permit, license, certificate or other entitlement for use or permission to act by one or more agencies." ECL *§* 8-0105(4). Initially, the SEQRA "lead agency" must decide whether an environmental impact statement ("EIS") is needed. ECL § 8-0109(4). "Type I" actions are those "'more likely to require the preparation of an EIS," and are listed in 6 NYCRR § 617.4. The Port of Albany Expansion Project is a Type I project because it involves physical alteration of more than 10 acres of land and more than 100,000 square feet of gross floor area in a town having a population of 150,000 persons or less. 6 NYCRR § 617.4(b)(6). In light of the project's Type I status, the Town of Bethlehem Planning Board, as lead agency for SEQRA review, decided to prepare a DGEIS.

Through SEQRA,"[t]he State has made protection of the environment one of its foremost policy concerns." *E.F.S. Ventures Corp. v. Foster,* 71N.Y.2d359, 371 (1988) (citation omitted). "SEQRA's fundamental policy is to inject environmental considerations directly into governmental decision-making; thus, the statute mandates that 'social, economic, and environmental factors shall be considered together in reaching decisions on proposed activities.'" *Coca-Cola Bottling Co. of New York, Inc. v. Bd. of Estimate of the City of New York,* 72 N.Y.2d 674 (1988) (citations omitted). Under SEQRA, the "environment" is defined broadly to include "existing patterns of population concentration, distribution or growth, existing

[3] Because proximity to areas of traffic pollution causes or exacerbates asthma, the Los Angeles County Health Department recommends that residences and parks be located no closer than 500 feet from a freeway. *County of Los Angeles Public Health Air Quality Recommendations for Local Jurisdictions* (rev. Jan. 22, 2013). A substantial portion of Ezra Prentice is within 500 feet of Interstate 787.

community character, and human health." 6 NYCRR § 617.2(l). Accordingly, socioeconomic impacts, including a project's impacts on low income and minority populations, should be taken into account under SEQRA. *See Matter of Chinese Staff and Workers Ass'n v. City of New York,* 68 N.Y.2d 359, 362-67 (1986).

DEC is an involved agency in SEQRA review of the Project because it has approval and regulatory authority over the Project under Article 15 of the ECL, Section 401 Clean Water Act Water Quality Certification, Stormwater MS4 and Stormwater Construction General Permits, individual ECL Article 17 wastewater discharge permit, Sediment Sampling and Analysis Plan, and Site Management Plan. DGEIS at 1-9 to 1-10. DEC's Environmental Justice Policy, entitled *Commissioner Policy 29, Environmental Justice and Permitting* (March 2003) ("CP-29"), provides guidance for incorporating environmental justice concerns into its permit review process and SEQRA review. Because the impact of a project on Environmental Justice is an appropriate part of environmental review under SEQRA, and given DEC's important role as an involved agency in the Project with jurisdiction over many permits, CP-29 provides helpful guidance for environmental justice review of the Project.

CP-29 addresses historic problems faced by environmental justice communities in participating in the permit review process: their lack of meaningful public participation, the unavailability or inaccessibility of certain relevant information to the public early in the permit process; and the failure of the permit process to address disproportionate adverse environmental impacts on minority and low-income communities. In order to address these concerns, CP-29 establishes "the general policy of DEC to promote environmental justice and incorporate measures for achieving environmental justice into its programs, policies, regulations, legislative proposals and activities." CP-29 at 2.

Environmental justice is defined as "the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies." *Id*. at 3.

Environmental justice review starts with a "preliminary screen" to determine whether "the proposed action is in or near a potential environmental justice area(s) and determine whether potential adverse environmental impacts related to the proposed action are likely to affect" such areas. *Id.* at 7. DEC has already determined that the Ezra Prentice Homes and nearby areas are "potential

environmental justice" communities under CP29. This designation is indicated by the purple area that encompasses Ezra Prentice in Figures 1 and 3 below.
A potential environmental justice area is defined to mean "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences" of a project. *Id.* at 4. U.S. Census data are used for identifying these areas. A "minority population" is a population recognized by the U.S. Census Bureau as "Hispanic, African-American or Black, Asian and Pacific Islander or American Indian." *Id.* For an urban area, a "minority community" means a census block group or groups with a 51.1 percent or more minority population. *Id.* at 3. A "low-income population" means a population having an annual income less than the poverty level, as established by the U.S. Census. *Id.* A "low income community" is a census block group or groups having a low income population equal or greater than 23.59 percent of the total population, as demonstrated by U.S. Census data. *Id.*

CP-29 has both procedural and substantive aspects. Procedurally, it requires enhanced public participation for actions affecting a potential environmental justice area. The policy provides that "[w]here a potential environmental justice area is identified by the preliminary screen, the applicant shall submit a written public participation plan as part of its complete application." *Id.* at 8. The policy requires that, at a minimum, the public participation plan identify stakeholders, including nearby residents, local elected officials, community-based organizations, and community residents; provide for distribution and posting of written information on the proposed action and permit review process; provide for public information meetings to keep the public informed about the proposed action and permit review process; and establish easily accessible document repositories in or near the potential environmental justice area to make available pertinent information. *Id.* The applicant is also required to submit a report summarizing progress on implementing the plan, all substantive concerns raised, all resolved and outstanding issues, the components of the plan yet to be implemented, and an expected time line for completing the plan. Upon completion of the plan, the applicant must submit a written certification that is has complied with the plan, including an updated status report. *Id.*

In performing environmental justice review, consideration of existing sources of pollution in the "airshed, watershed, or wasteshed" of the project should take place. *Id.* at 8. As with other elements of environmental review, if it is determined that there will be no adverse environmental impacts from an environmental justice perspective, an EIS would not be required. If significant adverse impacts cannot be ruled out, then an EIS addressing environmental justice should be prepared. A draft EIS should "describe the existing environmental burden on the potential environmental justice area and evaluate the additional burden of any significant adverse environmental impact on the potential environmental justice area." *Id.* at 9.

The Project Will Cause Disproportionate Adverse Environmental Impacts to Ezra Prentice and Nearby Communities

Ezra Prentice faces environmental and human health challenges. It is located in the midst of significant air pollution sources - traffic from South Pearl Street and Interstate 787, the railyard literally in its back yard, and its proximity to petroleum storage tank farms, a wastewater treatment plant, and a marine transfer facility across the tracks. Preliminary results from a recent survey of residents found very high asthma rates, 30 percent for children under 12, 46 percent for children between 12 and 18, and 33 percent for adults. *Health Survey* at 3. In comparison, the national rate of asthma for African American adults and children has been estimated at about 11 percent and 14 percent, respectively. The asthma rate for white adults and children are lower still, 7 and 9 percent respectively. *Id.* at 3-4. In the survey, 13 percent of Ezra Prentice residents reported suffering from other respiratory health problems, 35 percent had hypertension and 23 percent had diabetes, all well above that of nonminority communities. *Id.* at 4.

Local car and truck traffic is a significant source of air pollution at Ezra Prentice, as shown by preliminary results from DEC's South End Air Pollution Study. *South End Study Progress Update* (DEC January 10, 2018) ("*Preliminary Results*") at 5-6. The proximity of South Pearl Street and Interstate 787 contribute to air pollution as concentrations observed are characteristic of those found within 300 feet of roadways in other cities throughout the United States, indicating that motor vehicles are a major source. *Id.* at 17. Variability in emissions at Ezra Prentice correlates with traffic. *Id.* at 14. Preliminary results indicate that truck traffic appears to account for a disproportionate share of traffic related air pollution at Ezra Prentice. *Id.* at 28-32. Accordingly, the Project's increase in car and truck traffic is likely to exacerbate benzene, particulate matter, and other air pollution at Ezra Prentice, as would new operations at the railyard right next to the community. *See* Michael Rizzo *et al.*, *Cicero Rail Yard Study Final Report* (EPA Region 5 and ORD Feb. 2014) (diesel emissions at rail yard contribute to elevated pollution levels in adjacent neighborhoods). The number of trains and/or rail cars travelling through the Port of Albany past Ezra Prentice would increase, thereby adding to the noise and diesel emissions from the railyard. DGEIS at 3-54.

Additionally, concentrations of benzene in the air at the South Albany monitor are higher than at most other urban monitors in the State. Air sampling from March 2015 through December 2017 was undertaken and disclosed average concentrations of benzene at almost .7 micrograms per cubic meter in Albany's South End during 2017. *Albany South End - Benzene Results: Air Monitoring Results from NYSDEC's Air Toxics Monitoring Network* ("*Benzene Results*").[4] Preliminary results of an ongoing study by DEC show benzene in the South End at concentrations of between .12 and .30 parts per billion, which is equivalent to about

[4] https://www.dec.ny.gov/chemical/107858.html

.4 to .9 micrograms per cubic meter. *Preliminary Results* at 37. These results are more than DEC's annual guideline concentration ("AGC") of .13 micrograms per cubic meter for benzene, one of the values used by DEC to evaluate the acceptability of proposed new air pollution sources and mitigation measures, but the AGC is not an ambient air quality standard. *See Benzene Results.* The final results of the DEC's South End Air Pollution Study will inform a better understanding of the air quality in Ezra Prentice and nearby communities, and should be incorporated into the environmental review of the Project.

Benzene is a hazardous air pollutant regulated in New York under the federal Clean Air Act and Article 19 of the ECL. Benzene emissions are generated by "combustion of fuels used in passenger cars, heavy-duty trucks, marine vessels and planes. It is also released into the air when petroleum-based fuels (such as crude oil, gasoline, home heating oil) evaporate during storage or when the fuel is moved or transferred to and from storage terminal tanks, trucks, railcars and barges." *Albany South End - Benzene Results: Air Monitoring Results from NYSDEC's Air Toxics Monitoring Network*.[5] Acute exposure to benzene may cause respiratory tract irritation, along with drowsiness, headaches, eye irritation and, at high levels, unconsciousness. *Benzene EPA Fact Sheet*.[6] Chronic exposure to benzene may cause various blood disorders and leukemia. *Id.* EPA has classified benzene as a known human carcinogen for all routes of exposure. *Id.* "More than 100 studies show there is no safe level of benzene; all concentrations contribute to cancer risk." Earthea Nance, *et al., Ambient air concentrations exceeded health-based standards for fine particulate matter and benzene during the Deepwater Horizon oil spill,* 66:2 Journal of the Air & Waste Management Association (Jan. 15 2016). Combustion of gasoline and diesel fuel from the added car and truck traffic and rail operations could increase benzene emissions and associated health risks.

Particulate matter pollution can cause or exacerbate asthma and other respiratory problems. In its ongoing study, DEC has indicated that local sources, primarily diesel trucks, are responsible for large increases in particulate matter concentrations over baseline levels at Ezra Prentice. On average during weekdays, particulate matter less than 10 microns in diameter (PM_{10}) concentrations were 47 percent higher than baseline due to local traffic. *Preliminary Results* at 19. One recent study has indicated that increases in PM10 concentrations over just a few days triggers asthma attacks and increases the number of emergency room visits. Katherine A. James, *et al*., *Health Services Utilization in Asthma Exacerbations and PM_{10} Levels in Rural Colorado,* 15:8 Annals of the American Thoracic Society (Aug. 1, 2018). Accordingly, the Project has the potential to exacerbate the already significant asthma problem at Ezra Prentice.

[5] https:/www.dec.ny.gov/chemical/107858.html

[6] https:/www.epa.gov/sites/production/files/2016-09/documents/benzene.pdf.

The DGEIS improperly discounts air quality impacts by ignoring local conditions at Ezra Prentice, including the high incidence of asthma in the community, and focusing instead on DEC's Loudonville air monitoring station ten miles away that is in compliance with the National Ambient Air Quality Standards ("NAAQS"). DGEIS at 3-38. But the NAAQS do not apply to benzene emissions. and the DGEIS presents nothing to contradict the scientific evidence that increases in particulate matter emissions over a matter of a few days triggers asthma attacks and hospital admissions regardless of whether the NAAQS are met.

It should be presumed that these potential adverse impacts to Ezra Prentice are disproportionate given the already disproportionate environmental, health, and quality of life injuries suffered by that community. Under the Project as presently proposed, matters would get worse. Truck traffic from Interstates 90 and 787 north of the Project Site would obtain access to the Project site by travelling though Ezra Prentice before entering the southern entrance to the Port of Albany at South Port Road - for the express purpose of avoiding traffic in residential areas in the Town of Bethlehem, which is not an environmental justice community, thereby placing an unfair burden on Ezra Prentice. And Ezra Prentice would also bear the environmental burden of enhanced rail traffic in its back yard.

Project Alternatives to Mitigate Adverse Environmental Impacts on Ezra Prentice

Disproportionate adverse environmental impacts on Ezra Prentice can be avoided and mitigated. Instead of channeling traffic from Interstates 90 and 787 from the north through that community, the Project can require that all traffic be channeled through the northern Port entrance where trucks could be routed within the Port south to the Project site. *See* Figure 3.

Alternatively, a new Thruway interchange, Exit 23A, can be constructed that would include a road leading directly into the Project site. *See* Figure 3. This alternative can be a win-win because the Town of Bethlehem has long recognized its benefits in (1) lowering traffic demand on the northern section of US 9W and NY 144, (2) providing a more attractive route for travel to/from Glenmont and Delmar, especially for neighborhoods and businesses along the Feura Bush Road and Elsmere Avenue corridors, (3) improving access to South Bethlehem, and (4) providing a more direct route to transport freight to the CSX rail yard in Selkirk. A more detailed discussion of this alternative is found in Appendix A.

The Planning Board should also consider in its mitigation alternatives any opportunities to improve indoor air quality at Ezra Prentice. In prior meetings with the Attorney General's Office, residents of Ezra Prentice with units that front South Pearl Street described seeing soot in the interior of their residences around openings to the outside. According to EPA, infiltration can bring outside air pollutants into homes through openings, joints and cracks in walls, floors and

ceilings, and around windows and doors. A structural and indoor air quality analysis at Ezra Prentice might identify opportunities to mitigate the infiltration of any outside air pollutants into interior living quarters. Such an analysis might also identify opportunities to improve the heating, ventilation, and air conditioning systems at Ezra Prentice in order to improve indoor air quality.

Conclusion

The DGEIS should be supplemented and made available for further public comment to address the significant environmental justice concerns raised by the Albany Port Expansion Project. The process should accord with DEC's Environmental Justice Policy, CP-29, and require preparation of a Public Participation Plan to ensure that the voices from Ezra Prentice are heard. The final results of DEC's air quality study for the South End should also be incorporated to better inform the analysis. Alternatives to routing traffic through Ezra Prentice should be considered and adopted to mitigate the Project's disproportionate adverse environmental, human health, and quality of life impacts to that community.

LETITIA JAMES
Attorney General of the
State of New York

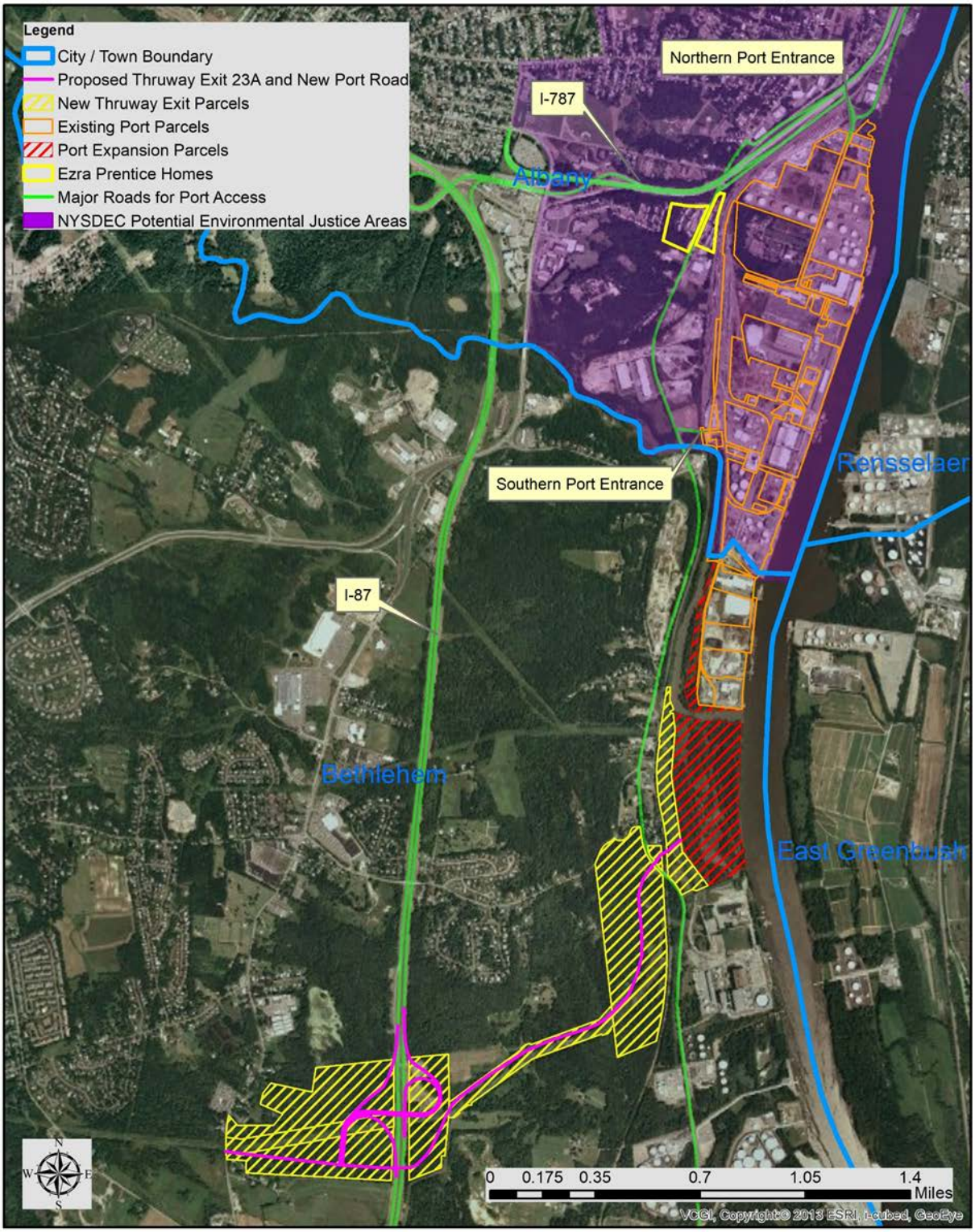
Philip Bein
Lemuel Srolovic
Assistant Attorneys General
Jeremy Magliaro
Policy Analyst
Joseph Haas
Environmental Scientist
Environmental Protection Bureau
28 Liberty Street, 19th floor
New York, New York 10007
(212) 416-8797
Philip.bein@ag.ny.gov

Figure 1: Ezra Prentice Homes and Close by Environmental Impacts

Figure 2a: A truck on South Pearl Street just a few feet from the children's playground at Ezra Prentice Homes

Figure 2b: Railroad traffic several yards from Ezra Prentice Homes

Figure 3: Ezra Prentice Homes and the Port of Albany Expansion



APPENDIX A

Alternative Proposing New Road and New York State Thruway Exit "23A"

Without either internal or external road development, the planned expansion of the Port of Albany brings with it increased truck traffic along Route 32 and Route 144. This increased traffic will affect the residence of the Ezra Prentice Homes, in a manor inconsistent with environmental justice policy.

One alternative to address this problem is to construct a new road and interchange on the New York State Thurway in the vicinity of Wemple Road, in the Town of Bethlehem. The proposed interchange and road would provide, among other benefits, a direct route between the New York State Thurway and the newly developed parcels comprising the expanded Port of Albany, thus mitigating any increase in traffic on existing roads utilized for Port access stemming from the expansion of the Port.

A new NYS Thruway interchange in the vicinity of Wemple Road has been under study for more than a decade. In December 2008 Wilber Smith Associates (WSA), on behalf of the Town of Bethlehem and the Capital District Transportation Committee (CDTC), prepared a report entitled *US 9W Corridor Transportation Planning Assessment, Advancing the Town of Bethlehem's Comprehensive Plan and Economic Development Goals*. In the report, WSA list the following benefits of such an interchange and new connecting road:

- A new road and interchange in the vicinity of Wemple Road would be expected to lower traffic demand on the northern section of US 9W and NY 144.

- A new NYS Thruway interchange in the vicinity of Wemple Road will make the NYS Thruway a more attractive route for travel to/from Glenmont and Delmar, especially for neighborhoods and businesses along the Feura Bush Road and Elsmere Avenue corridors. The model shows that traffic will increase on Feura Bush and Wemple Roads.

- To a lesser degree, access to South Bethlehem via the NYS Thruway will improve as well, shifting traffic to the southern portion of US 9W.

- Trucks currently using Maple Avenue are primarily oriented to South Bethlehem and the CSX rail yard. Making this new road the truck route will shift freight traffic to a more direct route. Based on the information available to the study team, vehicle miles traveled (VMT) will decrease by about 11 percent from current travel conditions. Vehicle hours traveled (VHT) would

decrease by about 50 percent. Decreasing VMT and VHT will lower freight operating costs in the corridor.

The new road and interchange proposed to address the environmental justice issues at the Ezra Prentice Homes would be located 3.2 miles south of the existing Thruway interchange #23. The new road connecting the new interchange with the US 9W and Route 144 and the adjacent Port expansion parcels would be approximately 11,375 feet in length and constructed to NYS Highway specifications. The new interchange would have a layout, architecture and construction costs similar to that of Thruway interchange #18 at New Paltz.

Both the new road and the new interchange could be constructed on portions of five separate parcels of real property identified below. Two of the parcels are owned by private entities, Glenmont Development Associates and Beacon Heights LLC. Beacon Heights LLC. is believed to be associated with Beacon Harbor LLC. who is believed to be the owner of the two parcels slated for development during the expansion of the Port of Albany. The other three parcels are owned or controlled by public utilities or authorities. Two of the three are utility corridor owned or controlled by Niagara Mohawk Power Corp. and the other is already owned by the New York Thruway Authority.

Additional specifics regarding the parcels identified for sighting of the new road and new Thruway interchange are provide ion the table below:

CITYTOWN_N	LOC_STREET	MARKE VALUE	ACRES	PRIMARY OWNER	MAIL_ADDR	PO_BOX	MAIL_CITY	STATE	MAIL_ZIP	SWIS_PRINT
Bethlehem	River Rd	$146,526.00	18.4	Niagara Mohawk Power Corp	300 Erie Boulevard Wes		Syracuse	NY	13202	01220098.00-2-10.21
Bethlehem	River Rd	$1,253,263.00	91.5	Beacon Heights LLC		932	Latham	NY	12110	01220098.00-2-10.22
Bethlehem	Land	$371,368.00	0.01	Niagara Mohawk Power Corp	300 Erie Boulevard Wes		Syracuse	NY	13202	01220097.00-3-1
Bethlehem	Route 9W	$91,789.00	88	Glenmont Development Assoc	560 Route 9W		Glenmont	NY	12077	01220097.00-2-18.1
Bethlehem	Thruway	NA	31.7	New York State Thruway Auth	200 Southern Blvd	189	Albany	NY	12201	NA

Ashley A. Erdmann

From: Robert Leslie <rleslie@townofbethlehem.org>
Sent: Wednesday, January 15, 2020 2:17 PM
To: Ashley A. Erdmann; Steve Boisvert
Cc: Megan Daly; Patrick Jordan; Richard Hendrick
Subject: FW: Port development

Follow Up Flag: Follow up
Flag Status: Flagged

See email below sent to the Planning Board.

Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054
Tele. (518) 439-4955, Ext. 1157
Fax. (518) 439-5808
rleslie@townofbethlehem.org

On Jan 14, 2020, at 7:17 PM, Paul Tick <tick.paul@gmail.com> wrote:

Dear Planning Board Members:

I write in regard to the proposal for the Port of Albany currently in front of the planning board, and in regard to future proposals that may impact the residents of the South End of Albany. While all of us face the effects of pollution, as compared to the overall population, South End residents suffer the effects disproportionally. While the town of Bethlehem is not responsible for the history that has led to this situation, it is our hope that the town will take this history into consideration and do whatever it can to ensure development of the port, now and in the future, is done in a manner that minimizes negative environmental impacts on the South End residents while increasing employment opportunities for those residents.

Thank you for your time and consideration.

Sincerely,

Paul Tick
Agnes Zellin

Engineering and
Land Surveying, P.C.

1533 Crescent Road
Clifton Park, NY 12065
Phone: 518.371.0799
Fax: 518.371.0822
mjelspc@mjels.com
mjels.com

January 16, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Via email only: rleslie@townofbethlehem.org

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Review of Supplemental DGEIS

Dear Mr. Leslie:

MJ Engineering and Land Surveying (MJ) has completed a technical review of the Supplemental Draft Generic Environmental Impact Statement (SDGEIS) submitted on November 27, 2019 for the above referenced project. The purpose of this review is to determine if the SDGEIS addresses the potential areas of environmental impact.

Based on our review of the SDGEIS, MJ offers the following review comments in addition to those comments provided in a letter dated December 6, 2019.

Section 3.7 - Traffic and Transportation

1. Page 3-10, Paragraph 1: Clarify build out phases. It is not clear if they are total areas or additional areas for Phase II.
2. Page 3-10: states that "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…" It further says: "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." What physical restrictions will be in place to prohibit truck access at the southern entrance? One option is an overhead height bar that physically restricts a truck.
3. Page 3-17: Regarding Appendix G – is the clause language to be used for both a tenant occupying a building owned/built by the Port, AND a building that is privately built with the Port leasing the land. It should be applicable to both scenarios. Please confirm. It is expected the clause language will be applicable to building that is privately built. If so, how will the Port enforce the clause language on a building it does not own?
4. Regarding future improvements to City streets – the FGEIS would benefit from an overall map of the preferred truck route that identifies:
    i. the improvements that are undertaken by McLaren (based on their map).
    ii. Current condition of Church Street and Boat Street (what is pavement condition, why no improvements needed?)
    iii. Future improvement plans for the remaining Raft Street, and Normanskill St/Port St. What is current condition of these roadways? Current condition of rail crossings, how many? What funding sources are available? Timeframe for improvements?
    iv. Regarding Step 4 – responsibility is identify as Albany, FHWA, NYSDOT, CDTC…but this would have to be prompted by POA. Reference should be made to POA involvement.

5. Page 3-22: Pedestrian and Bicycle: the assessment of impacts should be related to the users of the Bikeway Connector along South Pearl Street, the Exit 2 Ramp, and at the Exit 2 intersection with Church Street. No trucks using South Pearl Street will have a positive impact on the bike/ped users along the South Pearl St. section of Bikeway Connector. If this is correct, state as such. What are impacts to peds/bikes crossing Church St intersection with the increase in trucks traffic at intersection? Will there be conflicts? What is mitigation?

Appendix D – Traffic Impact Study

6. Page 1, Paragraph 2: Clarify build out phases. It is not clear if they are total areas or additional areas for Phase II.

7. Page 3, Figure 2: This concept plan differs from the plan for Concept A shown in the SDGEIS as it does not show a connection from the truck parking area to the access road leading to NYS Route 144 at the southeast corner of the proposed building. Please explain why the concept plans are different.

8. Page 4, Paragraph 4: It is stated that South Port Road is an urban major collector. The roads within the port are classified Urban Local Roads (FC 19) per the most recent Region 1 highway inventory available on the NYSDOT website. Please confirm the roadway classification.

9. Page 13, Paragraph 1: Section 3.7.1 states the background growth rate was accepted by NYSDOT and this paragraph states it was submitted. Identify which state is correct.

10. Page 13, Paragraph 2: It should be noted that the Kenwood Commons project is no longer active.

11. Page 30, Paragraph 2: Explain how enforcement by local law enforcement be coordinated/implemented.

12. Pages 31 & 32, Table 4: The Northbound and Southbound approaches to the I-787/I-87 Exit 23 Off Ramp are not correctly noted in the table.

13. Page 34, Table 6: The largest increase of ±30% in truck volumes is along the stretch of South Pearl St (NYS Route 32) in front of the Ezra Prentice community. Any new tenants should use the Church Street/Broadway intersection for ingress and egress from the Port when their destination is west, north or east and South Port Road for destinations to the South. This will mitigate any additional truck traffic in front of Ezra Prentice in the future beyond existing volumes. Any increase in truck volumes will increase delays and emissions in this area. Provide an additional table that shows the increase in truck volumes as a result of the restricted use of South Pearl Street. This tables should include all roadway segments included in Table 6.

14. Page 35, Paragraph 1: Percent trucks in the narrative does not match Figure 14. The first 40% should be 45% and second 40% should be 35%. The 60% should be 55%.

15. Page 41, Paragraph 1: Reference to Table 6 should be Table 7.

16. Page 41, Table 7: Were the increase in through traffic volumes considered when determining available turn movement gaps?

17. Page 43, Paragraph 1: The report recommends lowering the posted speed limit to 45 mph in the vicinity of the proposed driveway. Posted speed limits are based on the 85th percentile speed, which is 55 mph as stated in this paragraph. Is there any data that supports changing the speed limit in proximity to the proposed NYS Route 144 access drive to 45 mph?

18. Page 43, Table 8: Explain the increase in sight distance when looking right. It is understood that the increase is obtained by clearing vegetation, but the sight lines shown in Figure SD-01 in Appendix B do not extend beyond the west edge of pavement. How does vegetation removal allow for more sight distance from 345 to 450' for the proposed driveway and 385 to 500' for the shifted driveway?

19. Page 44, Table 9: The waterway is the Normans Kill, not Normanskill Creek.

20. Page 50, Table 12 and Paragraph 1: The text references an analysis of the merging highway but the LOS reported in the text is for the weaving areas from Table 12. The two LOS C with 29.9 and 31.1 pc/mi/ln should be LOS D per the merge areas section of Table 12.

21. Page 51, Third Bullet: Same comments as Page 43, Paragraph 1.

22. Appendix D Figure 16 is different than the "Recommended Truck Routes To/From Proposed Site" Figure shown in the presentation at January 6 public meeting. Appendix D Figure 16 shows truck route on Corning Hill Road, while Figure presented at the meeting (slide 33) does not show truck route on Corning Hill Road. Update the SGEIS to reflect the figure presented at the meeting since this addresses the goal of minimizing truck travel impacts on residential areas.

23. Please address public comments at the January 6 public meeting (supported by the Planning Board) related to assessing potential air quality impacts on the Ezra Prentice community (as a result of site generated truck traffic) based on the following:
    a. Additional truck traffic on Church Street/Boat St/Smith Blvd and River Road.
    b. Additional truck traffic on I-787
    c. Site generated emissions related to potential warehouse, manufacturing, assembly, industrial park, distribution centers, packaging facilities, business office, and commercial storage uses identified in Section 1.1. What are potential emissions and could they impact Ezra Prentice community?

Should you have any questions, please do not hesitate to contact myself or Ms. Jackie Hakes at (518) 371-0799.

Sincerely,

Joel Bianchi, P.E.
Senior Associate
Municipal Engineering
Group Manager

ecc: Jaclyn Hakes, AICP, Planning Group Manager
Chad Schneider, PE, Traffic Engineer
Elizabeth Staubach, Town of Bethlehem Economic Development Coordinator
File

Comments of the New York State Attorney General's Office on the Supplemental Draft Generic Environmental Impact Statement for the Proposed Port of Albany Expansion Project

Bethlehem Town Planning Board
January 16, 2020

The New York Attorney General's Office is pleased to submit these comments on the Supplemental Draft Generic Environmental Impact Statement ("SDGEIS" or "Supplemental EIS") for the Albany Port District Commission ("Port District") Port of Albany Expansion Project ("Project"), pursuant to the State Environmental Quality Review Act, ECL Article 8 ("SEQRA").

These comments follow the Attorney General's previous comments on the Project, dated September 16, 2019. Those comments recommended preparation of a Supplemental EIS to address environmental justice, air emissions, and quality of life impacts of the Project on the Ezra Prentice Homes ("Ezra Prentice"). The Attorney General's Office appreciates the decision of the Bethlehem Town Planning Board to require the Supplemental EIS and the efforts of the Port District in preparing that document to address potential adverse environmental impacts to the residents of Ezra Prentice.

The purpose of these comments is to make further recommendations to avoid Project-related adverse air pollution and quality of life impacts on the residents of Ezra Prentice Homes. In the Supplemental EIS, the Project seeks to mitigate such impacts by establishing a policy of routing truck traffic away from the Ezra Prentice Homes. By these comments, the Attorney General's Office seeks to help ensure implementation of the policy, by recommending improved signage to direct trucks away from Ezra Prentice when the trucks are entering or leaving the Project area.

Ezra Prentice

The Ezra Prentice Homes is a predominantly low-income public housing project in Albany's South End, consisting of 16 buildings, 179 units, and over 400 predominantly minority residents, many of whom are children.[1] It is a potential environmental justice area because it suffers from disproportionate adverse environmental impacts when compared to other communities.

[1] A recent survey found that African Americans accounted for about 75 percent of Ezra Prentice's population. Stacy Pettigrew, Ph.D., *Ezra Prentice Homes Health Project: Preliminary Observations* at 2 (May 14, 2019).

Ezra Prentice is located in the midst of significant air pollution sources - traffic from South Pearl Street and Interstate 787, the railyard literally in its back yard, and its proximity to petroleum storage tank farms, a wastewater treatment plant, and a marine transfer facility across the tracks. The State Department of Environmental Conservation completed an air study in 2019 which characterized air pollution sources and impacts to Ezra Prentice and the South End. New York State Department of Environmental Conservation ("DEC"), *Albany South End Community Air Quality Study: High Emitting Vehicles (HEVs*), (Oct. 2019). The study found that emissions from high emitting vehicles were highest around Ezra Prentice, and concluded that "[r]educing emissions from HEV vehicles would have the greatest benefit in improving neighborhood air quality." *Id.*

High Emitting Vehicles are diesel-fueled vehicles - trucks and buses - which emit high concentrations of traffic-related air pollution. DEC, *Albany South End Community Air Quality Study: Traffic-Related Air Pollution (TRAP) Results,* (Oct. 2019*).* Traffic–related air pollution is a mixture of pollutants, including particulate matter and gases. Particulate matter is a mixture of multiple components and particle sizes, including particles ranging in size from PM10 (10 microns or less) through ultrafine particles (less than 0.1 microns). *Id*. Traffic-related air pollution gases include carbon dioxide, carbon monoxide, nitrogen oxides, benzene, and others. The DEC study found that traffic-related air pollution is approximately 50% higher along South Pearl Street at Ezra Prentice than at a background monitor in the South End. *Id*.

A recent health outcome review by the New York State Health Department found that "[h]ospitalization rates for asthma, COPD, acute bronchitis, hypertension, myocardial infarction (heart attack) and diabetes were all higher in the South End neighborhood than in Albany County." New York State Department of Health, *Information Sheet: Albany South End Community Outcome Review*, (October 2019). The Department of Health concluded that the "health outcome review findings support actions being taken by NYSDEC, the City of Albany, NYSDOT and the Albany Housing Authority to reduce air pollution in the Ezra Prentice neighborhood." *Id.*

The Project and its Impacts

The Project is an expansion of the Port of Albany to be accomplished through the acquisition and development of about 82 acres of land consisting of Beacon Island and an access parcel in the Town of Bethlehem at the Town's northern boundary with the City of Albany. Draft Generic Environmental Impact Statement ("DGEIS") at 2-1. The Project identifies several conceptual layouts, including "Concept A," which represents the maximum amount of development permitted under current zoning law. It includes an approximately 1.13 million square foot two-story industrial use facility with associated access roads, employee

parking, trailer parking, refurbished rail access over the Normans Kill and a bulkhead wharf along the Hudson River. DGEIS at 1-1. Concept A would allow for the following uses: warehouse, manufacturing, assembly, industrial park, distribution, packaging, business, and commercial storage. *Id*. The four other concepts involve smaller warehouse capacity or use of the site for light fabrication or manufacturing of offshore wind products. *Id*. at 1-8.

Absent mitigation measures, the Project would increase air pollution to Ezra Prentice disproportionately by increasing truck traffic on the portion of South Pearl Street that bisects Ezra Prentice. Without mitigation, the DGEIS estimates a 25.4 to 27.1 percent increase in mid-day peak hour truck traffic on South Pearl Street passing through Ezra Prentice. That amounts to an increase of between 25 and 26 trucks during peak hours. DGEIS at 3-50.

The Project's Proposed Mitigation Measures:

During Construction

The Supplemental EIS addresses how construction vehicles would access the Project Site. For example, at page 2-10 the document states that "ingress and egress during construction and emergency response would be via the Proposed Project Driveway, which would connect the Project Site to River Road, and via South Port Road for the bridge construction over Normanskill Creek." On page 3-8 (Construction Impacts Mitigation Measures) of the SDGEIS, it states that to avoid traffic through Ezra Prentice "the project will require 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."

We support staging project-related construction to avoid and minimize the routing of construction vehicles by Ezra Prentice. We understand from communications with Port District that upgrades to the internal Port roads will be prioritized and take place before construction at the Project site. Upgrades include straightening, upgrading, and repaving Smith Boulevard, the largest internal road within the Port. This work is now being undertaken by the Port District. In addition other roads will need to be upgraded in the southern portion of the Port. Public money is being sought for such work. By completing internal road construction first, travel by heavy construction vehicles along South Pearl Street through Ezra Prentice can be avoided.

The Supplemental EIS could be enhanced by further discussion of the Port's plans for upgrading the City of Albany roads within the Port to facilitate the additional traffic during construction and operation. This discussion should

include the scope and timeline of such road improvement plans, including the extension of the road and construction of the new bridge over Normanskill Creek.

Post-Construction / Site Operation

The Supplemental EIS proposes mitigation for air quality impacts to Ezra Prentice: "Truck traffic to be routed such that they do not travel through Ezra Prentice community on South Pearl Street." Supplemental EIS at 1-3. In addition: "All truck traffic associated with the proposed expansion project [will] 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." Supplemental EIS, p. 3-23.

The form lease to be entered with Project tenants provides as follows:

> "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."

Supplemental EIS, App. G, Truck Route Supporting Documentation (Memo from Patrick K. Jordan, General Counsel, dated December 10, 2019, to Steve Boisvert, PE, McFarland Johnson) at 1.

The Project will enforce the lease provisions concerning truck routing using video surveillance. "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." *Id.*

Recommendations for Improved Signage

Improved road signage can help ensure that trucks avoid Ezra Prentice. Current signage along Interstates 87 and 787, Routes 32 and 144, and nearby streets is not sufficiently informative to direct heavy-duty vehicles to the Port and can be confusing. The enhanced signage (see attachment), created for illustrative

purposes, is intended to help direct drivers to access and egress from the Port of Albany on routes that avoid South Pearl Street where Ezra Prentice is located. The proposed signage directs drivers to use the Northern Port entrance via Church Street when travelling along Interstate 787 in any direction and when utilizing Interstate 87 west. It also directs drivers to the Southern Port entrance when travelling from the South (or if they miss their exits off the interstates needed to access the Northern Port Entrance), also avoiding Ezra Prentice.

We understand that the owners of roads upon which any additional signage would be proposed – which may include the City of Albany, New York State Department of Transportation, and Thruway Authority - would have to approve new signage. The New York State Department of Transportation has indicated that the road owner would have discretion to erect "way finding" signs of the type we propose.

In conclusion, we believe that the Port District's mitigation measures can be enhanced by signs that point trucks and other vehicles to travel routes that would avoid passing through the Ezra Prentice Homes.

LETITIA JAMES
Attorney General of the
State of New York

Philip Bein
Assistant Attorney General
Lemuel Srolovic
Bureau Chief
Jeremy Magliaro
Policy Analyst
Joseph Haas
Environmental Scientist
Environmental Protection Bureau
28 Liberty Street, 19th floor
New York, New York 10007
(212) 416-8797
Philip.bein@ag.ny.gov

Attachment

Port of Albany Expansion: Signage Reference Locations North

Port of Albany Expansion: Signage Reference Locations South

Reference Location 1: Interstate 787 South Bound Approaching Exit 2

Reference Location 2: Interstate 787 South off ramp to Route 32 South

Reference Location 3: Route 32 South to 787 South Service Road Port

Reference Location 4: Interstate 787 South Service Road at the Port of Albany North Entrance

Reference Location 5: Church Street North Bound at Broadway (North Port Exit)

Reference Location 6: Normanskill Street North at South Port Road (Both Directions)

Reference Location 7: South Port Road Exit

<u>Reference Location 8</u>: Interstate 87 Exit 23 at Interstate 787 and Route 9w

Reference Location 9: Interstate 787 North Bound Exit 1 at Route 9w

Reference Location 10: Route 9w South at Route 32

Reference Location 11: Route 32 at Route 144

Reference Location 12: Route 144 North at South Entrance to the Port of Albany

Referenced Location 13: Interstate 787 North Exit to the South Service Road Toward the Port of Albany North Entrance

Reference Location 14: Interstate 787 South Exit 1 at Route 9w

Reference Location 15: Interstate 87 South Exit 22

Reference Location 16: Interstate 87 North Exit 22

Reference Location 17: Interstate 87 Exit 22 at Route 144

SAMUEL I. FEIN
COUNTY OF ALBANY
COUNTY LEGISLATURE
6TH LEGISLATIVE DISTRICT

COMMITTEES
Social Services, Chair ★
Law ★
Civic Center ★
Conservation & Improvement ★

5 Elm St, Fl 3
Albany, New York 12202
518-362-8380
samfein6@gmail.com
www.feinforalbany.com

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

STATEMENT OF CONCERN
Why We Cannot Support the Port of Albany Expansion Plans

As a community leader in the South End of Albany, I wish to state that until there is recognition of the seriousness of the health situation at Ezra Prentice, and a realistic plan in place to either move the residents or to apply effective remediation steps, we must oppose the Port of Albany's expansion plans.

This is despite the fact that I welcome the Port's plans to create new green jobs in the assembly and shipping of parts for offshore wind turbines. We are certain that the South End community is eager to work with the Port management to insure that a fair share of those jobs go to residents of the South End. It would be a shame to lose this opportunity because no one is willing to take responsibility for the mistakes of the past.

Ezra Prentice Homes doesn't belong on a busy truck-filled highway and next to a rail switching yard and the expanding Port of Albany. It's time to state that obvious truth and deal with it, rather than pretend that half measures will make a bad situation palatable.

I agree with the Times Union and its November 6 editorial and call on all of our elected officials to do the right thing — move Ezra Prentice. As a representative of the South End in Albany County Legislature, I am eager to partner with other elected officials, community leaders, and business leaders to make this happen.

As the TU said, the siting of Ezra Prentice some fifty years ago is the fault of no living person. But it is certainly another in a long list of decisions over many decades in our city based on race that we must now make our responsibility to correct.

The October release of the long-delayed Department of Environmental Conservation "Albany South End Air Quality Study," together with the health survey conducted by the NYS Department of Health, provide irrefutable evidence that the heavy diesel truck traffic through the middle of Ezra Prentice is — and has been for many decades— causing serious health problems for the residents, both current and past. Even more precise health data collected from 110 households at Ezra Prentice by community organizations AVillage and the Radix Center reinforces these conclusions. **Imagine living in a community where 30 percent of young children have asthma, and where 46 percent of older children and 33 percent of adults have asthma.**

The Port is proposing to acquire some 80 acres of land in the Town of Bethlehem to build its new wind turbine assembly and staging facility. Because this land is in Bethlehem and not Albany, the decisions to approve this project will be made in a community that has no real stake or responsibility for the health of its neighbors.

But Ezra Prentice has been declared an "environmental justice community," which has legal implications for all of the industrial development nearby. Remediation efforts have been offered, but strike us as woefully short of the mark. Moving the truck traffic to the Port's interior road system — an expensive and time consuming enterprise at best — is moving the diesel fumes further from front doors to roads that are still as close as several football fields away. And more than doubling the truck traffic once the wind turbine facility is built strikes us as a poor bargain.

Diverting traffic several hundred feet away from residences, as well as the other mitigation steps offered so far, are halfway measures that would insult any other community. Yet because Ezra Prentice is a public housing site, with residents who are low income and predominately people of color, this is seen as acceptable.

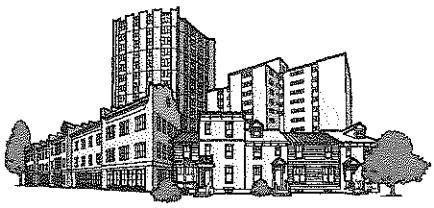
We call on the Bethlehem Planning Board to call a halt and demand that the Port of Albany return to the table with the people of Ezra Prentice and the South End. It is unfortunate that no other entity has stepped forward to find an acceptable solution to this crisis, so the Port should take the lead. They, and the Region's economic prosperity, have the most to loose by allowing this travesty to continue.

Moving Ezra Prentice is possible. All it takes is the political will. And if you will it, it is no dream.

Sincerely,

Sam Fein

Samuel Fein



ALBANY HOUSING
AUTHORITY

Steven T. Longo, Executive Director

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, New York 12054
Attn: Robert Leslie, AICP, Director of Planning

Dear Members of the Bethlehem Planning Board,

This letter is to offer wholehearted support for the Port of Albany's application to develop 80 acres of land in the Town of Bethlehem in a manner that will provide positive economic development while being sensitive to the environmental justice community of Ezra Prentice Homes in the South End of Albany.

The Port's proposal to create new investment and substantial jobs dovetails nicely with the Albany Housing Authority's mission to develop housing and support economic development initiatives in the surrounding communities. Attracting new jobs and investments will support nearby housing, small businesses and an overall community feel that will continue to make people want to call the South End home. We need jobs to support our communities and this proposal has demonstrated it can create as many as 1,600 new well-paying jobs.

I am pleased to see that the Port's proposal and ensuing updates have offered important mitigation efforts to offer no negative impacts to the Ezra Prentice community, which sits 1.7 miles away from the proposed expansion site. The Port's efforts to engage local civic stakeholders, hold a public meeting in the community, commitment to work on an alternative truck route and coordinate and install signage are all major safeguards for South Pearl Street and the residents of Ezra Prentice.

My staff and I are in constant contact with the residents of the Ezra Prentice Homes, as well as the public and private funding partners supporting this residential community and will continue to work with all relevant partners.

We look forward to continuing to work together as this project moves forward.

Sincerely,

Steven T. Longo

Steven T. Longo

Executive Director

115 Van Wies Point Road
Glenmont, New York 12077
January 16, 2020

Town of Bethlehem
445 Delaware Avenue
Delmar, New York 12043

Att: Robert Leslie

Re: Albany Port District Commission, Port of Albany Expansion Project

Dear Mr. Leslie:

The plans for the expansion of the Port of Albany, to the extent that I understand them, have been carefully thought through regarding how the property will be used and the impact on the environment and the people who live in the area. The additional truck traffic and air pollution are being addressed. People at the public hearing on January 6th properly raised the issue that air pollution does not remain with the trucks and trains producing it, but disperses, and in the case of the Port would increase air pollution inhaled by the nearby residents.

To my knowledge, however, no attention has been paid to the impact to residents living on the banks of the Hudson River, just south of the Port. It is clear that the Port expansion will utilize trains and highways to the west of the River and the River itself. My husband Charles and I are thirty year residents on land zoned residential, with approximately 60 houses in the neighborhood, just south of the industrial zoned property ending at Air Products, west of Highway 144, and Innovative Surface Solutions bordering the River. I respectfully request that in any of the scenarios for the use of the expansion, potential additional noise, pollution, and odors be determined and mitigated. As I am sure you understand, we bought and live where we do for peace and quiet and beauty as well as good qualities in the environment. Generally, our industrial neighbors to the near north of us are good, thoughtful, and clean neighbors, but sometimes the noise, mostly, I believe, from the loading and unloading of tankers is disturbing for long periods of time, as one example of what can result from increased industrial activity.

Please explore these potential problems and develop not only for the best economic improvements, but also the quality of life for all people who live on and near the Hudson River and wish to have and maintain good quality of life. Thank you.

Sincerely yours,

Charlotte Buchanan
518.434.3518
charlotte.buchanan@gmail.com

AVILLAGE
3 Lincoln Square
PO Box 10154
Albany, NY 12201

January 16, 2020

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

Dear Members of the Bethlehem Planning Board,

AVillage has been engaged with the residents of Ezra Prentice Homes for the past five years. We have listened to their stories, worked with them to survey their health, counted trucks passing through, supported their tenants association, supported youth activities and provided information when we could. Above all, we have made many friendships and mourned with them as residents develop illnesses and died. Thus, we can speak with authority about the disruptions and health impact of living in close proximity to a working port.

The January 6 public hearing on the Port of Albany's proposal to develop 80 acres in the Town of Bethlehem was a fundamentally flawed process, with little or no useful information and an attitude of talking down to the audience and questioners.

We urge the Bethlehem Planning Board to delay approval of the Port of Albany's application for permission to develop 80 acres of land in the Town of Bethlehem until such time as the Port's board and officials meet with residents of the South End of Albany and work in good faith to resolve the serious health issues at Ezra Prentice Homes.

The Port's plans to create new green jobs in the assembly and shipping of parts for offshore wind turbines is positive development. However, as I have learned about the serious health issues in the Ezra Prentice community, and elsewhere in the South End, it is important to me that my town does not contribute more air pollution to an already heavily impacted areas. This is a matter of simple justice.

It is more evident than ever that Ezra Prentice Homes doesn't belong in an industrial area, intersected by a busy truck-filled highway and next to a rail yard with potentially dangerous cargos. The mitigation measures offered so far do not appear to us to be sufficient to address the severe health issues that have been documented.

Dialogue is important, and I have learned that it has not happened so far. I appreciate that the Port alone it cannot resolve all the issues presented here. But as a major economic driver for the Capital Region, and working with the City of Albany and other elected officials, the Port can and should be a catalyst. What is required is political will at many levels.

Yours very truly,

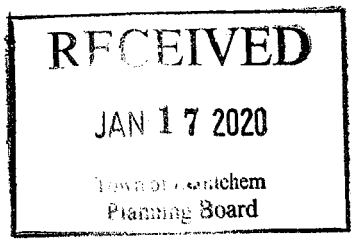
Tabetha Wilson
President, Board of Directors

avillageworks@gmail.com avillageworks.org (518) 451-9849

Ezra Prentice Tenants Association

627M South Pearl St.
Albany, NY 12202

January 16, 2020



Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

Dear Members of the Bethlehem Planning Board,

The Ezra Prentice Tenants Association has some serious concerns about the Port of Albany's Supplemental Draft Generic Environmental Impact Statement presented on January 6, 2020 at the Albany Housing Authority offices. Although only a few tenants of Ezra Prentice were able to attend that meeting, numerous questions have come to the attention of the Tenants Association's Executive Committee

First, why us? Why does a manufacturing facility in the Town of Bethlehem have to send its trucks — a projected 1,500 per day! — through a community already severely affected by air pollution and with many documented health problems? Your consultant did not show any options except to send the trucks north.

And while we would appreciate having trucks diverted off South Pearl Street and into the Port itself, in reality those trucks still pass within 2,000 feet (about two and a half football fields) from our back yards. This increase in truck traffic will also affect our residents and other South End neighbors as the trucks leave the Port's north entrance and turn left onto the ramp to I 787 and then labor up that hill past the west side of Ezra Prentice and the residences on Mount Hope Drive. The Port officials and their consultants failed to answer simple questions, such has how long it will take to develop the interior Port roads, how much it will cost and who will pay for it.

Most telling, the Supplemental Draft GEIS does not explain how the impact on residents of an "environmental justice community" can be measured or what steps would be taken if the air pollution persists at current levels or increases. And the January 6 public hearing did not provide enough information for residents to make informed comments or even get their questions answered. In our view it was a fundamentally flawed process.

We urge the Bethlehem Planning Board to delay approval of the Port of Albany's application for permission to develop 80 acres of land in the Town of Bethlehem until such time as the Port's board and officials meet with residents of the South End of Albany and work in good faith to resolve the serious health issues at Ezra Prentice Homes.

Yours very truly,

Demetrius Martinez
President, Ezra Prentice Tenants Association

RADIX
ECOLOGICAL SUSTAINABILITY CENTER

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

January 16, 2020

Dear Members of the Bethlehem Planning Board,

This letter is to urge the Bethlehem Planning Board to delay approval of the Port of Albany's application for permission to develop 80 acres of land in the Town of Bethlehem until such time as the Port's board and officials meet with residents of the South End of Albany and work in good faith to resolve the serious health issues at Ezra Prentice Homes.

We write this despite the fact that as an environmental organization, we strongly support the Port's plans to create new green jobs in the assembly and shipping of parts for offshore wind turbines. We are certain that the South End community is eager to work with the Port management to ensure that a fair share of those jobs go to residents of the South End. It would be a shame to lose this opportunity because no one is willing to take responsibility for the mistakes of the past.

Nevertheless, it is more evident than ever that **Ezra Prentice Homes doesn't belong in an industrial area**, intersected by a busy truck-filled highway and next to a rail yard with potentially dangerous cargos. The mitigation measures offered so far do not appear to us to be sufficient to address the severe health issues that have been documented.

We believe that unless sufficient measures are found to keep residents of Ezra Prentice safe from exposure to harmful air pollution and to the impact of the rail yards, it is time to give serious consideration to moving this complex to a more suitable location.

We appreciate that the Port wants to be a good neighbor, and that alone it cannot resolve all the issues presented here. But as a major economic driver for the Capital Region, and working with the City of Albany and other elected officials, the Port can and should be a catalyst. What is required is political will at many levels.

As a community leader, I also believe that there are solutions that could end up benefiting not only the residents but the Port and Albany's industrial future.

Yours truly,

Stacy Pettigrew, PhD, MS
Executive Director

8 Pinetree Drive
Delmar, NY 12054
January 16, 2020

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

Dear Members of the Bethlehem Planning Board,

As a resident of the Town of Bethlehem, I am writing to urge the Bethlehem Planning Board to delay approval of the Port of Albany's application for permission to develop 80 acres of land in the Town of Bethlehem until such time as the Port's board and officials meet with residents of the South End of Albany and work in good faith to resolve the serious health issues at Ezra Prentice Homes.

The Port's plans to create new green jobs in the assembly and shipping of parts for offshore wind turbines is positive development. However, as I have learned about the serious health issues in the Ezra Prentice community, and elsewhere in the South End, it is important to me that my town does not contribute more air pollution to an already heavily-impacted areas. This is a matter of simple justice.

It is more evident than ever that Ezra Prentice Homes doesn't belong in an industrial area, intersected by a busy truck-filled highway and next to a rail yard with potentially dangerous cargos. The mitigation measures offered so far do not appear to us to be sufficient to address the severe health issues that have been documented.

Dialogue is important, and I have learned that it has not happened so far. I appreciate that the Port alone cannot resolve all the issues presented here. But as a major economic driver for the Capital Region working with the City of Albany and other elected officials, the Port can and should be a catalyst. What is required is political will at many levels. Thank you for your consideration of this letter.

Sincerely,

Susan Schell

Walls Temple A.M.E. Zion Church

Rev. Alphonso H. Meadows Jr., Pastor
27 Delaware Street
Albany, NY 12202
(518) 449-1447

wallstempleamez@gmail.com

January 16, 2020

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

Dear Members of the Bethlehem Planning Board,

This letter is to urge the Bethlehem Planning Board to delay approval of the Port of Albany's application for permission to develop 80 acres of land in the Town of Bethlehem until such time as the Port's board and officials meet with residents of the South End of Albany and work in good faith to resolve the serious health issues at Ezra Prentice Homes.

There is already a significant amount of train and truck traffic in the area of Ezra Prentice Homes. The train whistles blow in the very early hours of the morning on weekdays. Weekdays are school days for young children. This means that trains are noisily coupling and uncoupling as well as idling. The fumes from the heavy trucks traffic and the trains permeate the air in the area of the Ezra Prentice Homes.

I appreciate the business and jobs that the Town of Bethlehem is trying to initiate, but I would like consideration taken for the Ezra Prentice Homes residents. I can understand the need for affordable housing in the 1960's but I am not sure why residents were moved from the heart of downtown Albany to an industrial area with major pollutants without anyone believing their health would be impacted.

As a community of faith, we consider the plight of the Ezra Prentice residents a matter of social justice. We also believe that there are solutions that could end up benefiting not only the residents but the Port and Albany's industrial future.

In His Service,

Rev. Alphonso H. Meadows Jr.
Pastor

WESTMINSTER
Presbyterian Church

85 Chestnut St.
Albany, NY 12210
(518) 436-8544
office@wpcalbany.org
wpcalbany.org

January 16, 2020

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

Dear Members of the Bethlehem Planning Board,

This letter is to urge the Bethlehem Planning Board to delay approval of the Port of Albany's application for permission to develop 80 acres of land in the Town of Bethlehem until such time as the Port's board and officials meet with residents of the South End of Albany and work in good faith to resolve the serious health issues at Ezra Prentice Homes.

We write this despite the fact that we welcome the Port's plans to create new green jobs in the assembly and shipping of parts for offshore wind turbines. We are certain that the South End community is eager to work with the Port management to insure that a fair share of those jobs go to residents of the South End. It would be a shame to lose this opportunity because no one is willing to take responsibility for the mistakes of the past.

Nevertheless, it is more evident than ever that Ezra Prentice Homes doesn't belong in an industrial area, intersected by a busy truck-filled highway and next to a rail yard with potentially dangerous cargos. The mitigation measures offered so far do not appear to us to be sufficient to address the severe health issues that have been documented.

We believe that unless sufficient measures are found to keep residents of Ezra Prentice safe from exposure to harmful air pollution and to the impact of the rail yards, it is time to give serious consideration to moving this complex to a more suitable location.

We appreciate that the Port wants to be a good neighbor, and that alone it cannot resolve all the issues presented here. But as a major economic driver for the Capital Region, and working with the City of Albany and other elected officials, the Port can and should be a catalyst. What is required is political will at many levels.

As a community of faith, we consider the plight of the Ezra Prentice residents a matter of social justice. We also believe that there are solutions that could end up benefiting not only the residents but the Port and Albany's industrial future.

Respectfully,

Rev. William Schram

The Session of Westminster Presbyterian Church
Rev. William Schram, moderator

Michael Burgess
476 Stratton Place
Delmar, New York 12054

Planning Board
Town of Bethlehem
445 Delaware Avenue
Delmar, New York 12054

Dear Members of the Planning Board,

I am writing to support efforts by the residents of the South End in Albany who live in the Ezra Prentice Homes related to the development plans of the Port of Albany on 80 acres in the Town of Bethlehem. Residents want to meet and express their concerns about environmental and health issues to the Port of Albany's board and officials about plans to assemble and ship wind turbines.

Air pollution is a concern to the residents of the Ezra Prentice Homes and further truck traffic could make the situation worse. Residents have suffered from being in an industrial area and already have oil trains sitting on tracks within feet of their homes.

I urge the Town of Bethlehem Planning Board to delay approval of the Port of Albany's plans until the relevant parties especially the board of the Port meet with residents of Ezra Prentice to come up with mutually agreed mitigation plan.

The effort to build, assemble and ship new wind turbines is a sound and welcome global environmental policy but we need to consider the local environment and the impact on low income residents who will be effected by the increased development and traffic.

Michael Burgess

Greater St. John's COGIC

Supt. McKinley B. Johnson, Sr.,

Planning Board, Town of Bethlehem
Bethlehem Town Hall 445
Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

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As a community of faith, we consider the plight of the Ezra Prentice residents a matter of social justice. We also believe that there are solutions that could end up benefiting not only the residents but the Port and Albany's industrial future.

Yours Truly,
Rev. McKinley B. Johnson Sr.
Supt. McKinley B. Johnson, Sr
Sr. Pastor of Greater St. Johns COGIC

South End Neighborhood Association

Albany, New York 12202

Planning Board, Town of Bethlehem
Bethlehem Town Hall
445 Delaware Avenue
Delmar, NY 12054
Attn: Robert Leslie, AICP, Director of Planning

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As a community leader, I also believe that there are solutions that could end up benefiting not only the residents but the Port and Albany's industrial future.

Regards

JoAnn Morton

President, South End Neighborhood Association

Visit us online at: http://www.southendna.blogspot.com
Email address: southendneighborhoodassociation@hotmail.com

Engineering and
Land Surveying, P.C.

1533 Crescent Road
Clifton Park, NY 12065
Phone: 518.371.0799
Fax: 518.371.0822
mjelspc@mjels.com
mjels.com

February 27, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Via email only: rleslie@townofbethlehem.org

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Planning Board Update for Review of the FGEIS

Dear Mr. Leslie:

MJ Engineering and Land Surveying (MJ) has conducted a technical review of the revised Final Generic Environmental Impact Statement (FGEIS) and associated appendices submitted on January 27, 2020 for the above referenced project. The purpose of this Planning Board update is to inform the Planning Board of the status of that technical review which is intended to determine if technical items have been adequately addressed and if the FGEIS is ready for acceptance by the Planning Board as lead agency.

Based on our technical review of the revised FGEIS as well as a review of comments provided by the Planning Board and Town staff, MJ has identified the several key outstanding technical items that are highlighted below. To ensure an efficient and effective review process, MJ, the applicant, Town staff and the Planning Board attorney met in person on February 26, 2020 to discuss the outstanding technical items and identify potential resolution to be incorporated in the FGEIS for consideration and review by the Planning Board. In addition, MJ will be meeting with the applicant to review non-technical comments primarily focused on language consistency and clarification.

Outstanding Technical Items Discussed with the Applicant:

1. ***Soils and Geology (Section 3.1)***

    a. Overview: Outstanding questions regarding the impacts to nearby residences of the proposed dynamic compaction (e.g. noise, duration) and the proposed mitigation.

    b. Proposed Resolution:
        i. It was agreed that the extent and location of the proposed dynamic compaction, which includes a 92-foot buffer from the property boundary is appropriate to mitigate potential impacts related to noise. To further support this conclusion, a calculation of the projected noise level at the nearby houses along Old River Road, accounting or any attenuation from the River Road grade elevation, will be included in the GEIS.
        ii. To further ensure the noise levels are in compliance with the Town of Bethlehem Local Law No. 5-09, dynamic compaction operations will only take place between the hours of 7 am and 7 pm and the Port has agreed to conduct noise monitoring during the dynamic compaction operations at the property boundary as an additional mitigation measure. Further limitations on the hours of operation (i.e. 9 am to 4 pm) may serve as a mitigation measure, however, this may lengthen the duration of the operations.

iii. Above items will be added to Table 1.3-1

2. *Floodplains and Floodways (Section 3.4)*

a. Overview: Outstanding questions related to impacts (e.g. sea level rise, truck trips) from raising the site elevation and the proposed mitigation. There are also additional concerns related to the potential for increased truck traffic during construction for site fill.

b. Proposed Resolution:
   i. MJ confirmed that the calculation of the Finished Floor Elevation (FFE) based on the Climate Leadership and Community Protection Act recommendations is accurate.
   ii. It was clarified that the additional 133,000 cubic yards of fill proposed to be brought into the site at full buildout is construction materials (i.e. crushed stone) for the proposed buildings and not related to the overall elevation of the site to the Finished Floor Elevation (FFE) of 20.3 feet. The proposed FFE is intended to account for sea level rise. The earthwork required to achieve this is proposed to include a series of cuts and fills utilizing on-site soils and is not anticipated to require additional fill from off site.
   iii. Preliminary testing of soils from the wharf area provide positive results for future use on site, which will have to be permitted by NYSDEC.
   iv. It was agreed to include a calculation and description of the number of trucks anticipated to transport the construction material (crushed stone) and add this narrative in the construction section (2.5).
   v. A discussion will be added explain that south entrance will be used as construction entrance during construction primarily for the bridge over the Normans Kill and import of construction material (crushed stone).
   vi. Narrative will be added that during a flood, the mobile equipment will be moved to higher ground in the existing Port District storage areas. Discussion of any anticipated outdoor storage of materials that may pose a threat (pollutants) to the Hudson River during a flood event would be discussed and described in a mobilization plan.

3. *Climate and Air (Section 3.6)*

a. Overview: Outstanding questions about the clear identification of the project's potential impacts on air quality to the Ezra Prentice community and the connection to the proposed mitigation. Outstanding questions also remain about potential odors specific to the spray booth and associated impacts.

b. Proposed Resolution:
   i. It was agreed that the section requires an introduction that provides a clearer overview of the environmental setting and the potential impacts to public health. This would connect the various sections highlighting existing conditions information derived from the extensive studies completed over the past several years.
   ii. It was agreed that while the expectation is that any odors would dissipate before reaching the Ezra Prentice community, there are other residences in the area (Old River Road, Van Wies Point), and the Port will identify appropriate proposed mitigation measures for the potential odor impact of the spray booth. It was noted that there is a NYSDEC permitting process establishing thresholds to regulate odors and that the Port intends to comply with all permitting requirements.

4. Traffic and Transportation (Section 3.7)

a. Traffic thresholds and associated mitigation

i. Overview: Outstanding questions about establishing thresholds for transportation improvements (mitigation) at each phase of development.

ii. Proposed Resolution:

1. The Port clarified that the intent is to implement traffic mitigation measures at each phase of development. For example, traffic mitigation for Phase III (1.13 million sf) would be implemented if and when a proposed project exceeds 600,001 sf. Since this is not clear in the FGEIS currently, the language will be updated to clarify when each mitigation measure will be triggered for each Phase of development. Clarification could be in the form of a table (to replace the current bulleted list) where side column reflects the intersections and top row reflects Phases with building square footage.
2. Restate that at each future site plan application a traffic analysis will be completed.
3. Based on the above, table 1.3-1 will be updated and reference new table mentioned above.

b. Existing conditions analysis of existing Port roads and mitigation

i. Overview: Outstanding questions about existing conditions of roadways for Port uses and suitability of the roadways for the specified truck route, which has been identified as a mitigation measure to address potential truck traffic impacts to the Ezra Prentice community. Additional questions raised about enforcement of the specified truck route. Questions regarding third party truck deliveries and expectations for following required truck route.

ii. Proposed Resolution:

1. It was agreed that an existing conditions overview of the lifecycle of the road and identification of road deficiencies (roadway width, striping, signage, turn radius, pavement condition, etc.) will be included based on the CDTC report (should CDTC's report provide the (1)current existing conditions, (2)deficiencies based upon design standards, and (3)needed improvements to address deficiencies). Potential improvements to address deficiencies will be identified as potential mitigation measures. The specific improvements to be implemented would be determined at the time of site plan review.
2. It was agreed that a more detailed explanation of techniques to monitor use of the truck route and enforcement will be included and implementation of such techniques would occur at time of site plan review. Possible solutions, included but not limited to, a license plate reader/tracker at key locations within the Port roads that would compare to a tenant vehicle license plate list.
3. Overall, the narrative will be updated to connect/tie together the discussion on the necessary roadway improvements with the enforcement to provide a comprehensive supporting mitigation measure.
4. Based on the above, table 1.3-1 will be updated.

c. Mitigation of southern entrance/driveway

i. Overview: Outstanding questions related to the sight distance, speed and overall viability of proposed southern entrance.

ii. Proposed Resolution:

1. Clarification will be added about the use of this driveway for truck access.
2. Clarification was provided that coordination with NYSDOT has occurred regarding the southern entrance off Route 144, specifically related to the limited sight distance and reduction of posted speed limit to 45mph. The Port agreed to confirm the most current information has been reviewed by NYSDOT regarding sight distance and speed and that the access onto Route 144 is viable.
3. Include a list of potential mitigation measures if the DOT does not allow a reduction in the speed limit to 45mph on Route 144.

It is MJ's understanding that the applicant will be revising the FGEIS to reflect the resolution identified above as well as several non-technical comments. Should the Planning Board have any concerns or questions about the approach described above, please let us know.

Should you have any questions, please do not hesitate to contact myself or Ms. Jackie Hakes at (518) 371-0799.

Sincerely,

Joel Bianchi, P.E.
Senior Associate
Municipal Engineering
Group Manager

ecc: Jaclyn Hakes, AICP, Planning Group Manager
Chad Schneider, PE, Traffic Engineer
Elizabeth Staubach, Town of Bethlehem Economic Development Coordinator
File

Engineering and
Land Surveying, P.C.

1533 Crescent Road
Clifton Park, NY 12065
Phone: 518.371.0799
Fax: 518.371.0822
mjelspc@mjels.com
mjels.com

February 24, 2020
Revised March 11, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Via email only: rleslie@townofbethlehem.org

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Technical Review of Revised FGEIS

Dear Mr. Leslie:

MJ Engineering and Land Surveying (MJ) has completed a technical review of the Final Generic Environmental Impact Statement (FGEIS) and associated appendices submitted on January 27, 2020 for the above referenced project. The purpose of this review is to determine if all previous comments have been adequately addressed and if the FGEIS is ready for acceptance by the Planning Board as lead agency.

Based on our review of the FGEIS as well as a review of comments provided by the Planning Board and Town staff, MJ recommends further analysis and evaluation may be necessary prior to Planning Board acceptance of this revised FGEIS. We offer the following technical review comments which reflect a consolidation of comments from our technical team, Planning Board members and Town staff. It is preferred that the FGEIS document to be directly revised, and that the additional text be highlighted for ease of review. In addition, next to the comments listed below identify the associated page #or #s of the revisions so the reviewer can easily find the revised text.

It should be noted that the following comments are in addition to the comments discussed and solutions arrived at during the February 26, 2020 meeting with Town staff, the Planning Board attorney, MJ and the applicant. The outcome of that meeting is included in the Planning Board memorandum dated February 27, 2020 that was read into the Planning Board record on March 3, 2020 and is attached for reference.

1. Use the phrase 'no significant adverse impact' consistently throughout document in place of "No potential impacts" or "No adverse impacts"

2. Appendix J of the FGEIS - the tables in the Summary of IDA PILOT Scenarios are missed named. Starting with the analysis of Concept B the first table is misnamed. It should be-No Abatement but each reads Enhanced.

3. Section 1.1 Page 4-3: 1st paragraph replace " uses permitted by right" with "use permitted by site plan and special use permit"

4. Section 1.4.1 Page 4-9: 1st paragraph- does paragraph refer to dynamic compaction, which will be used to stabilize the soil on the site for foundations, roads, parking lots? If so, it should state as such.

5. Section 1.4.7 Page 4-11: traffic mitigation improvements should also state- I787/I87/Route 9W intersection to include traffic signal timing monitoring and modifications, as necessary; and Glenmont Road/Rt 144 traffic signal warrant analysis. These mitigation measures are consistent with conclusions in the TIS.

6. Section 2.1 Page 4-19: Correction of land area and acquisition method (in fee or easement). Confirmation is needed that this north access road will be privately or publicly owned. Any road built to be conveyed to the Town will need to be constructed on land conveyed in fee by National Grid and not via an easement. If road is to be privately owned, then land can be obtained through easement or in-fee.

7. Section 3.9 Page 4-131: second paragraph references labeling but does not identify a map. Map to be provided.

8. Section 3.13 Figure 3.13-2 Land Use Map on page 4-153 is dated from the 2005 Comprehensive Plan. Use more current map. Suggest use of the LWRP land use map since it includes this area. See page 18 of LWRP document here: https://townofbethlehem.org/DocumentCenter/View/12736/Bethlehem-LWRP-_draft-2019--10-23-with-Town-revisions-12--23-2019ack?bidId=

9. Section 3.13 Figure 3.13-1 Zoning Map on page 4-152 reflects a zoning map date of 2008 while the current zoning map is identified as "Amended April 27, 2016". Link to zoning map: https://ecode360.com/attachment/BE1011/BE1011-128c%20Zoning%20Map.pdf from General Codes website.

10. Section 3.13 Page 4-149: last paragraph modify the sentence to -"…heavy industrial uses as permitted through site plan review or special use permit…" By right in not correctly used in this sentence. By right has a definition in the Town Zoning Law that no review by the Planning Board is required, which does not apply here.

11. Section 3.13 Page 4-151: 2nd paragraph- 2nd sentence is incorrect. It should reflect that "the site is located in a Heavy Industrial (I) zoning district and land divisions are only permitted in the R, RLL, RA, RB, RC, CR, RR, RH and RLI Districts only. Therefore, all future subdivision activities would be completed through the Town of Bethlehem's subdivision approval process."

12. Section 3.14 Page 4-163: last paragraph: removed "Bethlehem from "Bethlehem's Town Law 272-1…" This is NY State Town Law, not Bethlehem Town Law.

13. Section 3.15 Will police and fire receive taxes to service the site if the Port owns all buildings? Page 4-168: last paragraph: concluded additional revenue would likely offset any costs associated with additional efforts for local emergency services. Explain how emergency services will be provided support to service the expanded Port area should the buildings be owned by the Port. Suggest consideration of host community agreement and/or consideration of tenant to be taxable or subject to potential PILOT agreement.

14. Section 3.17 Reference should be made to the Fiscal Impact Assessment in the Appendix.

15. Section 3.18 Figure 3.18-1 is dated 2005 from the Comprehensive Plan. Use more current/updated map. Section mentions the Albany County Rail Trail but map does not have it labeled. Map from the Open Space plan includes an update location map of these recreation facilities. The Town Parks and Recreation Master Plan also includes a recreation map. See Parks and Recreation map in this pdf on page 60: https://townofbethlehem.org/DocumentCenter/View/9566/Bethlehem-Master-Plan---Final

16. Section 3.18 Table 3.18-1: identify which parks are located within 1-mile of the project site, as the title of the table suggests.

17. Section 3.18 At January public meeting, public comments mentioned a playground in Ezra Prentice community. Referenced as a recreation location and discuss potential impacts

18. Section 3.19 Page 4-193 states Construction is anticipated to take approximately 12-14 months but another section referenced a buildout of 10 years. Clarify or make consistent with other section(s).

19. Section 3.20 Page 4-195 states "NYSDEC is the governing agency that has complete jurisdiction and responsibility to administer the environmental justice process…" EJ is a SEQR issue with responsibility of the Lead Agency as determined by proposed action. Please clarify roles for EJ and SEQR.

20. Page 4-195: this discussion in the environmental setting section does not relate to environmental setting, it relates to mitigation measures. For example, CP29, public participation plan during site plan application are measures to mitigate impacts.

21. Page 4-186: concludes $18,302 annual cost for emergency services and no mitigation necessary. Explain how it determined that no mitigation is necessary. . Suggest that mitigation may be necessary if buildings are owned by Port and consider host community agreement and/or consideration of tenant to be taxable or subject to potential PILOT agreement.

22. Page 4-164: 4th paragraph: what is relevancy of this discussion? Economic development of the Port expansion project is unrelated to the HRVG act – "encourage economic development compatible with preservation and enhancement of natural and cultural resources within the area."

23. Section 5 Page 4-85: identify the potable water supply demand (gpd) for the project. Identify available water supplies (gpd).

24. There are several misspellings that should be corrected with revised pages or an errata sheet.
    a. On numerous pages two names are continually misspelled:
        i. Carriera should be Carriero
        ii. Beller should be Beeler
    b. Pages 3-15 and 4-45 - The phrase "…proposed building making and adjacent building…" is unintelligible; perhaps the "and" should be "any".
    c. Page 4-9, 1.4.1 Geology, para2 – is the phrase "demarcation maker" correct or should it be "demarcation marker"?

25. Section 3.1 - Southern driveway noted bedrock and shale (Normanskill Shale). How will bedrock be removed to construct southern driveway and what are potential noise impacts, duration and mitigation.

26. Note the typo: The phrase "…proposed building making and adjacent building…" is unintelligible; perhaps the "and" should be "any".

27. Page 4-65: High Water is same for Hudson River and Normans Kill. Or does Normans Kill not apply?

28. Page 4-67: Identify the total acreage of federal wetlands on the site- 1, 3-9. What happened to wetland 2?

29. Page 4-72: Normanskill Bridge construction. What wetland will it impact? Wetland 9? Please clarify.

30. Page 4-72: wetlands impacts- water service section states impacts to wetlands for water line extension requires directional drilling and Nationwide Permit. State here as well. If there are no impacts to wetlands 3 – 8, that should be stated.

31. Concept plans show wetland mitigation area along river? But the wetland section states in-lieu fee is preferred. Please clarify.

32. Page 4-87: provide map showing location of 3 monitoring sites in relation to project site. Is the Loudonville site accurately used as the nearest representative site? What about use of Albany and South Albany sites as nearest representative site? On map show other monitoring site locations from other studies referenced.

33. Page 3-28 Comment 71, page 4-119 Accident History Summary table and Page 52 of the TIS same table: Where did the statewide average accident rates come from in the accident history summary table for the segment of SR 144? Verify that all statewide average accident rates are from the most recent publication from NYSDOT.

34. Page 3-30 Comment 76: This comment response does not address whether oversized trucks can make the turning maneuvers on the preferred route nor whether NYSDOT or NYSTA comments were solicited and/or provided regarding this route.

35. Page 3-35 Comment 84: Response does not address impacts to the current roadway condition from increased project traffic nor who will own or maintain the new roadway improvements mentioned.

36. Page 4-109: add to the end of the first sentence "…due to the sight distance measurements not meeting highway requirements for truck turn movements."

37. Page 4-111: include LOS table from Appendix B. (Note that Appendix B is not labeled in the TIS). Southbound Route: provide discussion on decrease in LOS to F's. Identify Exit 22 intersection. Why is there greater detail in LOS analysis discussion in westbound alternative compared to southbound alternative. Both identify LOS F.

38. Page 4-111: Westbound Route: consistency when using quantity of trucks. Previous alternatives state 100%, while westbound route states "worst case scenario". Use 100%.

39. Page 4-111: Westbound Route: why is the following statement mentioned: "access to this interchange is also available via Church Street to the Green Street slip ramp onto I-787." There was not analysis of this interchange conducted for either alternative. Confuses the reader.

40. Page 4-112: table needs table #. Need to make clear comparison to table on page 4-110. This shows that truck traffic left to normal distribution patterns will increase truck trip during the mid-day peak from 8.9% to 31.3%, reflecting an additional 7 to 26 trucks. However, implementing a required truck route, the truck sensitivity analysis shows only a 3.8% to 6% increase in truck trips on adjacent roads, reflecting an additional 3 or 4 trucks.

41. Page 4-113: Figure 3.7-2 includes the Rt32 to Route 9W route, which is not the recommended route as shown on Figure 17 in the TIS. Figure 3.7-2 should be modified to reflect Figure 17.

42. Page 4-113 Figure 3.7-2 and TIS Page 42 Figure 17: North arrow is facing the wrong way.

43. Page 4-115: Confirm with CDTC the status of designating the roads through the Port on the Freight Priority Network. Does this designation make roads eligible for additional funding? If so, what sources?

44. Page 4-123, Conclusions and Recommendations: The improvements noted in the bullets need to be shown in a table to easily identify when the proposed improvements are recommended for implementation. The table should have the intersection in the first column followed by three columns for each phase with the improvement noted in the correct column. This would allow the Town to more easily identify improvements and their recommended implementation schedule.

45. Page 4-119, Accident History Analysis: Provide conclusions regarding the segment accident rate and trends for NY Route 144 as it relates to potential safety concerns at the new southern driveway. Include a discussion regarding the types of accidents occurring, and exposure and risk as it relates to the accidents experienced and the proposed increase in traffic volume generated from the project. Identify proposed mitigation measures that can be supported by NYSDOT; for example: removal of southern driveway, speed limit reduction, turn lanes that remove turning vehicle from thru lane.

46. Traffic – comment 92 response table has wrong intersection label in 2nd row. Should be the Wemple Road south.

47. Section 3.7.5 Section 3.7.5 - Bicycles and Pedestrians (and responses to #13 and # 74) The response to the question of impacts on bicycle and pedestrian traffic at the I787 Frontage Road and Church Street is inadequate. The FEIS states that the South End Bikeway Connector will "include a new signalized control for the pedestrian movement." There is not enough detail in this statement to conclude no impact, especially from right turning trucks onto Church Street. Collisions with bicyclists associated with right-turning vehicles is a common type of motorist/bicycle accident because a right-turning motorist's attention is directed to the left toward oncoming traffic and bicyclists are not anticipated approaching on the right side.

    The "T" intersection currently is controlled by a flashing signal. Based on the information presented, it is not understood how a pedestrian signal would operate. What other changes will be made at this intersection? Will there be a new right turn lane across the entrance/exit to the 2-way protected bike lane? Will there be any controls at the entrance to protect bicyclists and pedestrians from the off-track of turning tractor trailers?

    More information about the planned improvements need to be presented and possible mitigation discussed.

48. Response 77, page 3-32, The response regarding the Bikeway crossing is not consistent with the FGEIS text at page 4-122, Section 3.7.6

49. Response 111, page 3-46, there is no discussion of dewatering dredged material and its techniques, impacts, and protective measures.

50. Comments 74, 77, 93: impacts from new trucks on South End Connector bikeway – responses are not correct. However, the response to Supplemental DGEIS comment 13 is accurate. Correct the response to comments 74, 77, 93.

51. Sanitary Sewer – comment 125: Illustrate on concept plans where treatment plant is proposed on site. Identify/reference or justification that site conditions are suitable for treatment plant.

52. Land Use and Zoning – Highway frontage in Figure 3.13-3 and 3.13-4 needs to be verified.

53. Site Layout Concepts – comment 239 response is not accurate. Front yard setback along Normans Kill not a side yard setback.

54. Supplemental: CDTA – comment 8: has CDTA been contacted to determine if 1,100 potential employees warrant a new bus route or the addition of a new bus stop to an existing route.

55. Ensure comment responses are consistent with text and information with in the FGEIS itself. Examples include replacing the term “recommended” to “required” when referring to the truck route through the Port of Albany roadways.

56. Section 8 – Cumulative Impacts page 4-213: Revise second paragraph to reflect extension of water line.

57. Page 4-123, second bullet under conclusions and recommendations, last sentence: replace last sentence with the following: *" APDC will include the truck route clause in any anticipated tenant lease as well as installing a surveillance camera near the intersection of Sout6h Port Road and Port Road to ensure truck traffic follows the truck route."*

58. Section 8 – Cumulative Impacts page 4-213: Add the following text immediately prior to last paragraph to reflect potential cumulative impacts on traffic. "*The development projects described above along with the proposed development discussed herein may have cumulative impacts on traffic within the Town, including a degradation in the level of service. While each project individually will be required to address impacts, the Town, through its Local Waterfront Revitalization Program (LWRP), has recognized that this is a broader challenge and has recommended a comprehensive NYS Route 144 / River Road corridor study to determine key issues and potential steps to alleviate those issues."*

59. Section 3.7.6 Traffic & Transportation Conclusions and Recommendations: It is recognized that potential mitigation is identified and a follow-up traffic analysis will be completed for all site plan applications with tenant specific impacts to be identified at time of site plan. Add the following language to clarify that additional mitigation may be required as a result of that follow-up traffic analysis.

    "Additional or other mitigation may be required as a result of revised traffic impact study during site plan stage. "

60. Within the air quality section address the concerns expressed from public comment regarding trucks volume transferred from South Pearl Street to roads within the Port ("front yard to back yard"). Apply the conclusions from the DOH/DEC study related to distance and exposure to contaminants.

MJ recommends that the applicant address these comments as well as any additional substantive comments received from the Lead Agency and submit a revised Final GEIS for review.

Should you have any questions, please do not hesitate to contact myself or Ms. Jackie Hakes at (518) 371-0799.

Sincerely,

Joel Bianchi, P.E.
Senior Associate
Municipal Engineering
Group Manager

Attachment: Planning Board Update dated February 27, 2020

ecc: Jaclyn Hakes, AICP, Planning Group Manager
Chad Schneider, PE, Traffic Engineer
Elizabeth Staubach, Town of Bethlehem Economic Development Coordinator
File

Engineering and
Land Surveying, P.C.

1533 Crescent Road
Clifton Park, NY 12065
Phone: 518.371.0799
Fax: 518.371.0822
mjelspc@mjels.com
mjels.com

April 10, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Via email only: rleslie@townofbethlehem.org

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Technical Review of Revised FGEIS

Dear Mr. Leslie:

MJ Engineering and Land Surveying (MJ) has completed a technical review of the revised Final Generic Environmental Impact Statement (FGEIS), associated appendices and comment response submitted on March 26, 2020 for the above referenced project. The purpose of this review is to determine if all previous comments have been adequately addressed and if the FGEIS is ready for acceptance by the Planning Board as lead agency.

To expedite the process, we offer suggested text edits in track chances in the attached FGEIS sections. It will be necessary for the Planning Board and the applicant to agree to these suggested text edits prior to Planning Board acceptance of the FGEIS. Additionally, any outstanding technical comments are listed below.

Suggested edits in track changes are found on the following FGEIS pages:

1. Section 1
    a. Page 4-7
    b. page 4-12 through 4-13

2. Section 2
    a. page 4-32

3. Section 3
    a. page 4-79
    b. page 4-102
    c. page 4-105
    d. page 4-119
    e. page 4-125
    f. page 4-126
    g. page 4-128
    h. page 4-129
    i. page 4-130
    j. page 4-134
    k. page 4-137
    l. page 4-138
    m. page 4-165
    n. page 4-177

Outstanding Technical Comments:

1. Section 2, page 4-12: The Glenmont/144 traffic signal warrant analysis was not included on page 4-12 as noted in the March 26, 2020 response.

2. Section 2, page 4-32: Identify the number of anticipated truck trips per day to import fill material and the anticipated duration.

3. Section 3, page 4-45: previous Comment letter Question 25 related to the Southern Driveway and bedrock removal. Document was not fully updated to respond to this question. Revise document to state a blasting plan would be prepared and identify the components involved in such plan – monitoring instrument location, notification to neighbors, duration, etc.

4. Section 3, page 4-47: include discussion about potential attenuation of noise related to elevation of River Road.

5. Section 3, page 4-79: Confirm and identify there is a regional wetland bank available for this watershed to accept the proposed in-lieu-fee mitigation.

6. Section 3, page 4-125:
    a. indicate the standard used to evaluate condition of railroad crossings.
    b. Clarify what evaluation was completed of the railroad crossing (i.e. just pavement?).
    c. The life cycle analysis of the existing pavement section was not included in the roadway condition analysis as identified in the resolution stated in the February 27, 2020 letter to the Planning Board. Please include.
    d. Identify if the turning radii support truck movements and allow to stay in their own travel lane. If not, state any impacts and/or mitigation.
    e. Consider inclusion of road use agreement at time of site plan review to ensure truck route is in a suitable condition to accommodate truck traffic. Since mitigation of impacts on Ezra Prentice community is dependent on the accommodation of this route as a truck route, having a road that meets standards is important

7. Section 3, page 4-128:
    a. Rework this section as proposed below to be more clear for the reader:
        i. Under current posted speed limit (55mph) for passenger vehicles:
            1. Intersection sight distance
            2. Stopping sight distance
            3. Identify what turning movements can be accommodated - Right in /right out appear to be the only turning movements consistent with site distance calculations based on available distances.
        ii. Under reduced speed limit at 45mph
            1. Intersection sight distance
            2. Stopping sight distance
            3. Identify what turning movements can be accommodated
    b. Include a sight distance analysis (stopping and intersection) for trucks using the south entrance at the posted speed limit.

8. Section 3, page 4-129:
    a. Explain why this new alternative has been introduced – is there a need for full passenger vehicles access at a southern location?
    b. show alternative driveway location on map, including crossing/access easement and Town right-of-way as well as sight distance table
    c. identify if any ROW acquisition is required for alternative south driveway location.
    d. Include language that a full sight distance analysis would be required at time of site plan application and prior to a highway work permit approval for the alternative driveway location.

9. Section 3, page 4-130:
    a. clarify if the proposed mitigation is for the alternative southern driveway, the proposed southern driveway or both.

10. Section 3, page 4-131:
    a. Add qualitative assessment/conclusion regarding safety implications and potential increase number of accidents along this segment of Route 144 near the southern driveway. (i.e. this should be tied to the turning movement restrictions under posted speed limit as previously discussed)

11. Section 3, Page 4-137: 3rd bullet should state "the monetary amount of the fair share contribution to be determined during site plan approval stage".

MJ recommends the applicant address the comments and suggested edits in track changes and submit a revised FGEIS to the Planning Board for review.

Should you have any questions, please do not hesitate to contact myself or Ms. Jackie Hakes at (518) 371-0799.

Sincerely,

Joel Bianchi, P.E.
Senior Associate
Municipal Engineering
Group Manager

Attachment: FGEIS track changes pages

ecc: Jaclyn Hakes, AICP, Planning Group Manager
Chad Schneider, PE, Traffic Engineer
Elizabeth Staubach, Town of Bethlehem Economic Development Coordinator
File

APPENDIX B

SEQRA CORRESPONDENCE

July 30, 2019

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Via email only: rleslie@townofbethlehem.org

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
SEQR Completeness Review of Submittal #7

Dear Mr. Leslie:

MJ Engineering and Land Surveying (MJ) has reviewed the Draft Generic Environmental Impact Statement (DGEIS) as submitted by McFarland Johnson in an email dated July 25, 2019 and re-submitted on July 30, 2019, on behalf of the Albany Port District Commission for the proposed Port of Albany Expansion Project to determine if it is adequate for public review Pursuant to 6 NYCRR § 617.9 (a) (2). The completeness review has compared the required elements outlined in the Final Scoping Document dated March 27, 2019 to the contents of the DGEIS and its appendices. Once the Planning Board, as the Lead Agency has determined the DGEIS is complete, the document can be made available for public view.

In our review of the DGEIS, MJ also referred to **The SEQR Handbook, Fourth Edition 2019.** This reference document offers guidance on the review of a Draft EIS and specifically the determination of completeness and adequacy of a draft EIS for public review. The following includes specific guidance as identified in Chapter 5: Environmental Impact Statements, Section D.

- *Section D-1: "The lead agency must decide whether a draft EIS is complete and adequate for public review and comment, in terms of both its scope and content. Adequacy of the EIS for public review should be based on reasonable expectations, keeping in mind that the purpose of the public comment period is to allow all involved agencies and the public to review the draft EIS and comment on its merits. The regulations do not demand that the draft EIS be perfect–that would be an unreasonable expectation."*

- *Section D-2: "…Under the amended regulation at 6 NYCRR § 617.9 (a) (2), a draft EIS is adequate with respect to scope and content for the purpose of commencing public review if it meets the requirements of the final written scope (see 6 NYCRR § 617.8)…and 617.9 (b) (the regulatory requirements for the contents of a draft EIS), and provides the public and involved agencies with the necessary information to evaluate project impacts, alternatives, and mitigation measures…Additionally, a written scope, if one was prepared, provides a detailed catalogue of the materials which the lead agency identified as necessary for inclusion in the EIS. The lead agency should ensure that all relevant information has been presented and analyzed but should neither expect nor require a "perfect" or exhaustive document."*

- *Section D-2: "A draft EIS that is adequate to be accepted for public review should describe the proposed action, alternatives to the action, and various means of mitigating impacts of the action. The draft EIS should identify and discuss all significant environmental issues related to the action, however, the draft EIS will not necessarily provide a final resolution of any issues."*

Based upon the review of the July 30, 2019 submission, MJ recommends that the Town may determine the DGEIS complete for the purpose of public review.

Should the Town or applicant have any questions, please do not hesitate to contact this office at (518) 371-0799.

Sincerely,

Joel Bianchi, P.E.
Senior Associate
Municipal Engineering
Group Manager

ecc: Jaclyn Hakes, AICP, Planning Group Manager
Chad Schneider, PE, Traffic Engineer
Elizabeth Staubach, Town of Bethlehem Economic Development Coordinator
File

McFarland Johnson
Innovative Solutions / Sustainable Results

60 Railroad Place • Suite 402 • Saratoga Springs, NY 12866
Phone: 518-580-9380 • Fax: 518-580-9383
www.mjinc.com

August 5, 2019

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York

Dear Mr. Leslie:

We are in receipt of the Planning Board comments from the June 4, 2019 Planning Board meeting. We offer the following responses to their comments:

1. Mr. Lewendon suggested additional information on environmental issues specifically riverfront access and to identify the Albany County Rail Trail and cross reference the viewing area across the river for the Visual Impact Analysis.
Environmental issues specifically related to riverfront access have been addressed related to the wharf construction including dredging (Section 3.1), avoidance of SAVs (Section 3.2), as well as the visual resources and Visual Impact Assessment Report (Section 3.12 and Appendix M).

The view from across the river was addressed in the Aesthetic and Visual Resources section as well as the Visual Impact Assessment Report (Section 3.12 and Appendix M).

Since the Albany County Rail Trail does not pass through or adjacent to the project site, and as such was not incorporated into the DGEIS.

2. Mr. Smolinsky suggested addressing Rensselaer County or locations across the river, specifically the Papscanee Island Nature Preserve.
Papscanee Island Nature Preserve was addressed in the Visual Impact Assessment Report (Appendix M).

3. Mr. Gyory suggested listing existing town owned parks.
All Town owned parks are listed in the Recreation and Open Space Section 3.18.

4. Emergency services; identify number of existing and projected services needed.
The projected emergency service needs have been addressed and discussed in the Economic and Fiscal Impact Analysis (Appendix N).

5. Mr. Leslie recommended using caution when qualifying additional tax revenue, since the Port is tax exempt.
   As stated in the DGEIS, the Port intents to enter into a ground lease, where the Port would own the land and the tenant would own the building. Since the tenant would own the building, the building would therefore be taxable. The Economic and Fiscal Impact Analysis (Appendix N) was completed with the understanding of this scenario.

6. Ms. Powers suggested stronger language on the lease for encouraging the tenants to use alternative or renewable energy sources.
   The existing *Town of Bethlehem Comprehensive Plan and Generic Environmental Impact Statement* dated August 2005 states their goal to "promote the use of alternative, renewable energy sources for public and private buildings". The document also states, "encourage the use of Leadership in Energy and Environmental Design (LEED) standards for new development and redevelopment of buildings and sites in the town". The Compressive Plan uses language including "promote" and "encourage". The DGEIS Section 3.14 Community Character and Compatibility with Comprehensive Plan uses identical language by stating "the APDC will encourage the tenant(s) of the facility to use alternative and or renewable energy sources for the final buildings." It uses stronger language by stating "The APDC will recommend the project follow Leadership in Energy and Environmental Design (LEED) standards as applicable". The Port believes the use of the word "recommended" for LEED standards addresses the concern.

7. Mr. Smolinsky suggested looking at the general guidance in the Comprehensive Plan and the Town Code for renewable energy.
   See response to Ms. Powers comment above.

Please do not hesitate to call should you require additional information or have any questions.

Sincerely yours,
McFarland-Johnson, Inc.

Ashley Erdmann

Ashley Erdmann, P.E.
Civil Engineer

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK

SEQR RESOLUTION
COMPLETION AND ACCEPTANCE OF DRAFT GENERIC ENIVIRONMENTAL IMPACT STATEMENT, ESTABLISHMENT OF PUBLIC COMMENT PERIOD, AND PUBLIC HEARING DATE

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, and (7) adopted the Final Scope for the GEIS; and,

WHEREAS, the applicant has recently submitted a Draft GEIS to the Town and said Draft GEIS was reviewed and considered by the Town's consultant, Town Planning Staff and by the Town Planning Board with respect to its scope and content for the purpose of commencing public review; and

NOW, THEREFORE, BE IT RESOLVED,
pursuant to 6 NYCRR.9 that the Planning Board hereby determines that the Draft GEIS for the Albany Port District Industrial Park Project (Port of Albany Expansion) is complete and hereby accepted as adequate with respect to its scope and content for the purpose of commencing public review; and,

BE IT FURTHER RESOLVED,
pursuant to 6 NYCRR 617.9(a)(3), written comments on the Draft GEIS will be accepted by the Planning Board until September 6, 2019; and

BE IT FURTHER RESOLVED,
pursuant to 6 NYCRR 617.9(a)(4), a public hearing on the DGEIS is hereby scheduled and will be conducted by the Planning Board on August 20, 2019; and

BE IT FURTHER RESOLVED,
a notice of completion of Draft GEIS and Notice of Public Hearing shall be prepared and filed with involved agencies and published in accordance with the requirements of 6 NYCRR 617.12; and

BE IT FURTHER RESOLVED,
the Final EIS will address recreational opportunities within a 1 mile radius of the project area; and

BE IT FURTHER RESOLVED,

in addition to the requirements of 6NYCRR 617.12, the Draft GEIS shall be filed in the Bethlehem Town Library and with Town Clerk, and posted on the Town website to ensure maximum public access to the document.

On a motion by Scott Lewendon, seconded by Brian Gyory, and a vote of __5__ for, __0__ against, ___0___ abstained and ___0____ absent, this RESOLUTION was adopted on August 6, 2019.

14-12-9 (3/99)-9c

SEQR

State Environmental Quality Review
Notice of Completion of Draft
and
Notice of SEQR Hearing

Lead Agency: Town of Bethlehem **Project Number**

Address: 445 Delaware Avenue
Delmar, New York 12054

Date 8/7/2019

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. (and local law # if any)

A Draft Environmental Impact Statement has been completed and accepted for the proposed action described below. Comments are requested and will be accepted by the contact person until Robert Leslie A public hearing on the Draft EIS will be held on 8/20/2019 at 6:00 pm (date and time) at 445 Delaware Avenue Delmar, NY 12054 (place).

Name of Action:

Albany Port District Commission Industrial Park Project (Port of Albany Expansion)

Description of Action:

Albany Port District Commission (Port) is proposing to construct an industrial park with 5 conceptual layouts that range from 1.13 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 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, Glenmont, NY 12077 (Bethlehem)
East of River Road (NYS Rt. 144) south of Normans Kill and north of PSEG property.
Tax Map Numbers: 98.01-2-1.0 and 98.00-2-10.23

Potential Environmental Impacts:

The project may have significant environmental impacts related to land, geological features, surface water, groundwater, flooding, air, plants and animals, aesthetic resources, transportation, energy, noise, odor and light, human health and community character.

A copy of the Draft / Final EIS may be obtained from:

Contact Person: Robert Leslie, Director of Planning

Address: 445 Delaware Avenue, Delmar, NY 12054

Telephone Number: 518-43-4955

A copy of this notice must be sent to:

Department of Environmental Conservation, 625 Broadway Albany, New York 12233-1750

Chief Executive Officer, Town/City/Village of Town of Bethlehem

Any person who has requested a copy of the Draft / Final EIS

Any other involved agencies

Environmental Notice Bulletin 625Broadway Albany, NY 12233-1750

Copies of the Draft EIS must be distributed according to 6NYCRR 617.12(b).

The ENB SEQRA Notice Publication Form - *Please check all that apply*

Reset Form

Deadline: Notices must be received by **6 p.m. Wednesday** to appear in the following Wednesday's ENB

- ☐ Negative Declaration - Type I
- ☐ Conditioned Negative Declaration
- ☐ Positive Declaration
- ☐ Draft Scope
- ☐ with Public Scoping Session (optional)
- ☐ Final Scope
- ☑ Draft EIS
- ☑ with Public Hearing
- ☑ Generic
- ☐ Supplemental
- ☐ Final EIS
- ☐ Generic
- ☐ Supplemental

DEC Region # 4 County: Albany Lead Agency: Town of Bethlehem Planning Board

Project Title: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)

Brief Project Description: The action involves . . .

A Positive Declaration was previously issued on this project on January 15, 2019 and notice published in the ENB. A draft scope was submitted and a public scoping session occurred on March 19th 2019 and the Bethlehem Planning Board (Lead Agency) accepted the Final Scope on April 2, 2019. A Draft Generic Environmental Impact Statement was accepted as complete and adequate for public review on August 6, 2019 and a Public Hearing was scheduled for August 20, 2019 at Bethlehem Town Hall (445 Delaware Avenue, Delmar).

Albany Port District Commission (Port) is proposing to construct an industrial park with 5 conceptual layouts that range from 1.13 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 a bulkhead along Hudson River for on and offloading of equipment and materials (wharf).

Project Location (include street address/municipality): Port Road South, Glenmont NY 12077 (Bethlehem)

Contact Person: Mr. Robert Leslie, AICP, Director of Planning-Town of Bethlehem

Address: 445 Delaware Avenue City: Delmar State: NY Zip: 12054

Phone: 5184934955 Fax: 5184395808 E-mail: rleslie@townofbethlehem.org

For Conditioned Negative Declaration / Draft Scope / Draft EIS: Public Comment Period ends: 9 / 6 / 2019

For Public Hearing or Scoping Session: Date: 8 / 20 / 2019 Time: 6 : 00 am/pm

Location: Bethlehem Town Hall
445 Delaware Avenue, Delmar NY 12054

A hard copy of the Draft Scope/Final Scope/DEIS/FEIS is available at the following locations:
Bethlehem Town Clerk's Office, Bethlehem Public Library

The online version of the Draft Scope/Final Scope/DEIS/FEIS is available at the following publically accessible web site:
www.townofbethlehem.org

For Conditioned Negative Declaration: In summary, conditions include:

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK

SEQR RESOLUTION
RESCHEDULE OF PUBLIC HEARING DATE AND EXTENSION OF PUBLIC COMMENT PERIOD ON DRAFT GENERIC ENIVIRONMENTAL IMPACT STATEMENT

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 (the "Application"); and,

WHEREAS, the Planning Board on August 6, 2019 adopted a SEQR resolution that (1) accepted the Draft Generic Environmental Impact Statement (DGEIS) as complete (2) scheduled a public hearing for August 20, 2019, and (3) established a public comment period until September 6, 2019; and,

WHEREAS, to ensure compliance with the notice provisions for public hearings under SEQRA at 6 NYCRR Part 617.9(a)(4)(ii) which requires the public hearing to commence no less than 15 calendar days after the filing of the Notice of Completion, the Planning Board desire to set a new date for the SEQRA public hearing on September 3, 2019.

NOW, THEREFORE, BE IT RESOLVED,

pursuant to 6 NYCRR 617.9(a)(4), a public hearing on the Draft GEIS is hereby scheduled and will be conducted by the Planning Board on September 3, 2019 at 6 pm in the Bethlehem Town Hall, 445 Delaware Avenue, Delmar, NY 12054 to hear all comments related to the Application; and

BE IT FURTHER RESOLVED,

pursuant to 6 NYCRR 617.9(a)(3), the written comment period on the Draft GEIS will be extended until 5:00 pm on September 14, 2019 all written comments should be sent to: Robert Leslie, Director of Planning at rleslie@townofbethlehem.org or 445 Delaware Avenue, Delmar, NY 12054; and

BE IT FURTHER RESOLVED,

a Notice of Public Hearing shall be prepared, published and filed with involved agencies and published in accordance with the requirements of 6NYCRR 617.12.

On a motion by Brian Gyory, seconded by Scott Lewendon, and a vote of _Four (4)_ for, _Zero (0)_ against, Zero (0)_ abstained and _One (1)__ absent, this RESOLUTION was adopted on August 14, 2019.

14-12-9 (3/99)-9c

SEQR

State Environmental Quality Review
Notice of Completion of Draft
and
Notice of SEQR Hearing

Lead Agency: Town of Bethlehem **Project Number**

Address: 445 Delaware Avenue
Delmar, New York 12054

Date 8/7/2019

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. (and local law # if any)

A Draft Environmental Impact Statement has been completed and accepted for the proposed action described below. Comments are requested and will be accepted by the contact person until 9/14/2019 A public hearing on the Draft EIS will be held on 9/3/2019 at 6:00 pm (date and time) at 445 Delaware Avenue Delmar, NY 12054 (place).

Name of Action:

Albany Port District Commission Industrial Park Project (Port of Albany Expansion). A DGEIS was accepted as complete and adequate for public review on 8/6/2019 and a Public Hearing was scheduled for 8/20/2019 at Bethlehem Town Hall. On 8/14/2019 the 8/20/2019 Public Hearing was re-scheduled for 9/3/19. This public hearing is being held to ensure compliance with the notice provisions for public hearings under SEQRA at 6 NYCRR Part 617.9(a)(4)(ii). The public comment period on the Draft GEIS has been extended to 09/14/2019

Description of Action:

Albany Port District Commission (Port) is proposing to construct an industrial park with 5 conceptual layouts that range from 1.13 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 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, Glenmont, NY 12077 (Bethlehem)
East of River Road (NYS Rt. 144) south of Normans Kill and north of PSEG property.
Tax Map Numbers: 98.01-2-1.0 and 98.00-2-10.23

Potential Environmental Impacts:

The project may have significant environmental impacts related to land, geological features, surface water, groundwater, flooding, air, plants and animals, aesthetic resources, transportation, energy, noise, odor and light, human health and community character.

A copy of the Draft / Final EIS may be obtained from:

Contact Person: Robert Leslie, Director of Planning

Address: Bethlehem Town Hall
445 Delaware Avenue, Delmar, NY 12054

Telephone Number: 518-43-4955

A copy of this notice must be sent to:

Department of Environmental Conservation, 625 Broadway Albany, New York 12233-1750

Chief Executive Officer, Town/City/Village of Town of Bethlehem

Any person who has requested a copy of the Draft / Final EIS

Any other involved agencies

Environmental Notice Bulletin 625Broadway Albany, NY 12233-1750

Copies of the Draft EIS must be distributed according to 6NYCRR 617.12(b).

Reset

The ENB SEQRA Notice Publication Form - *Please check all that apply*

Reset Form

Deadline: Notices must be received by **6 p.m. Wednesday** to appear in the following Wednesday's ENB

- [ ] Negative Declaration - Type I
- [ ] Conditioned Negative Declaration
- [ ] Positive Declaration
- [ ] Draft Scope
- [ ] with Public Scoping Session (optional)
- [ ] Final Scope
- [x] Draft EIS
- [x] with Public Hearing
- [x] Generic
- [ ] Supplemental
- [ ] Final EIS
- [ ] Generic
- [ ] Supplemental

DEC Region # 4 County: Albany Lead Agency: Town of Bethlehem Planning Board

Project Title: Albany Port District Commission Industrial Park Project (Port of Albany Expansion)

Brief Project Description: The action involves . . .

A Draft Generic Environmental Impact Statement was accepted as complete and adequate for public review on August 6, 2019 and a Public Hearing was scheduled for August 20, 2019 at Bethlehem Town Hall (445 Delaware Avenue, Delmar). On 8/14/2019 the 8/20/2019 Public Hearing was re-scheduled for 9/3/19. This public hearing is being held to ensure compliance with the notice provisions for public hearings under SEQRA at 6 NYCRR Part 617.9(a)(4)(ii). The public comment period on the Draft GEIS has been extended to 09/14/2019.

Albany Port District Commission (Port) is proposing to construct an industrial park with 5 conceptual layouts that range from 1.13 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 a bulkhead along Hudson River for on and offloading of equipment and materials.

Project Location (include street address/municipality): Port Road South, Glenmont NY 12077 (Bethlehem)

Contact Person: Mr. Robert Leslie, AICP, Director of Planning-Town of Bethlehem

Address: 445 Delaware Avenue City: Delmar State: NY Zip: 12054

Phone: 5184934955 Fax: 5184395808 E-mail: rleslie@townofbethlehem.org

For Conditioned Negative Declaration / Draft Scope / Draft EIS: Public Comment Period ends: 9 / 6 / 2019

For Public Hearing or Scoping Session: Date: 9 / 03 / 2019 Time: 6 : 00 am/pm

Location: Bethlehem Town Hall
445 Delaware Avenue, Delmar NY 12054

A hard copy of the Draft Scope/Final Scope/DEIS/FEIS is available at the following locations:
Bethlehem Town Clerk's Office, Bethlehem Public Library

The online version of the Draft Scope/Final Scope/DEIS/FEIS is available at the following publically accessible web site:
www.townofbethlehem.org

For Conditioned Negative Declaration: In summary, conditions include:

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 [IfApplicable]

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: _____ Date: 11/20/19

Signature of Preparer (if different from Responsible Officer) _____ 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

McFarland Johnson
Innovative Solutions / Sustainable Results

60 Railroad Place • Suite 402 • Saratoga Springs, NY 12866
Phone: 518-580-9380 • Fax: 518-580-9383
www.mjinc.com

January 22, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York

Dear Mr. Leslie:

We are in receipt of the initial FGEIS review comment letters sent via email November 20 and 21, 2019 prepared by MJ Engineering and Land Surveying, P.C. and the Planning Board members. We respectfully submit the following responses to the comments related to FGEIS. Below is the comment followed by our response in bold text:

Overall Organization and Structure of FGEIS

1. MJ Engineering and Land Surveying, P.C.: The overall organization and structure of the FGEIS must be modified in a manner that clearly articulates any new information provided in the FGEIS, provides clear context and background as to why new information is provided (additional impacts evaluated, new mitigation proposed, revised thresholds proposed), clearly identifies any modifications to the DGEIS by reference, and appropriately addresses substantive public comments.

   RESPONSE: Updated sections of the Draft GEIS are included as Section 4.0 of the Final GEIS to reflect the revised text.

2. MJ Engineering and Land Surveying, P.C.: Response to Public Comment section should include an introductory paragraph to provide context for this section, describe why this section exists and how the applicant is responding to comments (describe organization of the comment responses – by DGEIS section - and if there are similar comments from multiple people, how that comment is addressed to avoid unnecessary duplication).

   Example language*: In accordance with 6 NYCRR Part 617.9(b)(8), the FGEIS must respond to*

substantive comments received. The following table identifies substantive comments received during the public comment period specific to environmental impacts associated with the State Environmental Quality Review (SEQR) process. Comments received during the public comment period that are not relevant to the evaluation and identification of environmental impacts, the development of appropriate mitigation measures or comments that concur with or object to the proposed action without elaboration are not included in this table. However, such comments are considered by the Lead Agency and are incorporated into the public record.

RESPONSE: The FGEIS Section 3. RESPONSE TO COMMENTS will begin with the following:

In accordance with 6 NYCRR Part 617.9(b)(8), the FGEIS must respond to substantive comments received. The following section identifies substantive comments received during the public comment period specific to the environmental impacts associated with the Albany Port District Commission Port of Albany Expansion Project and their associated responses. Comments received during the public comment period that are not relevant to the evaluation and identification of environmental impacts, the development of appropriate mitigation measures or comments that concur with or object to the proposed action without elaboration are not included in this section. However, such comments are considered by the Lead agency and are incorporated into the public record.

Comments have been organized and numbered as they relate to the DGEIS sections, with the DGEIS section heading listed. Similar comments are responded to the first comment in that group and then all subsequent duplicates will reference the original response that addresses their comment.

See Section 3.0 Response to Comments in the FGEIS.

Global Comments to FGEIS

3. MJ Engineering and Land Surveying, P.C.: The response to comments table format and organization is fine. However, all responses to comments must clearly identify if the response is referencing an existing section in the DGEIS or if it is providing new or modified language or information not found in the DGEIS (unless the response is a general response). It is unclear as presented currently and in fact many responses to comments introduce new information. The responses should be updated to reference the new FGEIS Section 3 – Substantial Modifications to the DGEIS, as applicable.

   RESPONSE: All comment responses have been marked to show whether the response references an existing section of the DGEIS or is adding additional information.

4. MJ Engineering and Land Surveying, P.C.: Comment responses indicating “duly noted” are not acceptable. If the comment has been deemed substantive it must be appropriately addressed in the FGEIS. The comment response should reference a specific section in the DGEIS where that comment is already addressed or provide for a modification of information and text in the appropriate section of the FGEIS. This may occur in a proposed new Errata Sheet Section of the FGEIS or in the Substantial Modification to DGEIS section.

RESPONSE: All duly noted responses have been modified to detail how the comment is responded to.

5. MJ Engineering and Land Surveying, P.C.: Comment responses referencing a response to a previous response to comment must clearly identify which previous comment is being referenced. For example, response to FGEIS Comment 40, page 3-14 is "See above comment and response to John Smolinsky." There are 39 comments above and many responses to John Smolinsky. The specific comment should be referenced or alternatively, reference the new FGEIS section that addresses the comment.

   RESPONSE: We found that only the following three comments inadvertently did not adequately cross reference our response:

   Comment 40 will be modified as follows: "See response to comment 34 from John Smolinsky above."

   Comment 41 will be modified as follows: "See response to comment 36 from John Smolinsky above."

   Comment 43 will be modified as follows: "See response to NYSDEC comment 22 regarding conditions of shoreline under Section 2.5."

   See Section 3.0 Response to Comment.

6. Brian Gyory: Albany County Letter At one of our recent meetings we discussed that this would be included as a footnote in the document. Please provide this reference and location.

   RESPONSE: The Albany County Letter was received after the close of the public comment period. Therefore, to be in compliance with SEQRA policy and procedures, the letter was not included nor referenced in the FGEIS. However, all comments are duplicates of comments received by others and therefore have been addressed in the FGEIS. The Port of Albany met with the Albany County Executive Office on January 8 , 2020 to review our responses to their comments. The Port of Albany will notify the County Executive of the FGEIS submittal and where their comments are addressed under a separate letter to their office.

<u>Specific FGEIS Content Comments</u>

7. Gianna Aiezza: The EIS needs to include a table with the thresholds clearly identified.

   RESPONSE: The Final GEIS included Table 1.0-1: Proposed Project Thresholds which details the proposed thresholds for the project.

8. MJ Engineering and Land Surveying, P.C.: FGEIS Table 1.0-1: The FGEIS should provide another overall table that clearly outlines all the permits and approvals needed from the various agencies, and identify at what phase of development (Phase1, Phase 2, Phase 3) are they needed. For example : If permit from a specific agency is needed initially for Phase 1, and no more for Phase 2 and 3 the table states 'permit issued during phase 1' If permit not needed in

phase 1 but needed in phase 2- then phase 2 becomes the threshold for the permit. [This table will help us in drafting the Findings Statement]. The current table 1.0-1 provides no threshold levels for Phase 1 and 2, except for full build out at Phase 3.

RESPONSE: All infrastructure approvals and permits are required as part of Phase 1. The only approval and permit required for Phase 2 and 3 are the individual site plan approval and subsequent building permit associated with the specific building for the respective Phase. Therefore, the list of permits and approvals for Phase 1 is provided in DGEIS Section 2.0.

9. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 4, page 3-1: Update Item 3.9 in Table 1.3-1 under proposed mitigation to include the statement that the 6 MGD capacity will exist once the Town completes the upgrades currently in progress. The way the EIS is written implies that the capacity exists today which is not the case. Also include such a statement as appropriate wherever water capacity is discussed throughout the document (including FGEIS Comment 117).

   RESPONSE: The Section 3.9 in Table 1.3-1 has been updated to show that the 6 MGD capacity will exist once the Town completes the upgrades currently in progress, as shown below. The note will be included within other references to the Town's water system.

3.9 Water Service (Potable and Fire Protection)	16,950 GPD water demand. 2,300 gpm fire demand. Connection to and extension of Town's water main.	Town existing watermain system **will have a 6 MGD capacity once the Town completes upgrades to the current system When the watermain is upgraded, it will have** adequate water to supply both the domestic and fire demand. Watermain design will be completed in accordance with AWWA Standard C600, Town of Bethlehem Water District No. 1, Albany County Department of Health, and NYSDOH regulations.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Section 1.3.

10. Brian Gyory: Comment No. 4 Section 3.7 identifies improvements to be made, Where is there additional information about these items?

    RESPONSE: The Table 1.3-1 was meant to summarize potential impacts and proposed mitigation measures of the sections discussed within the DGEIS. Details of the proposed mitigation for the Section 3.7 Traffic and Transportation are included within the DGEIS Section 3.7 as well as the Traffic Impact Study (TIS) report.

11. Gianna Aiezza: Table 1.3-1 - 3.20 for proposed mitigation refer to Supplemental EIS and delete text in table.

    RESPONSE: We think it is appropriate to leave Section 3.20 Environmental Justice as well as discussions in subsequent sections including the Table 1.3-1 since the Environmental Justice section was added in response to a public comment.

12. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 17, page 3-9: the description of the proposed action in DGEIS Section 2.3 should include the full project description, including phases and thresholds and must be consistent with the text included in DGEIS Section 4 – Alternatives.

RESPONSE: Section 2.3 will be modified to replace to first paragraph of Section 2.3 with the following:

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 FGEIS, only the full build out and corresponding phases of Concept A are being evaluated. 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 FGEIS, 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 FGEIS. It should be noted that since Phase 1 includes site, utility and roadway infrastructure, these impacts are evaluated throughout all sections.

The FGEIS 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 include the following:

Concept Plan A – Largest, Two-Level Warehouse

The detailed description for this concept and the corresponding phasing plan is provided above for the 1,130,000 square feet of industrial space.

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

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.

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.

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.

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.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Section 2.3.

13. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 26: Will the noise level be consistent with the Town's Noise Ordinance for construction activities? Identify the ordinance noise level, the noise level proposed by the construction work.

RESPONSE: The Town of Bethlehem's Local Law No. 5-2009 states the following: "No person shall operate or permit to be operated any tools or equipment used in construction, drilling, excavation or demolition work, between 10:00 p.m. and 6:00 a.m. the following day, except as specifically exempted § 81-11, Exemptions, above 65 dBA of noise as measured by a sound level meter at the property line of the parcel from which it is emanating or at a distance of 20 feet if it is emanating from something on a street."

Construction activities that may cause noise impacts include earthwork, paving, structure construction, land clearing, and blasting. Exact noise levels due to construction cannot be determined at specific sites since the number and types of construction equipment that would be used cannot be predicted, but the equipment will not be allowed to operate during the restricted times set forth by the Town.

Mitigation measures will be incorporated into the specific building and site plan contract documents to reduce construction noise and perceived disturbances in the project area.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Section 2.5.

14. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 27: The response needs to reflect that the Town gets water from wells adjacent to the Hudson River not directly from the river. Describe permits required, if applicable.

RESPONSE: See response to Comment 111. It should be noted that the comment states that the water supply is drawing from the Hudson River, but it is in fact drawing from a well adjacent to the Hudson River not directly from the river. As it relates to protections of the soil, a soil management plan will be prepared and approved by the NYSDEC as required. The NYSDEC has stated that 6 NYCRR Part 375-6.7(d) would have to be followed. Permits that may be required include permits from the Town of Bethlehem to connect to their water system and permits from the Albany County Department of Health and/or NYSDEC for backflow device permits.

15. Scott Lewendon: #27 – The response to comment #111 does not adequately respond to the concern about a disaster and the protection of the Town Water Supply. The response speaks to the monitoring of air quality, but not water quality. Can this response be expanded by discussing some means of monitoring water quality either at the site or at the intake of the Town water supply, if it occurs? Will there be a disaster preparedness plan in place that will explain procedures if there is a failure of any of the construction or remediation procedures?

    RESPONSE: The Town utilizes 11 groundwater wells adjacent the Hudson River to supplement their public water supply. As noted in response # 14 above, there is no direct intake from the Hudson River. These wells are more than two miles downstream of the project site. As part of the project specific Site Management Plan (SMP), prepared in accordance with 6 NYCRR Part 375 and DEC Technical Guidance for Site Investigation and Remediation, submitted to the NYSDEC, Division of Environmental Remediation and the NYSDOH for their review and approval water quality monitoring will be provided through a Stormwater Pollution Prevention Plan (SWPPP). All stormwater outfalls and discharge including those to the Hudson River will be monitored throughout construction of the project. It is anticipated that all monitoring will take place on the project site. The SMP will include the requirement of on-going monitoring of all mitigation measures throughout the project. Any failure in a remediation procedure will require a correction within 24 hours. Any potential contamination that is discovered will require immediate reporting to the NYSDEC. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment under Section 3.9.

16. Brian Gyory: Comment 27 and 111 Coal Ash Cap. Additional information on this. Is it or is it not in need of permit and capping. This should be figured out before we finalize the FGEIS.

    RESPONSE: Yes, the site is in need of permit and capping, as discussed in the DGEIS Section 2.5 and 3.1. Based on the historical use of the site and as listed in the September 13, 2019 NYSDEC correspondence, the NYSDEC standard remedial element of a cover system at an industrial site is as follows: A site cover will be required to allow for industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). The soil cover will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. The soil cover will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7 (d).

17. Brian Gyory: Comment No. 33 Dawn to dusk in December v June is a very different amount of impact. In order to be comfortable with this I would want to see additional information on the noise level for this and how far this noise travels. If it is going to be a nuisance we may want to restrict the hours further.

    RESPONSE: Dynamic compaction operations will comply with the Town of Bethlehem's Local Law No. 5-2009 and will only take place between the hours of 7 am and 7 pm. Industry averages show that dynamic compaction registers less than 70 dBA at 10 m away (as stated by ScienceDirect Dynamic Compaction). According to the fundamentals of noise propagation, sound pressures will decrease (attenuate) at a rate of 6 dB each time the distance is doubled. Assuming dynamic compaction will register 70 dBA at 10 m away and sound levels drop by 6 dBA by doubling the distance, at approximately 28 m (18 m additional to 10 m from source) the sound levels will be at 65 dBA meeting Town of Bethlehem sound requirements at the property line. It is not anticipated that dynamic compaction will not occur within approximately 92 feet (28 meters) of the property line to ensure compatibility with the Town code. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment in Section 3.1.

18. Brian Gyory: Comment No. 34 No monitoring needed Same comment as 33. In order to be comfortable with this I would want to see additional information on the noise level for this and how far this noise travels. If it is going to be a nuisance we may want to restrict the hours further.

    RESPONSE: Traffic noise within the project site is expected from heavy trucks traveling through the site and parking lots. Noise levels from the typical heavy trucks that are expected to operate at the proposed site may produce maximum noise levels of up to 75 dBA at the reference distance of 50 feet (according to the USDOT Federal Highway Administration Construction Noise Handbook). According to the fundamentals of noise propagation, sound pressures from stationary or slow-moving objects will decrease (attenuate) at a rate of 6 dB each time the distance away is doubled. At a distance of 150 feet, the noise will attenuate to approximately 65 dBA. Concept A shows the roadway used by trucks will be approximately 150 feet, at its closest, to the property line. As a result, the project will comply with the Town noise ordinance.

    There are no sensitive receptors immediately adjacent to the property boundary and the site is buffered by the Hudson River to the east, PSEG Power Plant to the south, National Grid high transmission power lines and railroad tracks to the west, and the Port of Albany to the North which further buffer the site noise from other more sensitive residential land uses. In addition, the site sits at a lower elevation than Route 144 creating a sound attenuator on the western site boundary.

    Section 3.1.3 of the DGEIS states that during construction particle velocities will be monitored, and techniques modified as required to achieve the desired densification and maintain particle velocities below the residential threshold at the project's property limits or sensitive facilities within the site.

Once a specific tenant and project is identified, noise from the proposed project will be addressed and if necessary, a noise barrier along the western property line could be constructed. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment under Section 3.1.

19. John Smolinsky: Page 3-12, Response to Comment 34 No information regarding noise has been provided; for example: the type and noise level of equipment, frequency range, adjacent uses, etc. The FGEIS analysis addresses vibration and particle movement; please describe the relationship of the vibration analysis to audible noise and impact on the surrounding area. One option might be to identify noise as a "supplemental determination of significance" to be determined when there is a specific project identified. Although dynamic compaction is common to all options it is understood that it will be limited to whatever the "load bearing" areas are utilized.

    RESPONSE: See above responses to comment 13, 17 and 18.

20. Brian Gyory: Comment No. 36 Coal Ash, Removal not Anticipated Comment indicates that removal is not anticipated, but if it is how will that be handled and where will it be relocated to?

    RESPONSE: Section 3.1.2 states "The fly ash and bottom ash at the site has the potential to contain high levels of metals and other contaminants that may require entering into a NYSDEC remedial program under 6 NYCRR Part 375." Section 3.1.3 states "A soil management plan (SMP) prepared in accordance with the NYSDEC regulations will be required prior to construction for management of the coal ash soils and this plan will also address procedures for constructing underground utilities and the future maintenance of the below grade infrastructure." Soil to be removed from the site will be handled and analyzed according the NYSDEC remediation guidelines for waste characterization. The need for off-site disposal of materials will be determined by the NYSDEC based on future subsurface investigations and remedial actions. The off-site disposal site is anticipated to be at a landfill permitted to accept such wastes, or other properly permitted facility as approved by the NYSDEC should a Beneficial Use Determination (BUD) be granted. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment under Section 3.1.

21. Brian Gyory: Comment No. 45 Coal Ash Remediation - Future subsurface investigation and remediation Additional information needed.

    The site investigation and remediation will be conducted in accordance with NYSDEC Division of Environmental Remediation (DER) Technical Guidance for Site investigation and Remediation (DER-10). As part of the permitting process the following primary work plans and reports will be developed and submitted to the NYSDEC for approval and permit:

    - **Remedial Investigation Work Plan (RIWP)- This document will detail the process by which the site will be characterized to determine the nature and extent of contamination of the site, as well as the surface and subsurface characteristics of the site, including topography, geology and hydrogeology, including depth to**

groundwater.

- **Remedial Investigation Report (RIR)- This report will document the site investigations and define the nature and extent of contamination at the site. This document will also include recommendations for further investigations if deemed warranted in order to fully characterize the site.**

- **Remedial Action Work Plan (RAWP)- This document will detail the actions that will be undertaken, including but not limited to the removal, treatment, containment, transportation, securing, or other engineering or institutional controls, temporarily or permanent, necessary to maintain control or remediate contamination at the site. This document will also include the monitoring requirements during the implementation of the remedial action(s).**

- **Site Management Plan (SMP)- This document will detail the institutional and engineering controls required for the site and any physical components of the remedial action required to be maintained and monitored to meet the site-specific remedial action goals. Engineering controls may include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, and access controls. Institutional controls include any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, including, but are not limited to, environmental easements, deed restrictions, site security (other than fencing), consent order/consent decree, 6 NYCRR Part 360 permit, zoning restrictions, deed notice, and groundwater use restrictions.**

- **Final Engineering Report (FER)- This report will document that the remediation was completed in accordance with the approved RAWP, including any certifications required.**

In addition, supplemental reports and plans may be prepared as components of the previously mentioned reports and plans, or as standalone documents based on the results of the remedial investigation and site characterization. These supplemental reports and plans may include, but are not limited, to the following: Remedial Action Monitoring Plan (RAMP), Site Specific Health and Safety Plan (HASP), Community Air Monitoring Plan (CAMP), and Community and Environmental Response Plan (CERP).

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment under Section 3.1.

22. Scott Lewendon: #48 – What is the meaning of the "either" in the second sentence of the response? Is this a typo? Or. Is there another responsible party?

RESPONSE: The sentence has been updated to read: "The responsible party or permittee would either be the tenant or the Port of Albany". See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment under Section 3.1.

23. Scott Lewendon: #s 56, 57 & 58 – The response to these comments are under #56 and include only two actions – Construction duration restrictions and the use of a turbidity curtain. There are other comments relative to actions that would minimize impacts including consultation with NOAA and mitigation for underwater noise impacts from pile driving. This response should be expanded.

    RESPONSE: NYSDOS (44 NYCMP policies) The project will require Section 10 and 404 permits from the USACE. As part of the permitting process, the USACE will serve as the lead federal agency in the required Section 7 and the Fish and Wildlife Coordination Act (FWCA) consultation processes with NOAA. Avoidance, minimization and mitigation of potential impacts to shortnose sturgeon and Atlantic sturgeon will be presented in the Joint Application for Permit based on the final design of the project and pre-application consultation with the USACE and NOAA.

    Based on preliminary design, the wharf and associated caissons (Piles) will be recessed back approximately 40 feet from the existing shoreline which will provide an earthen barrier during construction which will mitigate any potential underwater noise impacts. In addition, based on the potential requirements associated with obtaining the required NYSDEC permit and which includes consultation with NOAA, the USACE, and the National Marine Fisheries Service, appropriate noise thresholds will be established , monitored, and mitigated as necessary.

    See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.2.

24. John Smolinsky: Page 3-21, Comment 61and 62 - What are the risks associated with using the "Low" projection of sea level rise? How would the package sewage treatment plant be affected? It is clear that the expense of raising the site elevation is high but there is no discussion of the risk analysis and the total or temporary loss of the facility in the event of flooding.

    RESPONSE: The risk associated with using the "low" vs the "medium" projection of sea rise is that the medium projected sea rise would potentially flood a portion of the site, the lowest points nearest to the river used for vehicle parking, to up to 6.1 feet; and that the building could potentially experience floodwaters to a depth of roughly 1.9 feet . The project site will be occupied by largely mobile assets (materials, trucks, cars, etc.) that can be evacuated from the flood prone areas in the case of an emergency. The building will be privately owned, operated, and insured. In the event of flooding any damage will be repaired or replaced by the owner at no expense to the Town of Bethlehem.

    The package treatment plant will be designed and installed to exceed the *NYSDEC DRAFT New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act June 20, 2018*. This Act states the following: Section 3.3.2.4.1, Non-Critical Water Infrastructure:

    Applicants in projects involving non-critical water treatment and supply equipment in

both tidal and nontidal areas should demonstrate consideration of the following guideline, considering practicality, costs, risk tolerance and environmental effects:

- ***The vertical flood elevation and corresponding horizontal floodplain that result from adding two feet of freeboard to the BFE [100-yr storm even water elevation] and extending this level (transversely to the direction of flow in riverine situations) to its intersection with the ground***

The Resiliency Act suggests that the package treatment plant be designed such that it will not allow a release of raw sewage for a storm event 2 feet above the 100 yr. flood elevation. Two feet above the 100 yr. storm event is elevation 20.0 (100 yr. BFE of 18 feet plus 2 feet). The project's package treatment plant will exceed this recommendation by being designed and constructed to be resilient and operable at flood elevation of 22.1 feet (BFE of 18 feet, plus the 50 year-medium projection sea level rise of 2.1 feet, plus 2 feet of freeboard).

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.4.

25. Gianna Aiezza: The NYSDEC recently releases the results of the south end air study. Please include a summary and how the results impact the project .

    RESPONSE: A summary of the latest NYSDEC study is included in the updated in both the DGEIS and FGEIS Section 3.6 Climate and Air.

26. Brian Gyory: Comment No. 61, 62, 65 Not Following Guidance I would like to have a further discussion with the applicant on this. Would it be possible to elevate key pieces of equipment to the CRRA guidance standards? At a bare minimum I would like to see the wastewater treatment facility equipment and other key equipment at this level. The impact of a flood in this area is very likely and I would not be comfortable with flood waters washing away additional raw sewage into the Hudson.

    RESPONSE: See the response to comment 24 above.

27. Gianna Aiezza: Number 68. Odor - the response states that no odor threshold is required because the odors will be similar to those in the Port. However, there are odor problems within the Port that result in odor complaints. There are asphalt facilities within the Port as well as the wastewater treatment facility, all of which release hydrogen sulfide odors that create odor problems in the Port. An odor threshold needs to be established as part of the EIS.

    RESPONSE: The NYSDEC Odors & Hydrogen Sulfide webpage summarizes previous DEC screening assessments conducted at seven locations both on and off the Port property from 2015-2017. A total of 80,000 ten-minute observations were collected from the seven locations. A total of eight one-hour averages for hydrogen sulfide were recorded above the DEC's one-hour standard of 0.01 ppm all at one location, in the vicinity of the Buckeye Terminal. The study concluded that the source of the hydrogen sulfide odor in this localized (Buckeye Terminal) area and may include an asphalt plant and diesel emissions from trucks and equipment, including marine vessels and intermittent operations of diesel engines.

As a point of clarification, the Albany County Water Purification Plant is not on the Port of Albany property and is not a tenant of the Port of Albany. The wastewater treatment plan is owned by Albany County. Gorman Brothers, Inc. is an asphalt company with office space, truck/vehicle storage, and a maintenance shop located at 200 Church Street within Port of Albany property, however, Gorman Brothers do not manufacture asphalt at this location. Callanan Industries, Inc. owns an asphalt plant, also known as Albany Asphalt & Aggregates, which is located at 101 Dunham Drive and is also not located on the Port of Albany property.

As mentioned above, the New York State DEC Standard for hydrogen sulfide is 0.01 ppm for a one-hour period which will be used as the odor threshold value for this project.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.6.

28. Scott Lewendon: #69 (5th paragraph, 1st sentence) This response (and in other responses) states that the project includes a "recommendation" that truck traffic use the Port Road instead of Rt. 32. This action should be a requirement as mitigation for increased truck traffic and associated air quality impacts, and should eventually find its way into the findings. Additionally, a discussion of enforcement procedures, similar to our discussion at the presentation to the PB, should be included in the appropriate responses.

    RESPONSE: The APDC has committed to requiring the proposed truck route to be written into any lease for the Proposed Site. All leases would include a truck route clause and would be enforced with existing and proposed installed surveillance cameras. 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. Additional information regarding enforcement has been provided in the Supplemental DGEIS Section 3.7 and Appendix G.

29. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 71, page 3-26: The statewide average accident rates in the accident history summary table for the segment of SR 144 appear to be from the 2015-2016 average accident rates as published on NYSDOT website. Verify that all statewide average accident rates are from the most recent publication.

    RESPONSE: The 2015-2016 average accident rates are the latest data published by NYSDOT and available to the public on their website.

30. Brian Gyory: Comment No. 71 accident rate below statewide average Just because the accident rate is below the statewide average I don't think this should be the deciding factor for no improvements necessary. I think this should be looked at further.

    RESPONSE: Comparison to the statewide average accident rate is the benchmark used by NYSDOT and is the industry standard to provide an overall assessment of the accident history within a roadway corridor. NYSDOT noted in their September 14, 2019 letter that the department evaluated the most recent available 5 years of crash data from the Route

32/Route 144 intersection and the crash experience warrant was not met.

31. Gianna Aiezza: Number 75. Information from the presentation needs to be included in the EIS in order to address the original comment. Original Comment - I am requesting that they come prepared with maps to illustrate their assumptions and to have clearly marked the routes and residential neighborhoods including Ezra Prentice. It is clear that traffic will impact them contrary to what Steve said at the meeting when we accepted the EIS as complete. The EIS says nothing about not allowing traffic to go by that neighborhood as he stated so they need to be prepared to fully discuss the traffic section in relation to that neighborhood as well as other residential neighborhoods. Furthermore, they did not take into account and discuss the traffic study conducted by CDTC in May 2018. I specially asked during scoping that they discuss that study in the EIS. They claim in the report the data from the DEC report is too old however the CDTC report was issued in May 2018 and extremely relevant and it was not done by the DEC. Furthermore, the CDTC study focuses on the exact area they are looking to increase truck traffic. A link to the report is below. I am requesting that the Port review it and be ready to discuss it at the meeting. I am also requesting that they revise their report (obviously not before Tuesday) to discuss the findings and how they relate to their findings and the proposed increases in trick traffic. I would like them to be prepared to discuss it for Tuesday. This is not a new request so they should have already reviewed it as I specifically asked during scoping that they review all of the studies done in this neighborhood and discuss them in the EIS.

    RESPONSE: The information presented at the public hearing is the information contained in the Draft GEIS. The CDTC and the DEC study is referenced in the Draft GEIS and the TIS located in the FGEIS Appendix E.

32. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 76, page 3-29: This comment does not address whether oversized trucks can make the turning maneuvers on the preferred route nor whether NYSDOT or NYSTA comments were solicited and/or provided. For the existing condition, explain why merging traffic at 29.9 pc/mi/ln is LOS C when the table referenced from the HCM for merging areas shows this to be LOS D. This same comment applies to the proposed condition.

    RESPONSE: Oversized loads require a one time individual transport permit that identifies the specific truck route to be traveled depending on the specifications of that specific oversized load. The permit is issued by the NYSDOT in consultation with the local municipality and the NYSTA if necessary, on an as needed basis at the time of the need and therefore are not included within a Traffic Impact Study. During the oversized load permitting process, a specified truck route is studied by the trucking company and NYSDOT to verify that turning maneuvers can be accommodated along the entire truck route. The truck route identified for this project are not to be considered as an oversized load truck route.

    The Level of Service (LOS) that the HCS7 Freeway Merge Report displays is determined by the "Density in Ramp Influence Area" field of the report, and not "Average Density". This information is provided in the HCS7 report printouts in the TIS appendix. The density results noted in the body of the TIS were incorrectly referencing "Average Density" results. The Level

of Service noted in the TIS for the Existing AM conditions was correctly provided as LOS 'C', based on a "Density in Ramp Influence Area" value of 27.0 pc/mi/ln (Existing) and 27.9 pc/mi/ln (Proposed).

33. Scott Lewendon: #77 This response only addresses the impact of traffic on the section of the future bikeway along South Pearl Street. It does not address the two intersections where the bikeway will cross roadways that will be impacted by truck traffic resulting from the expansion of the Port. The first intersection is the intersection of the I787 northbound Frontage Road with Church Street. At this intersection, bicyclists and pedestrians will need to cross Church Street at the uncontrolled leg of the intersection. The second intersection is Broadway, once again, where bicyclists and pedestrians will need to cross at an uncontrolled section of roadway.

    The amount of non-motorized traffic crossing these intersections will be significant. The bikeway connector will connect the second and third most heavily traveled trails in the Capital District. User information can be found on the CDTC 2016 Trail Count: https://www.cdtcmpo.org/images/bike_ped/TrailsPlan/2016%20Capital%20District%20Trail%20User%20Count%20FINAL%20RSsmall.pdf

    Currently, the northerly end of the Albany County Rail Trail experiences an average daily weekday count of 177 trail users, while the estimated annual usage at the busiest part of the trail is 164,073. At the southerly end of the Mohawk Hudson Trail (USS Slater), the average daily weekday count is 365, while the estimated annual usage at the busiest part of the trail (Corning Preserve) is 202,839. When these trails are finally connected, the average daily weekday count will certainly rise.

    Any improvements at these intersections proposed as part of the South End Connector should be discussed, and, at the very least, a narrative should be presented about the impact of crossing these intersections and roadways by trail users. Perhaps, a gap analysis might need to be completed with recommendations for specific improvements such as pedestrian activated crosswalk controls or similar traffic control devices that might be necessary once the connector bikeway is completed and specific projects for the Port expansion are proposed.

    RESPONSE: The South End Bikeway Connector Trail is currently under construction and the new trail will have two roadway crossings. The Church Street crossing is within the Port Expansion project's traffic study area while the Broadway crossing is north of the traffic study area; however, both intersections are expected to experience an increase in traffic associated with the port expansion project. The improvements at the Church Street crossing (from the I-787 frontage road) are proposed to include a new signalized control for the pedestrian movement as part of the South End Bikeway Connector Trail Project. At the Broadway Crossing near Quay Street, based on consultation with the consultant engineer for the project sponsor, the intersection will either be converted to an all way stop for vehicular traffic or have the cycle track proceed through the intersection with vehicular traffic yielding to the cycle track. Either option being constructed as part of the South End Bikeway Connector Trail Project will provide improve the crossing by granting the right of way to the pedestrian/bicyclist on the trail. See Section 4.0 Updated Draft Generic Environmental Impact

Statement Text Reflecting Public Comment under Section 3.7.

34. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 79, page 3-32: This comment provided direction to revise Section 3.7 to provide a summary of the methodologies, findings and conclusions from the TIS and not copy the TIS language. While the response does summarize the methodologies, it only provides a very broad summary of the findings and conclusions and references the DGEIS and TIS which had 56 comments.

    RESPONSE: Section 3.7 has been revised to provide additional narrative summarizing the findings and conclusions of the TIS .

35. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 80, page 3-32: The TIS should be revised incorporating comments addressed in the FGEIS.

    RESPONSE: An updated TIS has been prepared to address the DGEIS comments and will be included as Appendix E to the FGEIS.

36. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 81, page 3-32: Was NYSDOT contacted regarding the preferred travel route? The travel route for oversized load transports could be discussed to/from the major interstate junctions to/from the Port regardless of tenant or origin. Are there any roads in the Town that could handle these oversized loads, i.e. roads that don't have low clearance issues and wide enough lanes to accommodate these trips?

    RESPONSE: NYSDOT was contacted and provided the TIS and had no direct comments on the preferred travel route. They did not have any truck routing and capacity related concern in their review letter dated September 14, 2019. The NYSDOT Region 1 office was contact to confirm that their September 14, 2019 letter contained the extent of their comments and there are no subsequent comments or concerns. The technical comments provided in Item #4 above are only related to the Signal Warrant Analysis and there were no comments on the other sections of the report.

    See response to comment #32 regarding oversized loads.

37. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 83, 3-33: NYSDOT reports volumes for four different sections of NYS Route 144 within the study area. Where was the volume and heavy vehicle data collected by NYSDOT referenced in the response?

    RESPONSE: The information provided was based on the updated directional traffic data collected as part of this project on June 18, 2019 per the request of the Town's consultant Engineer, which was collected 110' N of Anders Lane on NYS Route 144 (on front of the proposed project site). The count data reports were included in Appendix A of the TIS. Historic NYSDOT traffic data reports along NYS Route 144 were utilized to confirm the accuracy/consistency of the project specific data collected (NYSDOT Station 110107, 110061, 110062 and 110509).

38. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 84, page 3-33: Response does not address impacts to the current roadway condition from increased project traffic nor who will

own or maintain the new roadway improvements mentioned.

RESPONSE: As documented in the City of Albany – S. Pearl St. Heavy Vehicles Travel Pattern Study completed by CDTC dated May 2018, the current roadway condition "is in a poor state of repair. The pavements are in poor condition, there are multiple railroad crossings, it lacks adequate pavement markings and signage, and there are tight turning radii at several intersections". The study also confirms that the roadway network consist of Town of Bethlehem (Normanskill Street) and City of Albany owned streets.

Section 3.7 of the Supplemental DGEIS provides additional information that the CDTC study indicates as the long term improvement plan and funding sources.

39. Brian Gyory: Comment No. 84 new turn lane proposed Where is this shown in further detail?

    RESPONSE: A conceptual layout plan of the proposed turn lane geometry is provided in the FGEIS in Appendix L. The detailed design of the proposed right turn lane improvements will be provided at the time of site plan approval when a specific tenant / building is proposed and is warranted based upon an updated Traffic Analysis associated with the actual specific project.

40. John Smolinsky: Page 3-28, 3-31, and 3-39, Comment/Response 74, 77, and 93 - The responses seem to ignore the existence of the "South End Connector Bikeway" which will connect the two major multi-purpose trails in the area. Construction began in Sept, 2019 and the route follows the 787 ramp/Frontage Rd. to Church St, crosses Church street and continues under 787 to Quay St. Church St has been identified as a preferred entrance to the Port site so it seems relevant to address the intersection of the Bikeway and Church St regarding traffic control and safety.

    RESPONSE: See response to comment #33 above.

41. Brian Gyory: Comment No. 74, 77, 93 Explain bike points The current report fails to address the project currently being constructed on 787 ramp and South Pearl Street which is connecting along South Pearl and 787.

    RESPONSE: See response to comment #33 above.

42. Brian Gyory: Comment No. 92 Wemple Road traffic assumed to not be affected How is this assumed? It has been discussed that this intersection could be used for workers to get to parts of town and surrounding communities.

    RESPONSE: Based on our traffic analysis and review of the existing traffic volumes counted at Wemple Road and River Road, it was determined that this roadway will not be utilized as a through fair on a daily basis by vehicles traveling to/from the Port Expansion project.

43. Gianna Aiezza: Number 96 - include the Plaza 23 truck stop on a map to show where it is in relation to the intersections and proposed route.

    RESPONSE: Figure 18, which depicts the location of Plaza 23 has been prepared and is included in the updated FGEIS.

44. MJ Engineering and Land Surveying, P.C.: FGEIS Response to Comment 100, it's stated that the "Port of Albany is in the design process of upgrading Smith Blvd from Boat Street to Raft Street." What do the improvements consist of? Provide a map? Are turn movements being minimized? What funding source is being used for road improvements…TIGER funds? We need to know what the time frame is for additional improvements to Smith Blvd south of Raft Street and improvements to Port Street. If trucks are to be restricted to the roads within the Port, improvements to the condition of the road need to be made to make the travel feasible. What are the Ports plans for these improvements...when? I would think this would be part of mitigation to keep trucks off of South Pearl Street (Ezra Prentice community)?

    RESPONSE: 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 lifting cargo to and from the maritime terminal. This enabled funding for improvements to the portion of Smith Boulevard that runs adjacent to the maritime terminal.

    The planned roadway reconstruction of Smith Boulevard between Boat Street and Raft Street is still in the design phase and is planned for the 2020/2021 construction season. The roadway, whether full-depth or partial reconstruction, will be designed to accommodate heavy truck traffic. All design work is being completed by McLaren Engineering group, who will utilize Equivalent Single-Axle Load (ESAL) concept to measure the impacts of the planned traffic on the proposed pavement. The work is intended to contribute to the comprehensive improvement of the City Streets that run through the Port District that will serve as the truck route as envisioned and articulated in the 2018 CDTC report "City of Albany: S. Pearl St. Heavy Vehicle Travel Pattern Study." Further details and concept plan for the proposed road improvements are included in Appendix G of the Supplemental DGEIS.

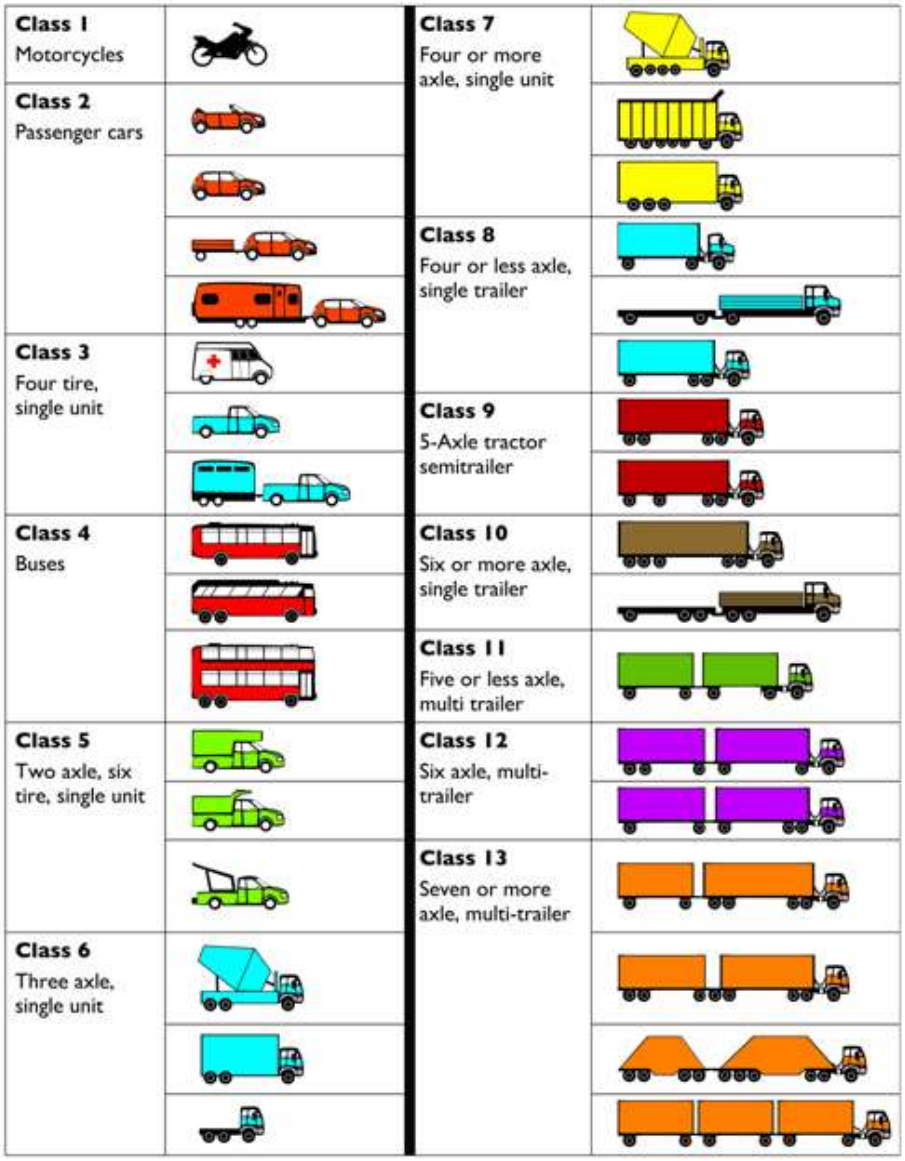
    See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.7.

45. Brian Gyory: Comment No. 100 Port Road Improvements I would request the plans to be shared for what these improvements will be and when they will be completed.

    RESPONSE: See response to Comment #44.

46. Brian Gyory: Comment No. 72, 75, 91, 104 Indicate truck route, How is this enforced? Q-104 mentions video surveillance, but how will this be used/enforced?. Also what is the definition of a "truck"? Does this include maintenance workers, deliveries, equipment, etc.? I think this should be defined for consistency.

    RESPONSE: See response to comment# 28 above relating to enforcement measures. The definition of a truck used in the TIS is consistent with the Federal Highway Administration (FHWA) heavy vehicles classifications F4 through F13 as shown on the below figure which has been added to the TIS.



47. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 107, page 3-42: The AASHTO recommended sight distance values are based on design speed and when that is not available, the 85%-ile speed should be utilized. What is the design speed or 85%-ile speed for this section of roadway? One of these values should be used to determine AASHTO recommended sight distance values. Is there any additional data that supports changing the speed limit in proximity to the proposed NYS Route 144 access drive to 45 mph? How were the initial sight distances measured? The values originally presented in the TIS are about 2 times the values in the FGEIS.

RESPONSE: The 85th percentile speed (55 mph) was used in the sight distance calculations provided in the TIS. This speed was field measured at the time the directional traffic data was collected 110' N of Anders Lane on NYS Route 144 on June 18, 2019; however, the proposed site driveway location is in a different location from the traffic data that was collected. The proposed driveway is located within a horizontal "S" curve section of NYS Route 144 which

has a posted advisory speed of 45-mph. We therefore modified the location of the proposed driveway to meet the AASHTO sight distance requirement for the posted speed of 45 MPH. Once a specific tenant or building is proposed, an application for a driveway permit will be submitted to the NYSDOT at which time the request to change the 45 mph speed limit from advisory to regulatory will be made.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.7.

48. John Smolinsky: Truck Routing - provide possible methods of requiring and enforcing truck traffic associated with proposed options on the POA expansion. Since truck routing is likely to involve one or more key Findings, the FGEIS should elaborate on possible monitoring and enforcement options; once a tenant is identified the supplemental GEIS can require a specific option. The FGEIS and the Supplemental FGEIS ,especially the traffic/routing mitigation sections should include a discussion of the monitoring and enforcement options.

    RESPONSE: See response to comment #28 for enforcement discussion.

49. Gianna Aiezza: As discussed at the meeting on 11/19, a section should be added that clearly discusses how trucks will be rerouted from S Pearl St so they will not pass by Ezra Prentice. The plan should include a map of the Port with the anticipated road improvements and any information that supports the plan for traffic to be realistically rerouted through the Port. In addition please include what the lease agreements will include and how truck routes will be enforced. Where will cameras be? How often will they be monitored? How will the lease be enforced - what will the process be? Will tenants have to submit reports to certify compliance with the lease? What are the penalties for non compliance? The lease should detail penalties for noncompliance.

    RESPONSE: A discussion of the proposed truck route has been included in the updated TIS and Section 3.7 with a map detailing the route, included as Figure 3.7-2. See response to comment #28 for enforcement details.

50. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 125, page 3-49: This response to comment indicates that only the on-site package treatment system is being considered with all other alternatives not being considered further. At a SEQRA level, this approach would be technically feasible, subject to a technical review by the Town and NYSDEC under a General Permit. It should be noted that should one of the other alternatives identified in the DGEIS become a preferred alternative in the future, a Supplemental GEIS may be required.

    RESPONSE: It is hereby noted that should one of the other alternatives identified in the DGEIS become a preferred alternative in the future, a Supplemental DGEIS may be required.

51. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 125, where on the site will the treatment system be located.

    RESPONSE: The potential location of the on-site package wastewater treatment plant is show on drawing UT-01 Utility Layout, in Appendix Q Concept Plan A of the DGEIS.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.10.

52. Brian Gyory: Comment No. 125 Package System General explanation needed of why no longer connecting to municipal systems. For example the revised section should explain the evaluation and how the applicant decided on a package system. In addition, cut sheets says 17,500 gpd where the document says 20,000 gpd? Additional information needed on size/usage requirement.

    RESPONSE: The selection of the on-site option as the only preferred alternative was made due to the prohibitive cost, disruption to the public, and environmental impact of running a force main from the proposed building to the existing County treatment plant several miles away.

    The on-site wastewater demand for the project has been estimated to be 16,960 gallons per day. The project has proposed an on-site package wastewater treatment plant that exceeds this amount. The drawing in Appendix G of the FGEIS shows a tank system from Delta Treatment Systems that can treat anywhere from 15,000 gallons per day to 25,000 gallons per day. The B-17.0 model would treat 17,000 gallons per day, or just above the estimated project demand. This is the model referenced in the example specifications.

    See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.10.

53. Scott Lewendon: #135 Visual impacts are based on the change in visual quality and visual quantity, and their effect on the viewer groups. The change in these attributes should be emphasized in the argument that no substantial impact on the environment will occur.

    RESPONSE: Section 3.12.2 Aesthetic and Visual Resources Potential Impacts has been updated to include emphases to the argument that no substantial impacts on the environment will occur. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.12.

54. Brian Gyory: Comment No. 146 City of Albany mutual aid Do we need city signoff too?

    RESPONSE: The Proposed Project does not require the City of Albany's sign off. The fire district with jurisdiction, the Selkirk Fire District, has provided a will serve letter stating they can serve the Proposed Project. No additional verifications are needed.

55. John Smolinsky: Page 3-55 and 3-56 Comment/Response 150 and 151 - The response regarding "PILOTS" is incomplete. The purpose of estimating a typical PILOT would be to provide the range of tax benefits possible from site development.

    RESPONSE: The FGEIS response to comment 150 and 151, as well as Section 3.17 Fiscal and Economic Impact of the FGEIS, has been updated to include the following:

Summary of IDA PILOT Scenarios

The Town of Bethlehem offers real property tax abatements (PILOT) benefits to certain projects that result in an increase in the property tax assessment by the taxing jurisdiction (County, Town and School District). The PILOT (Payment In Lieu of Taxes) consists of an agreed-upon percentage of the improvements that would be otherwise due on the property if the project was completed without IDA tax abatements. The IDA offers a Standard and an Enhanced Abatement and each are awarded on a case-by-case basis.

The Standard Abatement commences at 50% of the increase in assessed valuation resulting from a project and then declines by 5% per year for a ten year period. This abatement is designed for projects that are eligible for IDA assistance and meet a standard level of economic impact including, job creation, business development and tax generation. This program provides abatement for the Town, County and School District taxes throughout the Town.

The Enhanced Abatement is designed to enhance the regional competitive position of the Town in attracting high quality business development that meets very specific economic benefit criteria.

To be eligible for the enhanced abatement, an applicant must demonstrate the project's ability to substantially meet the following criteria:

- **Extraordinary new job creation and capital investment**
- **Net new business investment in the Capital Region**
- **Reuse or redevelopment of abandoned or underutilized real estate**
- **Consistency with the Town's comprehensive plan recommendations**
- **Market penetration: potential for catalytic effect for subsequent projects**
- **Consistency with regional target industries**
- **Business development that promotes diversification**

While no PILOT agreement is in place, the fiscal implications of both the Standard and Enhanced PILOTs were analyzed for each of the five concepts for hypothetical purposes. The following chart summarizes the property tax revenue differences under the various abatement scenarios for each concept.

Summary: 12-Year Property Tax Revenue Comparison of IDA PILOT (Abatement) Scenarios*			
Concept	No Abatement	Standard Abatement	Enhanced Abatement
Concept A	$ 28,962,456	$ 22,571,894	$ 13,768,774
Concept B	$ 24,506,694	$ 19,099,295	$ 11,650,501
Concept C	$ 24,135,380	$ 18,809,912	$ 11,473,978
Concept D	$ 5,569,703	$ 4,340,749	$ 2,647,841
Concept D.1	$ 14,852,542	$ 11,575,330	$ 7,060,910

** Includes Sum of County, Town, School District Revenues*

Source: Camoin 310

Analysis Tables

Concept A

Fiscal Analysis - No IDA Abatement - Concept A			
Year	Town Revenue	County Revenue	School District Revenue
1	$364,793	$281,423	$1,574,625
2	$370,264	$285,645	$1,598,244
3	$375,818	$289,929	$1,622,218
4	$381,456	$294,278	$1,646,551
5	$387,178	$298,692	$1,671,250
6	$392,985	$303,173	$1,696,318
7	$398,880	$307,720	$1,721,763
8	$404,863	$312,336	$1,747,590
9	$410,936	$317,021	$1,773,803
10	$417,100	$321,777	$1,800,410
11	$423,357	$326,603	$1,827,417
12	$429,707	$331,502	$1,854,828
Total	$4,757,337	$3,670,101	$20,535,018

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept A				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$182,396	$140,712	$787,313
2	45%	$203,645	$157,105	$879,034
3	40%	$225,491	$173,958	$973,331
4	35%	$247,946	$191,281	$1,070,258
5	30%	$271,024	$209,085	$1,169,875
6	25%	$294,739	$227,380	$1,272,239
7	20%	$319,104	$246,176	$1,377,410
8	15%	$344,134	$265,486	$1,485,451
9	10%	$369,843	$285,319	$1,596,423
10	5%	$396,245	$305,688	$1,710,390
11	0%	$423,357	$326,603	$1,827,417
12	0%	$429,707	$331,502	$1,854,828
Total		$3,707,631	$2,860,294	$16,003,969

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept A				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$37,582	$28,993	$162,222
4	80%	$76,291	$58,856	$329,310
5	70%	$116,153	$89,608	$501,375
6	60%	$157,194	$121,269	$678,527
7	50%	$199,440	$153,860	$860,882
8	40%	$242,918	$187,402	$1,048,554
9	30%	$287,655	$221,915	$1,241,662
10	20%	$333,680	$257,421	$1,440,328
11	10%	$381,021	$293,943	$1,644,675
12	0%	$429,707	$331,502	$1,854,828
Total		$2,261,642	$1,744,769	$9,762,363

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept B

Fiscal Analysis - Enhanced IDA Abatement - Concept B			
Year	Town Revenue	County Revenue	School District Revenue
1	$308,671	$238,127	$1,332,375
2	$313,301	$241,699	$1,352,361
3	$318,000	$245,325	$1,372,646
4	$322,770	$249,005	$1,393,236
5	$327,612	$252,740	$1,414,134
6	$332,526	$256,531	$1,435,346
7	$337,514	$260,379	$1,456,876
8	$342,577	$264,285	$1,478,730
9	$347,715	$268,249	$1,500,911
10	$352,931	$272,273	$1,523,424
11	$358,225	$276,357	$1,546,276
12	$363,598	$280,502	$1,569,470
Total	$4,025,439	$3,105,470	$17,375,784

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept B				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$154,335	$119,064	$666,188
2	45%	$172,315	$132,935	$743,798
3	40%	$190,800	$147,195	$823,588
4	35%	$209,801	$161,853	$905,603
5	30%	$229,328	$176,918	$989,894
6	25%	$249,394	$192,398	$1,076,510
7	20%	$270,011	$208,303	$1,165,501
8	15%	$291,190	$224,642	$1,256,920
9	10%	$312,944	$241,424	$1,350,820
10	5%	$335,284	$258,659	$1,447,253
11	0%	$358,225	$276,357	$1,546,276
12	0%	$363,598	$280,502	$1,569,470
Total		$3,137,227	$2,420,249	$13,541,820

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept B				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$31,800	$24,532	$137,265
4	80%	$64,554	$49,801	$278,647
5	70%	$98,284	$75,822	$424,240
6	60%	$133,010	$102,612	$574,139
7	50%	$168,757	$130,189	$728,438
8	40%	$205,546	$158,571	$887,238
9	30%	$243,401	$187,774	$1,050,637
10	20%	$282,345	$217,818	$1,218,739
11	10%	$322,402	$248,721	$1,391,648
12	0%	$363,598	$280,502	$1,569,470
Total		$1,913,697	$1,476,343	$8,260,461

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept C

Fiscal Analysis - Enhanced IDA Abatement - Concept C			
Year	Town Revenue	County Revenue	School District Revenue
1	$303,994	$234,519	$1,312,188
2	$308,554	$238,037	$1,331,870
3	$313,182	$241,608	$1,351,848
4	$317,880	$245,232	$1,372,126
5	$322,648	$248,910	$1,392,708
6	$327,488	$252,644	$1,413,599
7	$332,400	$256,434	$1,434,803
8	$337,386	$260,280	$1,456,325
9	$342,447	$264,184	$1,478,169
10	$347,583	$268,147	$1,500,342
11	$352,797	$272,169	$1,522,847
12	$358,089	$276,252	$1,545,690
Total	$3,964,448	$3,058,418	$17,112,515

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept C				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$151,997	$117,260	$656,094
2	45%	$169,705	$130,920	$732,529
3	40%	$187,909	$144,965	$811,109
4	35%	$206,622	$159,401	$891,882
5	30%	$225,854	$174,237	$974,896
6	25%	$245,616	$189,483	$1,060,199
7	20%	$265,920	$205,147	$1,147,842
8	15%	$286,778	$221,238	$1,237,876
9	10%	$308,202	$237,766	$1,330,353
10	5%	$330,204	$254,740	$1,425,325
11	0%	$352,797	$272,169	$1,522,847
12	0%	$358,089	$276,252	$1,545,690
Total		$3,089,693	$2,383,578	$13,336,640

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept C				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$31,318	$24,161	$135,185
4	80%	$63,576	$49,046	$274,425
5	70%	$96,794	$74,673	$417,812
6	60%	$130,995	$101,058	$565,439
7	50%	$166,200	$128,217	$717,401
8	40%	$202,432	$156,168	$873,795
9	30%	$239,713	$184,929	$1,034,719
10	20%	$278,067	$214,518	$1,200,274
11	10%	$317,518	$244,952	$1,370,562
12	0%	$358,089	$276,252	$1,545,690
Total		$1,884,702	$1,453,974	$8,135,303

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept D

Fiscal Analysis - Enhanced IDA Abatement - Concept D			
Year	Town Revenue	County Revenue	School District Revenue
1	$70,152	$54,120	$302,813
2	$71,205	$54,932	$307,355
3	$72,273	$55,756	$311,965
4	$73,357	$56,592	$316,644
5	$74,457	$57,441	$321,394
6	$75,574	$58,302	$326,215
7	$76,708	$59,177	$331,108
8	$77,858	$60,065	$336,075
9	$79,026	$60,966	$341,116
10	$80,212	$61,880	$346,233
11	$81,415	$62,808	$351,426
12	$82,636	$63,750	$356,698
Total	$914,873	$705,789	$3,949,042

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept D				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$35,076	$27,060	$151,406
2	45%	$39,163	$30,212	$169,045
3	40%	$43,364	$33,453	$187,179
4	35%	$47,682	$36,785	$205,819
5	30%	$52,120	$40,209	$224,976
6	25%	$56,681	$43,727	$244,661
7	20%	$61,366	$47,342	$264,887
8	15%	$66,180	$51,055	$285,664
9	10%	$71,124	$54,869	$307,004
10	5%	$76,201	$58,786	$328,921
11	0%	$81,415	$62,808	$351,426
12	0%	$82,636	$63,750	$356,698
Total		$713,006	$550,057	$3,077,686

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept D				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$7,227	$5,576	$31,197
4	80%	$14,671	$11,318	$63,329
5	70%	$22,337	$17,232	$96,418
6	60%	$30,230	$23,321	$130,486
7	50%	$38,354	$29,589	$165,554
8	40%	$46,715	$36,039	$201,645
9	30%	$55,318	$42,676	$238,781
10	20%	$64,169	$49,504	$276,986
11	10%	$73,273	$56,527	$316,284
12	0%	$82,636	$63,750	$356,698
Total		$434,931	$335,533	$1,877,378

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept D.1

Fiscal Analysis - Enhanced IDA Abatement - Concept D.1			
Year	Town Revenue	County Revenue	School District Revenue
1	$187,073	$144,320	$807,500
2	$189,879	$146,484	$819,613
3	$192,727	$148,682	$831,907
4	$195,618	$150,912	$844,385
5	$198,553	$153,176	$857,051
6	$201,531	$155,473	$869,907
7	$204,554	$157,805	$882,955
8	$207,622	$160,172	$896,200
9	$210,736	$162,575	$909,643
10	$213,898	$165,014	$923,287
11	$217,106	$167,489	$937,137
12	$220,363	$170,001	$951,194
Total	$2,439,660	$1,882,103	$10,530,778

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept D.1				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$93,537	$72,160	$403,750
2	45%	$104,434	$80,566	$450,787
3	40%	$115,636	$89,209	$499,144
4	35%	$127,152	$98,093	$548,850
5	30%	$138,987	$107,223	$599,936
6	25%	$151,148	$116,605	$652,430
7	20%	$163,643	$126,244	$706,364
8	15%	$176,479	$136,147	$761,770
9	10%	$189,663	$146,318	$818,678
10	5%	$203,203	$156,763	$877,123
11	0%	$217,106	$167,489	$937,137
12	0%	$220,363	$170,001	$951,194
Total		$1,901,349	$1,466,817	$8,207,163

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept D.1				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$19,273	$14,868	$83,191
4	80%	$39,124	$30,182	$168,877
5	70%	$59,566	$45,953	$257,115
6	60%	$80,612	$62,189	$347,963
7	50%	$102,277	$78,903	$441,478
8	40%	$124,573	$96,103	$537,720
9	30%	$147,516	$113,803	$636,750
10	20%	$171,118	$132,011	$738,630
11	10%	$195,395	$150,740	$843,423
12	0%	$220,363	$170,001	$951,194
Total		$1,159,816	$894,753	$5,006,340

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.17.

56. Brian Gyory: Comment No. 154 More detail needed. How is school district receiving expected tax benefits, but not town?

    RESPONSE: The comment 154 response and the table "Potential Increase in Annual Property Tax Revenue (Off-Site)" discusses both the Town of Bethlehem and the Bethlehem School District.

57. MJ Engineering and Land Surveying, P.C.: Comment No. 154 I don't believe the Appendix J and the EIS makes it clear that there are two fiscal impact alternatives: one where the Port owns the buildings (not taxable) and the other where private entities build/own the buildings (taxable with potential IDA incentives). In the Fiscal Impact Analysis, the Alternative Fiscal Scenario Analysis on page 21 should break out the "Town of Bethlehem taxing jurisdictions benefit" rather than grouping together. Also, where does the 90% assumption come from, what is included in determining 90% from off-site property tax revenue?

    RESPONSE: Section 3.16, 3.17, and Appendix J of the FGEIS have been updated to include reference to the two (2) fiscal scenarios. The 90% assumption is from the fact that 90% of the economic impacts of new development will occur within the Town of Bethlehem as discussed in the EMSI economic impact model. Therefore, 90% of the countywide fiscal impacts are assumed to occur in the Town of Bethlehem. See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

58. MJ Engineering and Land Surveying, P.C.: FGEIS Response to Comment 162, the response incorrectly states "the EJ process is administered and the sole responsibility of the NYSDEC." This is not true. Please comment that this should be corrected.

    RESPONSE: The statement will be modified to read as follows "See below Section 3.20 Environmental Justice Review (EJ Process). The CP-29 process, which incorporates the EJ process, is administered and the responsibility of the NYSDEC. This process commences upon an application for a permit to the NYSDEC." See Section 3.0 Response to Comment.

59. Brian Gyory: Comment No. 165 The current plan doesn't meet zoning correct? Height issue

    RESPONSE: The Proposed Project will meet the Industrial land use zoning regulations. However, the project will not meet all area, yard, and bulk requirements, specifically the maximum building height could be exceeded.

60. Gianna Aiezza: Section 3.20 should be deleted and instead the section should refer to the Supplemental EIS.

    RESPONSE: We recommend that Section 3.20 Environmental Justice remain as it responds to several public comments. In addition, the Section has been included in the Supplemental DGEIS.

61. John Smolinsky: Pages 3-62 to 3-83 Environmental Justice - Provide any background that provides specific actions taken by the POA to engage, educate the Ezra Prentice community specifically regarding this expansion project and the potential impacts on the community.

Provide a discussion of possible measures that could be taken at the FGEIS stage to gather community input, prepare the community for the eventual proposal of a specific project. The current strategy to prepare a Supplemental FGEIS should include discussion of past efforts specifically in regard to the expansion at Beacon Island.

RESPONSE: A Supplemental DGEIS has been prepared, and a public informational meeting was held on January 6, 2020. The transcript on the public meetings and responses to comments are included in the Final GEIS.

62. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 164, page 3-86: Provide a discussion of the impacts generated by each alternative, the level of mitigation and the thresholds that trigger that mitigation. This is important should impacts be triggered by a threshold that is less than the maximum build out and mitigation be necessary for development that may be less than the maximum build out.

RESPONSE: Mitigation required for each concept has been included in Section 4.0 Reasonable Alternatives to be Considered, and shall include the following:

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

For Concept B: 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.

For Concept C: 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.

For Concept D: 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.**

For Concept D1: 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.**

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

63. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 167, page 3-86: A discussion of temporary impacts from construction activities (e.g. noise, traffic, dust) must also be included in DGEIS Section 5 – Adverse Impacts Which Cannot Be Avoided.

RESPONSE: Section 5 Adverse Environmental Impacts Which Cannot Be Avoided has been revised to include the following:

Temporary, normal, unavoidable short-term impacts from construction will be mitigated using industry standard 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 requiring that all equipment is has operational exhaust and muffler systems. All truck traffic, including construction vehicles, will be routed along the prescribed truck route through the Port property to avoid traveling on South Pearl Street through the Ezra Prentice community.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment.

64. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 178, page 3-89: If the manufacturing concept will not generate more trips than the current concept, than why are the trips associated with that land use on page 13 of the TIS almost double those determined using the site-specific trip generation rate? What would be the size range of a single manufacturing facility on this site and what are the associated trips? The comparison on page 13 of the TIS indicates that a single manufacturing facility is the worst case as the anticipated trips are almost double the calculated trip rate. Additionally, the trip generation calculations in Appendix E include the General Light Industrial land use which is not mentioned in the TIS and is comparable to the Manufacturing land use trips. The Warehousing land use discussed in the TIS is not included in the trip generation calculations. All three land uses shown in the calculations are above the site-specific trips counted. Since this study is to assess a worst-case impact, clarify why the site-specific rate is most appropriate.

RESPONSE: The Port expansion project will be developed with similar uses and tenants that currently exist within the Port District, therefore, the trip generation rate used was based on the Port's existing trip generation rate calculated using the data obtain during the field traffic

counts conducted as part of the TIS. Using actual data is the most accurate and recommended methodology as stated in ITE Trip Generation Manual, and is the industry standard that was approved by NYSDOT for this project. The other trip generation rates referenced in the Trip Generation section of the TIS on page 13 were provided to validate that using the calculated rate was reasonable when comparable to the rates assigned by the ITE. When comparing the ITE rates to the calculated rate establish by the existing traffic data, it was determined that using the rate based on actual data was the most accurate methodology, given that a 1,130,000 square foot, two-story building solely used for manufacturing is not a realistic, nor practical development scenario. A Million square foot 2 story manufacturing building is also outside the data range reported in the ITE trip generation manual due to the lack of manufacturing facilities of that size and nature.

See Section 4.0 Updated Draft Generic Environmental Impact Statement Text Reflecting Public Comment Under Section 3.7.

65. Brian Gyory: Comment No. 195 Mention physical barrier The board should see additional information on this item. This is the first time we are hearing about this. Provide details, pictures and sites where this is being currently used

RESPONSE: A physical barrier is proposed at the southern entrance/exit to the Project Site. A colloquially labeled "head banger" will be installed at a height of 8 +/- feet to create a physical barrier to prohibit trucks from passing through. An example of one option is included below. Further details will be provided upon Site Plan application.

Permanent type with hanging bar that can sing open manually if needed during an emergency only

66. Brian Gyory: Comment No. 205 Page 3-95 shows percent increase I thought trucks weren't using these routes? Route by Ezra Prentice shows a 29.1% increase in traffic. Please clarify

RESPONSE: NYSDOT standards require that all traffic impact studies analyze the traffic generated by a proposed project based upon the existing traffic distribution patterns with no restrictions. This analysis establishes a base line from which restrictions/ mitigation measures can be adopted to avoid impacts to a particular street or neighborhood. Without restrictions/mitigation measures, it is projected that S. Pearl Street in front of Ezra Apprentice

would experience 29.1% increase in truck traffic. As a result of this base line analysis the truck sensitivity analysis was deemed necessary to determine the most appropriate truck route to avoid impacts to the Ezra Prentice Community. After completing that assessment, it was determined that all trucks associated with the Port Expansion project will utilize the Church Street entrance at the north end to avoid impacts to the existing residential areas including Ezra Prentice.

67. Brian Gyory: Truck Sensitivity Review Are the three color lines new?

    RESPONSE: No, these three colors are not new, this figure was provided in the original TIS; however, the lines were extended outside the study area for the Public Hearing to further expand on the truck routes that were reviewed during the truck sensitivity analysis.

68. MJ Engineering and Land Surveying, P.C.: FGEIS Comment 232, page 3-100: Response to Comment 71 does not address the request to provide rationale for not providing turn lanes at the proposed access driveway at NYS Route 144.

    RESPONSE: The proposed access driveway does not warrant turn lanes from a capacity standpoint; therefore, the turn lanes were not recommended as a result of the analysis completed in the TIS. The NYSDOT reviewed the TIS and did not comment or recommend any turn lanes at the proposed intersection. The NYSDOT takes ownership of the additional lanes/pavement once constructed; therefore, they will not allow/require turn lanes unless they are warranted.

69. MJ Engineering and Land Surveying, P.C.: If any appendices or components of appendices in the DGEIS have been updated to address comments, those appendices should be updated in their entirety and provided as an FGEIS appendix similar to what was provided for the Updated Economic & Fiscal Impact Report included in the FGEIS.

    For example, additional traffic data was gathered and analyzed. The transportation impact study should be updated to reflect the additional information and that updated study should be included in the FGEIS appendices.

    It appears that text should also be revised in the Stormwater Report (DGEIS Appendix J). The response to this comment (FGEIS comment 233, page 3-100) should be expanded to include a description of the extension soil investigation and findings, not just a reference to the DGEIS section. The Stormwater Report should be updated and the updated report should be included as an appendix in the FGEIS.

    RESPONSE: All technical studies that were revised to address comments have been updated and included in the FGEIS appendices. This includes, but is not limited to, the TIS and Stormwater Report.

70. MJ Engineering and Land Surveying, P.C.: The proposed EJ public engagement plan should be included in the FGEIS as an appendix.

    RESPONSE: The Public Participation Plan has been included as an appendix in the

Supplemental DGEIS as Appendix E.

71. John Smolinsky: Appendix D - This appendix should be updated to include the NYS DEC October 2019 Albany South End Community Air Quality Study, particularly the Key Findings and New Actions to Reduce air pollution and exposure. The FGEIS or the supplemental FGEIS should include the updated study information.

    RESPONSE: The NYSDEC October 2019 air monitoring study has been summarized within the Draft and Supplemental DGEIS. We recommend that since the NYSDEC studies do not directly evaluate the Proposed Project, they should not be included as appendices. However, the location of the study has been incorporated with references including links to the documents.

72. MJ Engineering and Land Surveying, P.C.: It is unclear if FGEIS comment 238, page 3-101 has been addressed. Please address and include revised boundary survey as an appendix in the FGEIS.

    RESPONSE: The Boundary Survey was completed by a subconsultant and is not available for alteration. Since this comment is not considered an environmental impact, we recommend that the boundary survey remain as is.

73. MJ Engineering and Land Surveying, P.C.: It is unclear if FGEIS comment 239, page 3-101 has been addressed. Please address and include revised front yard setback on all concepts as an appendix in the FGEIS.

    RESPONSE: After further review with MJ Engineering this comment is no longer applicable.

Please do not hesitate to call should you require additional information or have any questions.

Sincerely yours,

McFARLAND-JOHNSON, INC.

Ashley Erdmann, P.E.
Civil Engineer

McFarland Johnson
Innovative Solutions / Sustainable Results

60 Railroad Place • Suite 402 • Saratoga Springs, NY 12866
Phone: 518-580-9380 • Fax: 518-580-9383
www.mjinc.com

March 26, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Technical Review of Revised FGEIS

Dear Mr. Leslie:

We are in receipt of the initial FGEIS technical review comment letter sent via email dated February 24, 2020 and revised March 11, 2020 prepared by MJ Engineering and Land Surveying, P.C. We respectfully submit the following responses to the comments.

It should be noted that the following comments are in addition to the comments discussed and solutions arrived at during the February 26, 2020 meeting with Town staff, the Planning Board attorney, MJ and the applicant. The outcome of that meeting is included in the Planning Board memorandum dated February 27, 2020 that was read into the Planning Board record on March 3, 2020 and is attached for reference.

1. Use the phrase 'no significant adverse impact' consistently throughout document in place of "No potential impacts" or "No adverse impacts"
   RESPONSE: Changed throughout document.

2. Appendix J of the FGEIS - the tables in the Summary of IDA PILOT Scenarios are missed named. Starting with the analysis of Concept B the first table is misnamed. It should be-No Abatement but each reads Enhanced.
   RESPONSE: Appendix J has been updated.

3. Section 1.1 Page 4-3: 1st paragraph replace " uses permitted by right" with "use permitted by site plan and special use permit"
   RESPONSE: Changed on page 4-3.

4. Section 1.4.1 Page 4-9: 1st paragraph- does paragraph refer to dynamic compaction, which will be used to stabilize the soil on the site for foundations, roads, parking lots? If so, it should state as such.
   RESPONSE: Changed on page 4-10.

5. Section 1.4.7 Page 4-11: traffic mitigation improvements should also state- I787/I87/Route 9W intersection to include traffic signal timing monitoring and modifications, as necessary; and Glenmont Road/Rt 144 traffic signal warrant analysis. These mitigation measures are consistent with conclusions in the TIS.
   RESPONSE: Changed on page 4-12.

6. Section 2.1 Page 4-19: Correction of land area and acquisition method (in fee or easement). Confirmation is needed that this north access road will be privately or publicly owned. Any road built to be conveyed to the Town will need to be constructed on land conveyed in fee by National Grid and not via an easement. If road is to be privately owned, then land can be obtained through easement or in-fee.
   RESPONSE: Changed on page 4-21.

7. Section 3.9 Page 4-131: second paragraph references labeling but does not identify a map. Map to be provided.
   RESPONSE: Changed on page 4-143.

8. Section 3.13 Figure 3.13-2 Land Use Map on page 4-153 is dated from the 2005 Comprehensive Plan. Use more current map. Suggest use of the LWRP land use map since it includes this area. See page 18 of LWRP document here: https://townofbethlehem.org/DocumentCenter/View/12736/Bethlehem-LWRP-_draft-2019--10-23-with-Town-revisions-12--23-2019ack?bidId=
   RESPONSE: Changed on page 4-165.

9. Section 3.13 Figure 3.13-1 Zoning Map on page 4-152 reflects a zoning map date of 2008 while the current zoning map is identified as "Amended April 27, 2016". Link to zoning map: https://ecode360.com/attachment/BE1011/BE1011-128c%20Zoning%20Map.pdf from General Codes website.
   RESPONSE: Changed on page 4-164.

10. Section 3.13 Page 4-149: last paragraph modify the sentence to -"…heavy industrial uses as permitted through site plan review or special use permit…" By right in not correctly used in this sentence. By right has a definition in the Town Zoning Law that no review by the Planning Board is required, which does not apply here.
    RESPONSE: Changed on page 4-161.

11. Section 3.13 Page 4-151: 2nd paragraph- 2nd sentence is incorrect. It should reflect that "the site is located in a Heavy Industrial (I) zoning district and land divisions are only permitted in the

R, RLL, RA, RB, RC, CR, RR, RH and RLI Districts only. Therefore, all future subdivision activities would be completed through the Town of Bethlehem's subdivision approval process."
RESPONSE: Changed on page 4-163.

12. Section 3.14 Page 4-163: last paragraph: removed "Bethlehem from "Bethlehem's Town Law 272-1…" This is NY State Town Law, not Bethlehem Town Law.
RESPONSE: Changed on page 4-175.

13. Section 3.15 Will police and fire receive taxes to service the site if the Port owns all buildings? Page 4-168: last paragraph: concluded additional revenue would likely offset any costs associated with additional efforts for local emergency services. Explain how emergency services will be provided support to service the expanded Port area should the buildings be owned by the Port. Suggest consideration of host community agreement and/or consideration of tenant to be taxable or subject to potential PILOT agreement.
RESPONSE: Changed on page 4-181.

14. Section 3.17 Reference should be made to the Fiscal Impact Assessment in the Appendix.
RESPONSE: Changed on page 4-185.

15. Section 3.18 Figure 3.18-1 is dated 2005 from the Comprehensive Plan. Use more current/updated map. Section mentions the Albany County Rail Trail but map does not have it labeled. Map from the Open Space plan includes an update location map of these recreation facilities. The Town Parks and Recreation Master Plan also includes a recreation map. See Parks and Recreation map in this pdf on page 60: https://townofbethlehem.org/DocumentCenter/View/9566/Bethlehem-Master-Plan---Final
RESPONSE: Changed on page 4-203.

16. Section 3.18 Table 3.18-1: identify which parks are located within 1-mile of the project site, as the title of the table suggests.
RESPONSE: Changed on page 4-200.

17. Section 3.18 At January public meeting, public comments mentioned a playground in Ezra Prentice community. Referenced as a recreation location and discuss potential impacts
RESPONSE: Changed on page 4-200 and 4-204.

18. Section 3.19 Page 4-193 states Construction is anticipated to take approximately 12-14 months but another section referenced a buildout of 10 years. Clarify or make consistent with other section(s).
RESPONSE: Changed on page 4-205.

19. Section 3.20 Page 4-195 states "NYSDEC is the governing agency that has complete jurisdiction and responsibility to administer the environmental justice process…" EJ is a SEQR issue with responsibility of the Lead Agency as determined by proposed action. Please clarify roles for EJ and SEQR.

RESPONSE: Changed on page 4-212.

20. Page 4-195: this discussion in the environmental setting section does not relate to environmental setting, it relates to mitigation measures. For example, CP29, public participation plan during site plan application are measures to mitigate impacts.
    RESPONSE: Changed on page 4-207 – 4-213.

21. Page 4-186: concludes $18,302 annual cost for emergency services and no mitigation necessary. Explain how it determined that no mitigation is necessary. . Suggest that mitigation may be necessary if buildings are owned by Port and consider host community agreement and/or consideration of tenant to be taxable or subject to potential PILOT agreement.
    RESPONSE: Changed on page 4-198.

22. Page 4-164: 4th paragraph: what is relevancy of this discussion? Economic development of the Port expansion project is unrelated to the HRVG act – "encourage economic development compatible with preservation and enhancement of natural and cultural resources within the area."
    RESPONSE: Removed from page 4-176.

23. Section 3.5 Page 4-85: identify the potable water supply demand (gpd) for the project. Identify available water supplies (gpd).
    RESPONSE: Changed on page 4-91.

24. There are several misspellings that should be corrected with revised pages or an errata sheet.
    a. On numerous pages two names are continually misspelled:
        i. Carriera should be Carriero
        RESPONSE: Changed on page 3-13 and 3-19.

        ii. Beller should be Beeler
        RESPONSE: Changed on page 3-46.

    b. Pages 3-15 and 4-45 - The phrase "…proposed building making and adjacent building…" is unintelligible; perhaps the "and" should be "any".
    RESPONSE: Changed on page 3-16 and 4-48.

    c. Page 4-9, 1.4.1 Geology, para2 – is the phrase "demarcation maker" correct or should it be "demarcation marker"?
    RESPONSE: Changed on page 4-10.

25. Section 3.1 - Southern driveway noted bedrock and shale (Normanskill Shale). How will bedrock be removed to construct southern driveway and what are potential noise impacts, duration and mitigation.
    RESPONSE: Changed on page 4-45.

26. Note the typo: The phrase "…proposed building making and adjacent building…" is unintelligible; perhaps the "and" should be "any".
RESPONSE: Changed on page 4-48.

27. Page 4-65: High Water is same for Hudson River and Normans Kill. Or does Normans Kill not apply?
RESPONSE: Changed on page 4-69.

28. Page 4-67: Identify the total acreage of federal wetlands on the site- 1, 3-9. What happened to wetland 2?
RESPONSE: Changed on page 4-71.

29. Page 4-72: Normanskill Bridge construction. What wetland will it impact? Wetland 9? Please clarify.
RESPONSE: Changed on page 4-77.

30. Page 4-72: wetlands impacts- water service section states impacts to wetlands for water line extension requires directional drilling and Nationwide Permit. State here as well. If there are no impacts to wetlands 3 – 8, that should be stated.
RESPONSE: Changed on page 4-77.

31. Concept plans show wetland mitigation area along river? But the wetland section states in-lieu fee is preferred. Please clarify.
RESPONSE: Changed on page 4-79.

32. Page 4-87: provide map showing location of 3 monitoring sites in relation to project site. Is the Loudonville site accurately used as the nearest representative site? What about use of Albany and South Albany sites as nearest representative site? On map show other monitoring site locations from other studies referenced.
RESPONSE: Changed on page 4-99.

33. Page 3-28 Comment 71, page 4-119 Accident History Summary table and Page 52 of the TIS same table: Where did the statewide average accident rates come from in the accident history summary table for the segment of SR 144? Verify that all statewide average accident rates are from the most recent publication from NYSDOT.
RESPONSE: Changed on page 3-30 and 4-128.

34. Page 3-30 Comment 76: This comment response does not address whether oversized trucks can make the turning maneuvers on the preferred route nor whether NYSDOT or NYSTA comments were solicited and/or provided regarding this route.
RESPONSE: As previously stated, the required truck routes are not intended to also be the oversized truck routes. Oversize truck routes are established and permitted by the NYSDOT on an as needed individual basis to accommodate the specific requirements of the oversized load. Each oversized load has their own width, height and turning radii requirements and

therefore all roadways throughout the transportation system are considered and evaluated by the licensed hauler. The prescribed route that is identified during this permitting process, is analyzed to ensure all height, width and turning movements can accommodate the oversized load. As a result, if the required truck route is selected as the oversized truck route , all turning maneuvers will be met.

Regarding the required truck routes identified as part of this project, the NYSDOT and NYSTA currently allow trucks to use this route and will continue to do so.

35. Page 3-35 Comment 84: Response does not address impacts to the current roadway condition from increased project traffic nor who will own or maintain the new roadway improvements mentioned.
RESPONSE: The FGEIS Appendix L contains our pavement condition assessment. South Port Road is currently in fair condition and is expected to function adequately with the addition of the project traffic. The NYSDOT will own and maintain the improvements along South Pearl Street and the City of Albany will own and maintain the improvements along South Port Road.

36. Page 4-109: add to the end of the first sentence "…due to the sight distance measurements not meeting highway requirements for truck turn movements."
RESPONSE: Changed on page 4-117.

37. Page 4-111: include LOS table from Appendix B. (Note that Appendix B is not labeled in the TIS). Southbound Route: provide discussion on decrease in LOS to F's. Identify Exit 22 intersection. Why is there greater detail in LOS analysis discussion in westbound alternative compared to southbound alternative. Both identify LOS F.
RESPONSE: We think the LOS table from the Truck Sensitivity Analysis is included in Appendix B of the TIS. Appendix B is listed under the List of Appendices on the third page of the TIS, again on the Appendices cover page of the TIS, and a third time on the Appendix B cover sheet immediately before the contents of Appendix B of the TIS.

Additional detail has been added to the Southbound Route, which includes exit 22 intersection and the corresponding LOS decrease on page 4-119.

38. Page 4-111: Westbound Route: consistency when using quantity of trucks. Previous alternatives state 100%, while westbound route states "worst case scenario". Use 100%.
RESPONSE: "Worst case scenario" has been replaced with "100%" on page 4-119.

39. Page 4-111: Westbound Route: why is the following statement mentioned: "access to this interchange is also available via Church Street to the Green Street slip ramp onto I-787." There was not analysis of this interchange conducted for either alternative. Confuses the reader.
RESPONSE: This language has been removed from the Westbound Route description on page 4-119.

40. Page 4-112: table needs table #. Need to make clear comparison to table on page 4-110. This shows that truck traffic left to normal distribution patterns will increase truck trip during the mid-day peak from 8.9% to 31.3%, reflecting an additional 7 to 26 trucks. However, implementing a required truck route, the truck sensitivity analysis shows only a 3.8% to 6% increase in truck trips on adjacent roads, reflecting an additional 3 or 4 trucks.
RESPONSE: A table number and title has been added as well as language clarifying the table has been added on page 4-120.

41. Page 4-113: Figure 3.7-2 includes the Rt32 to Route 9W route, which is not the recommended route as shown on Figure 17 in the TIS. Figure 3.7-2 should be modified to reflect Figure 17.
RESPONSE: Figure 3.7-2 has been modified to reflect Figure 17 on page 4-121. .

42. Page 4-113 Figure 3.7-2 and TIS Page 42 Figure 17: North arrow is facing the wrong way.
RESPONSE: Figure 3.7-2 and Figure 17 have been modified to reflect the requested change. .

43. Page 4-115: Confirm with CDTC the status of designating the roads through the Port on the Freight Priority Network. Does this designation make roads eligible for additional funding? If so, what sources?
RESPONSE: As stated in the Supplemental DGEIS on page 3/18, the designation of the roads has been completed and are now eligible for additional funding

44. Page 4-123, Conclusions and Recommendations: The improvements noted in the bullets need to be shown in a table to easily identify when the proposed improvements are recommended for implementation. The table should have the intersection in the first column followed by three columns for each phase with the improvement noted in the correct column. This would allow the Town to more easily identify improvements and their recommended implementation schedule.
RESPONSE: A table showing the proposed mitigation for each phase has been created and is included on page 4-133.

45. Page 4-119, Accident History Analysis: Provide conclusions regarding the segment accident rate and trends for NY Route 144 as it relates to potential safety concerns at the new southern driveway. Include a discussion regarding the types of accidents occurring, and exposure and risk as it relates to the accidents experienced and the proposed increase in traffic volume generated from the project. Identify proposed mitigation measures that can be supported by NYSDOT; for example: removal of southern driveway, speed limit reduction, turn lanes that remove turning vehicle from thru lane.
RESPONSE: Additional detail has been added to the sight distance section of the FGEIS starting on page 4-125.

46. Traffic – comment 92 response table has wrong intersection label in 2nd row. Should be the Wemple Road south.
RESPONSE: The comment 92 response table on page 3-41 has been updated with the correct intersection label.

47. Section 3.7.5 Section 3.7.5 - Bicycles and Pedestrians (and responses to #13 and # 74) The response to the question of impacts on bicycle and pedestrian traffic at the I787 Frontage Road and Church Street is inadequate. The FEIS states that the South End Bikeway Connector will "include a new signalized control for the pedestrian movement." There is not enough detail in this statement to conclude no impact, especially from right turning trucks onto Church Street. Collisions with bicyclists associated with right-turning vehicles is a common type of motorist/bicycle accident because a right-turning motorist's attention is directed to the left toward oncoming traffic and bicyclists are not anticipated approaching on the right side.

    The "T" intersection currently is controlled by a flashing signal. Based on the information presented, it is not understood how a pedestrian signal would operate. What other changes will be made at this intersection? Will there be a new right turn lane across the entrance/exit to the 2-way protected bike lane? Will there be any controls at the entrance to protect bicyclists and pedestrians from the off-track of turning tractor trailers?

    More information about the planned improvements need to be presented and possible mitigation discussed.
    RESPONSE: See updated responses on Pages 3-31 and 3-118 based on new information from the design plans for the South End Bikeway Connector Trail Project.

48. Response 77, page 3-32, The response regarding the Bikeway crossing is not consistent with the FGEIS text at page 4-122, Section 3.7.6
    RESPONSE: Comment response has been corrected on page 3-31 (Comment 74) which is referenced as a response for Comment 77 on page 3-33.

49. Response 111, page 3-46, there is no discussion of dewatering dredged material and its techniques, impacts, and protective measures.
    RESPONSE: Changed on page 3-48 and 4-142.

50. Comments 74, 77, 93: impacts from new trucks on South End Connector bikeway – responses are not correct. However, the response to Supplemental DGEIS comment 13 is accurate. Correct the response to comments 74, 77, 93.
    RESPONSE: The responses to comments 74, 77, and 93 have been corrected on pages 3-31, 3-34, and 3-42.

51. Sanitary Sewer – comment 125: Illustrate on concept plans where treatment plant is proposed on site. Identify/reference or justification that site conditions are suitable for treatment plant.
    RESPONSE: Changed on page 3-54 and 4-152.

52. Land Use and Zoning – Highway frontage in Figure 3.13-3 and 3.13-4 needs to be verified.
    RESPONSE: Changed on page 4-162, 4-163, 4-167,4-169, and 4-171 .

53. Site Layout Concepts – comment 239 response is not accurate. Front yard setback along Normans Kill not a side yard setback.
RESPONSE: Changed on page 4-167,4-169, and 4-171.

54. Supplemental: CDTA – comment 8: has CDTA been contacted to determine if 1,100 potential employees warrant a new bus route or the addition of a new bus stop to an existing route.
RESPONSE: An expanded response to comment #8 was provided on page 3-116.

55. Ensure comment responses are consistent with text and information with in the FGEIS itself. Examples include replacing the term "recommended" to "required" when referring to the truck route through the Port of Albany roadways.
RESPONSE: Completed throughout.

56. Section 8 – Cumulative Impacts page 4-213: Revise second paragraph to reflect extension of water line.
RESPONSE: Changed on page 4-225.

57. Page 4-123, second bullet under conclusions and recommendations, last sentence: replace last sentence with the following: *" APDC will include the truck route clause in any anticipated tenant lease as well as installing a surveillance camera near the intersection of Sout6h Port Road and Port Road to ensure truck traffic follows the truck route."*
RESPONSE: Changed on page 4-132.

58. Section 8 – Cumulative Impacts page 4-213: Add the following text immediately prior to last paragraph to reflect potential cumulative impacts on traffic. "*The development projects described above along with the proposed development discussed herein may have cumulative impacts on traffic within the Town, including a degradation in the level of service. While each project individually will be required to address impacts, the Town, through its Local Waterfront Revitalization Program (LWRP), has recognized that this is a broader challenge and has recommended a comprehensive NYS Route 144 / River Road corridor study to determine key issues and potential steps to alleviate those issues."*
RESPONSE: Changed on page 4-225.

59. Section 3.7.6 Traffic & Transportation Conclusions and Recommendations: It is recognized that potential mitigation is identified and a follow-up traffic analysis will be completed for all site plan applications with tenant specific impacts to be identified at time of site plan. Add the following language to clarify that additional mitigation may be required as a result of that follow-up traffic analysis.

"Additional or other mitigation may be required as a result of revised traffic impact study during site plan stage. "

RESPONSE: In order to comply with SERQA, we suggest adding a statement to the Findings Statement as follows: *"In the event that at the time of reviewing a site plan application, an unforeseen impact is identified that has not been addressed as part of the DGEIS, SDGEIS or FDGEIS, a Supplemental EIS will be required that addresses that specific impact and associated*

mitigation measures" .

60. Within the air quality section address the concerns expressed from public comment regarding trucks volume transferred from South Pearl Street to roads within the Port ("front yard to back yard"). Apply the conclusions from the DOH/DEC study related to distance and exposure to contaminants.
RESPONSE: Changed on page 4-102.

Please do not hesitate to call should you require additional information or have any questions.

Sincerely yours,
McFARLAND-JOHNSON, INC.

Ashley Erdmann, PE

Civil Engineer

McFarland Johnson
Innovative Solutions / Sustainable Results

60 Railroad Place • Suite 402 • Saratoga Springs, NY 12866
Phone: 518-580-9380 • Fax: 518-580-9383
www.mjinc.com

April 8, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York
MJ File: 709.26
Technical Review of Revised FGEIS

Dear Mr. Leslie:

We are in receipt of the Planning Board Update for Review of the FGEIS memo dated February 27, 2020 prepared by MJ Engineering and Land Surveying, P.C. We respectfully submit the following responses to the comments.

1. ***Soils and Geology (Section 3.1)***

   a. Overview: Outstanding questions regarding the impacts to nearby residences of the proposed dynamic compaction (e.g. noise, duration) and the proposed mitigation.

   RESPONSE: The following text is located on page 4-47: The nearest residential property, located along Old River Road, is approximately 360 feet from the Project Site's property line. Therefore, noise from dynamic compaction is calculated to be approximately 48 dBA at the home or below that of a normal conversation, and well below the Town noise ordinance regulation of 65dBA. To further minimize this short term noise impact, and to avoid any perceived nuisance, the dynamic compaction will be sequence such that the operation will begin along the western edge of the roadway and move eastward which will

decrease the amount of time the compaction operation is at its closest point to the residential homes. As the compaction operation moves eastward, further away from the homes, the noise will dissipate even further below the highest anticipated decibel level of 48 dBA.

b. Proposed Resolution:

i. It was agreed that the extent and location of the proposed dynamic compaction, which includes a 92-foot buffer from the property boundary is appropriate to mitigate potential impacts related to noise. To further support this conclusion, a calculation of the projected noise level at the nearby houses along Old River Road, accounting or any attenuation from the River Road grade elevation, will be included in the GEIS.

RESPONSE: Please note that a correction to the calculated buffer was made on page 4-46. The correct calculation results is a 60 foot buffer.

On page 4-47, The FGEIS states the following: The nearest residential property (located along Old River Road) is approximately 360 feet from the Project Site's property line. Therefore, the noise from dynamic compaction is calculated to be approximately 48 dBA at that home. 48 dBA is noted to be below the volume of a normal conversation and is well below the Town noise ordinance.

ii. To further ensure the noise levels are in compliance with the Town of Bethlehem Local Law No. 5-09, dynamic compaction operations will only take place between the hours of 7 am and 7 pm and the Port has agreed to conduct noise monitoring during the dynamic compaction operations at the property boundary as an additional mitigation measure. Further limitations on the hours of operation (i.e. 9 am to 4 pm) may serve as a mitigation measure, however, this may lengthen the duration of the operations.

RESPONSE: As stated on page 4-46, Dynamic compaction operations will comply with the Town of Bethlehem's Local Law No. 5-2009 and will only take place between the lesser of 7 am to 7 pm or 7 am to dawn as daylight permits.

As a condition of site plan approval, the Port will conduct noise monitoring during dynamic compaction operations.

iii. Above items will be added to Table 1.3-1

RESPONSE: Table 1.3-1 on page 4-4 has been updated accordingly.

2. Floodplains and Floodways (Section 3.4)

a. Overview: Outstanding questions related to impacts (e.g. sea level rise, truck trips) from raising the site elevation and the proposed mitigation. There are also additional concerns related to the potential for increased truck traffic during construction for site fill.

b. Proposed Resolution:

i. MJ confirmed that the calculation of the Finished Floor Elevation (FFE) based on the Climate Leadership and Community Protection Act recommendations is accurate.
RESPONSE: No response necessary.

ii. It was clarified that the additional 133,000 cubic yards of fill proposed to be brought into the site at full buildout is construction materials (i.e. crushed stone) for the proposed buildings and not related to the overall elevation of the site to the Finished Floor Elevation (FFE) of 20.3 feet. The proposed FFE is intended to account for sea level rise. The earthwork required to achieve this is proposed to include a series of cuts and fills utilizing on-site soils and is not anticipated to require additional fill from off site.
RESPONSE: No response necessary.

iii. Preliminary testing of soils from the wharf area provide positive results for future use on site, which will have to be permitted by NYSDEC.
RESPONSE: No response necessary.

iv. It was agreed to include a calculation and description of the number of trucks anticipated to transport the construction material (crushed stone) and add this narrative in the construction section (2.5).
RESPONSE: Page 4-32 states the following: The import of this material is anticipated to generate approximately 4,750 truck trips.

v. A discussion will be added explain that south entrance will be used as construction entrance during construction primarily for the bridge over the Normans Kill and import of construction material (crushed stone).
RESPONSE: Page 4-32 states the following: As mentioned above construction traffic will be routed along the required truck routes and enter the site through the proposed southern project driveway, and or through the City Streets through the Port District.

vi. Narrative will be added that during a flood, the mobile equipment will be moved to higher ground in the existing Port District storage areas. Discussion of any anticipated outdoor storage of materials that may pose a threat (pollutants) to the Hudson River during a flood event would be discussed and described in a mobilization plan.

RESPONSE: Page 4-85 states the following: Once a tenant is identified, the site plan application will include a mobilization plan that will discuss any outdoor storage of potential pollutants. The mobilization plan will also describe how any mobile equipment will be moved to higher ground within the existing Port District storage areas. .

3. Climate and Air (Section 3.6)

a. Overview: Outstanding questions about the clear identification of the project's potential impacts on air quality to the Ezra Prentice community and the connection to the proposed mitigation. Outstanding questions also remain about potential odors specific to the spray booth and associated impacts.

b. Proposed Resolution:

i. It was agreed that the section requires an introduction that provides a clearer overview of the environmental setting and the potential impacts to public health. This would connect the various sections highlighting existing conditions information derived from the extensive studies completed over the past several years.

RESPONSE: In consultation with MJ Engineering Page 4-93 states the following: This section describes climate and air quality. Air quality within the area adjacent to the Project Site has been the focus of numerous studies and reports for many years. The NYSDEC has studied the air quality in the Albany South End for years based on concerns for public health. The NYSDEC determined air toxins of particular concern to public health for residents in the Albany South end. Regulatory reports and studies related to climate and air quality are summarized below.

ii. It was agreed that while the expectation is that any odors would dissipate before reaching the Ezra Prentice community, there are other residences in the area (Old River Road, Van Wies Point), and the Port will identify appropriate proposed mitigation measures for the potential odor impact of the spray booth. It was noted that there is a NYSDEC permitting process establishing thresholds to regulate odors and that the Port intends to comply with all permitting requirements.

RESPONSE: Page 4-102 states the following: The paint both will be equipped with proper

filtration systems and overspray controls per the permit requirements.
Page 4-102 later states the following: Odor releases from the site are unlikely; however, additional potential odor mitigation could also include vegetative buffers between the property and adjacent properties. The New York State DEC Standard for hydrogen sulfide is 0.01 ppm for a one-hour period which will be used as the odor threshold value for this project.

4. Traffic and Transportation (Section 3.7)

a. Traffic thresholds and associated mitigation

i. Overview: Outstanding questions about establishing thresholds for transportation improvements (mitigation) at each phase of development.

ii. Proposed Resolution:

1. The Port clarified that the intent is to implement traffic mitigation measures at each phase of development. For example, traffic mitigation for Phase III (1.13 million sf) would be implemented if and when a proposed project exceeds 600,001 sf. Since this is not clear in the FGEIS currently, the language will be updated to clarify when each mitigation measure will be triggered for each Phase of development. Clarification could be in the form of a table (to replace the current bulleted list) where side column reflects the intersections and top row reflects Phases with building square footage.
RESPONSE: A proposed threshold/mitigation table outlining the proposed mitigation for each intersection at each phase of development has been created and is included on Page 4-133.

2. Restate that at each future site plan application a traffic analysis will be completed.
RESPONSE: The requested statement has been added to the table on Page 4-133.

3. Based on the above, table 1.3-1 will be updated and reference new table mentioned above.
RESPONSE: Table 1.3-1 on Page 4-6 has been updated accordingly.

b. Existing conditions analysis of existing Port roads and mitigation

i. Overview: Outstanding questions about existing conditions of roadways for Port uses and suitability of the roadways for the specified truck route, which has been identified as a mitigation measure to address potential truck traffic impacts to the Ezra Prentice community. Additional questions raised about enforcement of the specified truck route. Questions regarding third party truck deliveries and expectations for following required truck route.

ii. Proposed Resolution:

1. It was agreed that an existing conditions overview of the lifecycle of the road and identification of road deficiencies (roadway width, striping, signage, turn radius, pavement condition, etc.) will be included based on the CDTC report (should CDTC's report provide the (1)current existing conditions, (2)deficiencies based upon design standards, and (3)needed improvements to address deficiencies). Potential improvements to address deficiencies will be identified as potential mitigation measures. The specific improvements to be implemented would be determined at the time of site plan review.
RESPONSE: An existing conditions analysis and report has been conducted and included in Appendix L of the FGEIS. Page 4-123 states the following: McFarland Johnson, Inc. completed a Pavement Evaluation Report for the required truck route on City Streets that lie within the Port of Albany District that are not currently planned for upgrades. The evaluation included a portion of Raft Street, Port Street/Normanskill Street, and the entire length of South Port Road. The field inspection and evaluation was completed following the NYSDOT Pavement Distress Condition Survey procedures. The inspection determined that based on the type, severity, and extent of cracking the pavement has section that in fair condition while the balance is in poor condition. See Appendix L of the FGEIS for the Pavement Evaluation Report.

2. It was agreed that a more detailed explanation of techniques to monitor use of the truck route and enforcement will be included and implementation of such techniques would occur at time of site plan review. Possible solutions, included but not limited to, a license plate reader/tracker at key locations within the Port roads that would compare to a tenant vehicle license plate list.
RESPONSE: Page 4-134 states the following: Based on conversations with

managers in the Trucking Industry, there are two types of trucking companies; asset based trucking companies and independent truckers. The asset based carriers are trucking companies who own their fleet of trucks and their drivers are company employees. The independent truck drivers are self-employed and obtain their delivery/shipping assignments through a broker. Asset based companies and brokers contract directly with their customers to deliver products and materials. Delivery contracts are typically for a one year period and contain penalties if drivers violate the terms of the contract. As mentioned, the Port of Albany will include as part of their tenant lease, a condition that will require that each tenant have their shipments and deliveries enter and exit along the specific truck routes and avoid S. Pearl Street. This condition will also be made part of the trucking service contract that each tenant will execute with their trucking service provider. The trucking service carrier will then communicate the specified truck route to be followed including turn by turn direction which will be printed on the Bill of Lading which is provided to every truck driver prior to deliver. Violators will be penalized with the possibility of termination of the trucking service contract and or lease as described in Appendix G.

It is commonplace and industry standard to have GPS units on all trucks. Some asset companies also require drivers to use handheld GPS units. These GPS units allow trucking companies and brokers to monitor the routes taken and driving behavior for all shipments and deliveries. The Port of Albany will implement an annual audit of their tenants trucking service contracts to ensure the identified truck routes are being followed.

3. Overall, the narrative will be updated to connect/tie together the discussion on the necessary roadway improvements with the enforcement to provide a comprehensive supporting mitigation measure.
RESPONSE: Page 4-135 states the following: Appendix L of the FGEIS 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. See the letter from the Mayor of the City of Albany in appendix L 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.

4. Based on the above, table 1.3-1 will be updated.
   RESPONSE: Table 1.3-1 on Page 4-9 has been updated.

c. Mitigation of southern entrance/driveway

i. Overview: Outstanding questions related to the sight distance, speed and overall viability of proposed southern entrance.

ii. Proposed Resolution:

1. Clarification will be added about the use of this driveway for truck access.
   RESPONSE: Page 4-117 states the following: The projected truck trip distribution was established based on the actual distribution patterns from the existing Port of Albany site and given that the proposed new southern driveway onto NYS Route 144 will prohibit trucks due to intersection sight distance not meeting highway standards for truck turn movements.
   Page 4-126 states the following: Truck traffic to/from the Port will not be allowed to use this southern proposed access drive. Therefore, sight distance for Truck traffic was not analyzed.

2. Clarification was provided that coordination with NYSDOT has occurred regarding the southern entrance off Route 144, specifically related to the limited sight distance and reduction of posted speed limit to 45mph. The

Port agreed to confirm the most current information has been reviewed by NYSDOT regarding sight distance and speed and that the access onto Route 144 is viable.

RESPONSE: DOT was contacted to review the latest TIS on February 26, 2020. We have since followed up and expect a response soon.

3. Include a list of potential mitigation measures if the DOT does not allow a reduction in the speed limit to 45mph on Route 144.

RESPONSE: Page 4-127 states the following: In the event that NYSDOT does not approve the speed limit reduction along NYS Route 144 (River Road) and the necessary sight distance cannot be obtained for the proposed southern driveway location with the current conditions. Below are potential mitigation measures that could be applied to provide a secondary driveway without a NYS Route 144 speed reduction:

1. **The driveway intersection will be construction such that only right in, left in and right out maneuvers will be allowed. See figure in Appendix L.**
2. **The driveway would be moved north to avoid the sight distance limitation imposed by the existing horizontal and vertical curves where NYS Route 144 (River Road) crosses the railroad tracks. This alternative location would utilize an existing commercial access point, at the De Martini Oil Equipment Services property, at the location of the existing Town of Bethlehem ROW. There is also adequate sight distance for passenger cars entering and exiting the proposed site. It should be noted that this location would utilize an existing railroad underpass, located approximately 200 feet back from NYS Route 144 (River Road) and is approximately 30 feet wide. This underpass can provide sufficient width for a two-lane access driveway into the proposed site for passenger vehicles. However, due to the lack of available height, trucks would be prohibited**
3. **A third and less preferred alternative would be to realign NYS Route 144 (River Road) after it crosses the existing train tracks to the north of the proposed southern access driveway. This would involve straightening the road in order to remove the horizontal curve, thus increasing the available sight distance to meet AASHTO recommended distances.**

In addition to these alternatives, as noted in the TIS, it is recommended that the following mitigation should also be considered during the design of the proposed entrance:

- **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 to improve the visibility of the intersection during nighttime conditions.**

Please do not hesitate to call should you require additional information or have any questions.

Sincerely yours,
McFARLAND-JOHNSON, INC.

Ashley Erdmann, PE
Civil Engineer

McFarland Johnson
Innovative Solutions / Sustainable Results

60 Railroad Place • Suite 402 • Saratoga Springs, NY 12866
Phone: 518-580-9380 • Fax: 518-580-9383
www.mjinc.com

April 24, 2020

Mr. Robert F. Leslie, AICP
Director of Planning
Town of Bethlehem
Department of Economic Development & Planning
445 Delaware Avenue, 2nd Floor
Delmar, NY 12054

Re: Albany Port District Commission
Port of Albany Expansion Project
Beacon Island, Tax ID 98.01-2-1.0 / 98.00-2-10.23
Town of Bethlehem, Albany Co, New York

Dear Mr. Leslie:

We are in receipt of the FGEIS review comment letters sent via email dated April 10,2020 prepared by MJ Engineering and Land Surveying, P.C., and the Planning Board members. We respectfully submit the following responses to the comments. Below is the comment followed by our response in bold text:

Suggested edits in track changes are found on the following FGEIS pages:

1. Section 1
    a. Page 4-7
    b. page 4-12 through 4-13

2. Section 2
    a. page 4-32

3. Section 3
    a. page 4-79
    b. page 4-102
    c. page 4-105
    d. page 4-119
    e. page 4-125
    f. page 4-126
    g. page 4-128
    h. page 4-129
    i. page 4-130
    j. page 4-134

k. page 4-137
l. page 4-138
m. page 4-165
n. page 4-177

RESPONSE: All suggested text changes were accepted and now are incorporated into the document.

Outstanding Technical Comments:

1. Section 2, page 4-12: The Glenmont/144 traffic signal warrant analysis was not included on page 4-12 as noted in the March 26, 2020 response.

   RESPONSE: The suggested text change has been incorporated into the document.

2. Section 2, page 4-32: Identify the number of anticipated truck trips per day to import fill material and the anticipated duration.

   RESPONSE: Page 4-32 has been updated to include approximately 80 truck trips per day over a 3-month duration.

3. Section 3, page 4-45: previous Comment letter Question 25 related to the Southern Driveway and bedrock removal. Document was not fully updated to respond to this question. Revise document to state a blasting plan would be prepared and identify the components involved in such plan – monitoring instrument location, notification to neighbors, duration, etc.

   RESPONSE: Section 2.5 on page 4-33 was expanded to state that a blasting plan will be prepared at the time of site plan review.

4. Section 3, page 4-47: include discussion about potential attenuation of noise related to elevation of River Road.

   RESPONSE: Page 4-47 was revised to include a discussion regarding the attenuation of noise due to the elevation of the closest house on Old River Road.

5. Section 3, page 4-79: Confirm and identify there is a regional wetland bank available for this watershed to accept the proposed in-lieu-fee mitigation.

   RESPONSE: Page 4-78 was revised to identify the actual (TWT) The Wetland Trust Mohawk River watershed to be used as mitigation if necessary.

6. Section 3, page 4-125:
    a. indicate the standard used to evaluate condition of railroad crossings.

RESPONSE: Page 4-121 was revised to indicate that the railroad crossings were improved 10 years ago to meet NYSDOT standards.

    b. Clarify what evaluation was completed of the railroad crossing (i.e. just pavement?).

RESPONSE: Page 4- 121 was revised to indicate that the railroad crossings were visually inspected and improved 10 years ago to meet NYSDOT standards.

    c. The life cycle analysis of the existing pavement section was not included in the roadway condition analysis as identified in the resolution stated in the February 27, 2020 letter to the Planning Board. Please include.

RESPONSE: Page 4-122 has been updated to include a life cycle analysis to be completed during site plan review.

    d. Identify if the turning radii support truck movements and allow to stay in their own travel lane. If not, state any impacts and/or mitigation.

RESPONSE: Page 4-121 has been updated to state that during inspection, all observed trucks were able to complete turns within the travel lanes without impacting opposing traffic. Therefore, all turning maneuvers are adequate.

    e. Consider inclusion of road use agreement at time of site plan review to ensure truck route is in a suitable condition to accommodate truck traffic. Since mitigation of impacts on Ezra Prentice community is dependent on the accommodation of this route as a truck route, having a road that meets standards is important

RESPONSE: Page 4-122 was revised to include executing a road use agreement upon site plan approval.

7. Section 3, page 4-128:
    a. Rework this section as proposed below to be more clear for the reader:
        i. Under current posted speed limit (55mph) for passenger vehicles:
            1. Intersection sight distance
            2. Stopping sight distance

3. Identify what turning movements can be accommodated - Right in /right out appear to be the only turning movements consistent with site distance calculations based on available distances.

ii. Under reduced speed limit at 45mph
1. Intersection sight distance
2. Stopping sight distance
3. Identify what turning movements can be accommodated

b. Include a sight distance analysis (stopping and intersection) for trucks using the south entrance at the posted speed limit.

RESPONSE: Page 4-124 has been revised to clarify that under current conditions, the proposed southern driveway location left hand turns exiting and entering would not be feasible since it fails to meet sight distance standards with the current regulatory posted speed limit of 55mph. Therefore, the driveway is proposed to be limited to a right-in and right-out configuration.

Given the additional time needed for trucks to exit (decelerate) and enter (accelerate) a 55 MPH roadway, this southern driveway right-in right-out configuration is not adequate for trucks therefore trucks will not be allowed to use this southern proposed access drive.

8. Section 3, page 4-129:
   a. Explain why this new alternative has been introduced – is there a need for full passenger vehicles access at a southern location?
   b. show alternative driveway location on map, including crossing/access easement and Town right-of-way as well as sight distance table
   c. identify if any ROW acquisition is required for alternative south driveway location.
   d. Include language that a full sight distance analysis would be required at time of site plan application and prior to a highway work permit approval for the alternative driveway location.

RESPONSE: Page 4-125 has been revised to indicate that if the DOT does not approve the speed limit reduction, the southern driveway will remain as a right-in/right-out configuration.

9. Section 3, page 4-130:
   a. clarify if the proposed mitigation is for the alternative southern driveway, the proposed southern driveway or both.

RESPONSE: Page 4-132 has been modified to clarify that there is no alternative driveway location and the corresponding list of proposed mitigation measures.

10. Section 3, page 4-131:
    a. Add qualitative assessment/conclusion regarding safety implications and potential increase number of accidents along this segment of Route 144 near the southern driveway. (i.e. this should be tied to the turning movement restrictions under posted speed limit as previously discussed)

RESPONSE: Page 4-127 has been modified to provide a qualitative assessment regarding the right-in/right-out driveway configuration.

11. Section 3, Page 4-137: 3rd bullet should state "the monetary amount of the fair share contribution to
be determined during site plan approval stage".

RESPONSE: Page 4-132 has been revised as suggested.

Please do not hesitate to call should you require additional information or have any questions.

Sincerely yours,

McFARLAND-JOHNSON, INC.

Ashley Erdmann, P.E.
Civil Engineer

APPENDIX C

CORRESPONDENCE WITH AGENCIES

McFarland Johnson
Innovative Solutions / Sustainable Results

60 Railroad Place • Suite 402 • Saratoga Springs, NY 12866
Phone: 518-580-9380 • Fax: 518-580-9383
www.mjinc.com

August 6, 2019

New York State Historic Preservation Office
Peebles Island State Park
P.O. Box 189
Waterford, New York 12188-0189
Attn: Nancy Herter, Ph.D.

Re: USACE
Albany Port District Commission Port of Albany Expansion Project
Beacon Island Property
SHPO Project Number: 18PR07273

Dear Ms. Herter:

As a follow up to our conversation last week, and pursuant to your letter dated March 14, 2019, we are notifying you that due to updated information received from perspective companies that may locate on this property, the height of the building could reach 85 feet. Our previous concept design specifications dated February 12, 2019, from which your assessment was based upon, assumed a maximum building height of 60 feet. We are therefore submitting updated photo-simulations and cross sections that reflect the new building height from the same view shed (Papscanee Island Historic District) and locations along American Oil Road that you previously reviewed. No other concept design specifications are being revised.

Attached hereto is the mentioned panoramic photo simulation completed from the point along American Oil Road with the potential 85-foot-tall building during the winter months (worst case scenario) when the vegetation has no foliage. The visualization shows that the building poses no significant visual impact during this time of the year. During all other seasons the building will not be visible due to the existing foliage obstructing the view.

Additionally, please note that the PSEG property immediately to the south of the project site can be seen with their multiple structures taller than the 85 feet. The PSEG site has buildings ranging in height from 85 feet to 145 feet and stacks that are approximately 230 feet tall. To the north, The Port of Albany site has storage silos approximately 90 feet tall. Therefore, the proposed building height is consistent with and lower than the highest structures that are visible from Papscanee Island Historic District.

Our visual assessment includes cross sections from three lines of sight that have also been provided for your review. Based on the attached visual assessment the proposed building will not be visible most of the year and during the winter season it will not cause an adverse visual impact on the Papscanee Island

Site. This is based on the existing property types and uses including building heights that remain in the same viewshed as the Project site.

If you have any questions related to the enclosed information or if you require additional information, please contact me at (518) 580-9380 ext. 3650.

Sincerely,
McFarland-Johnson, Inc.

Ashley Erdmann, P.E.
Civil Engineer

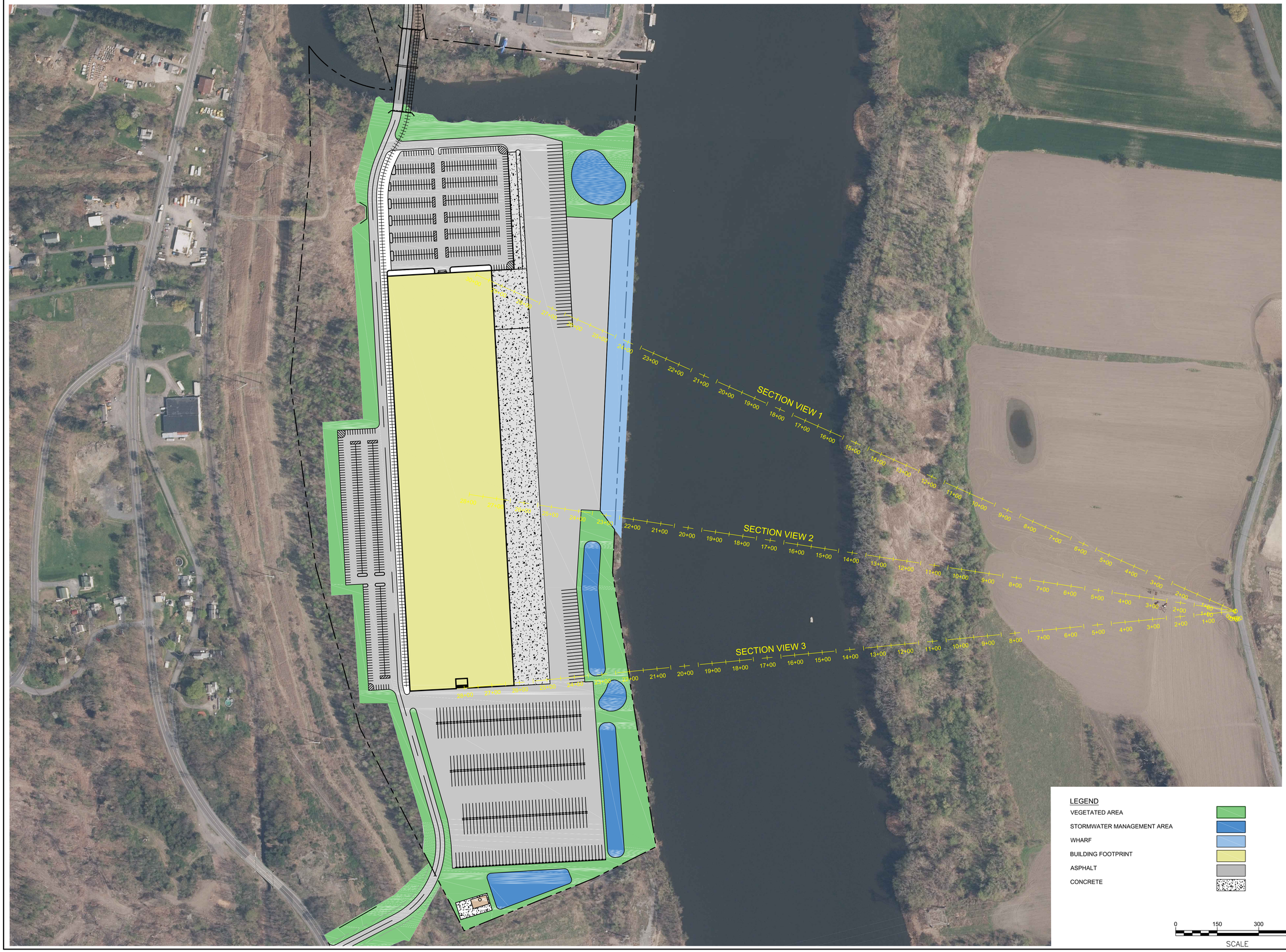
APPENDIX A

PHOTO SIMULATION FROM AMERICAN OIL ROAD

VISUAL SIMULATION OF PROPOSED BUILDING

APPENDIX B

SECTIONS FROM AMERICAN OIL ROAD



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

PROJECT MILESTONE
VISUAL IMPACT

NO.	DATE	DESCRIPTION

CLIENT:
ALBANY PORT DISTRICT COMMISSION

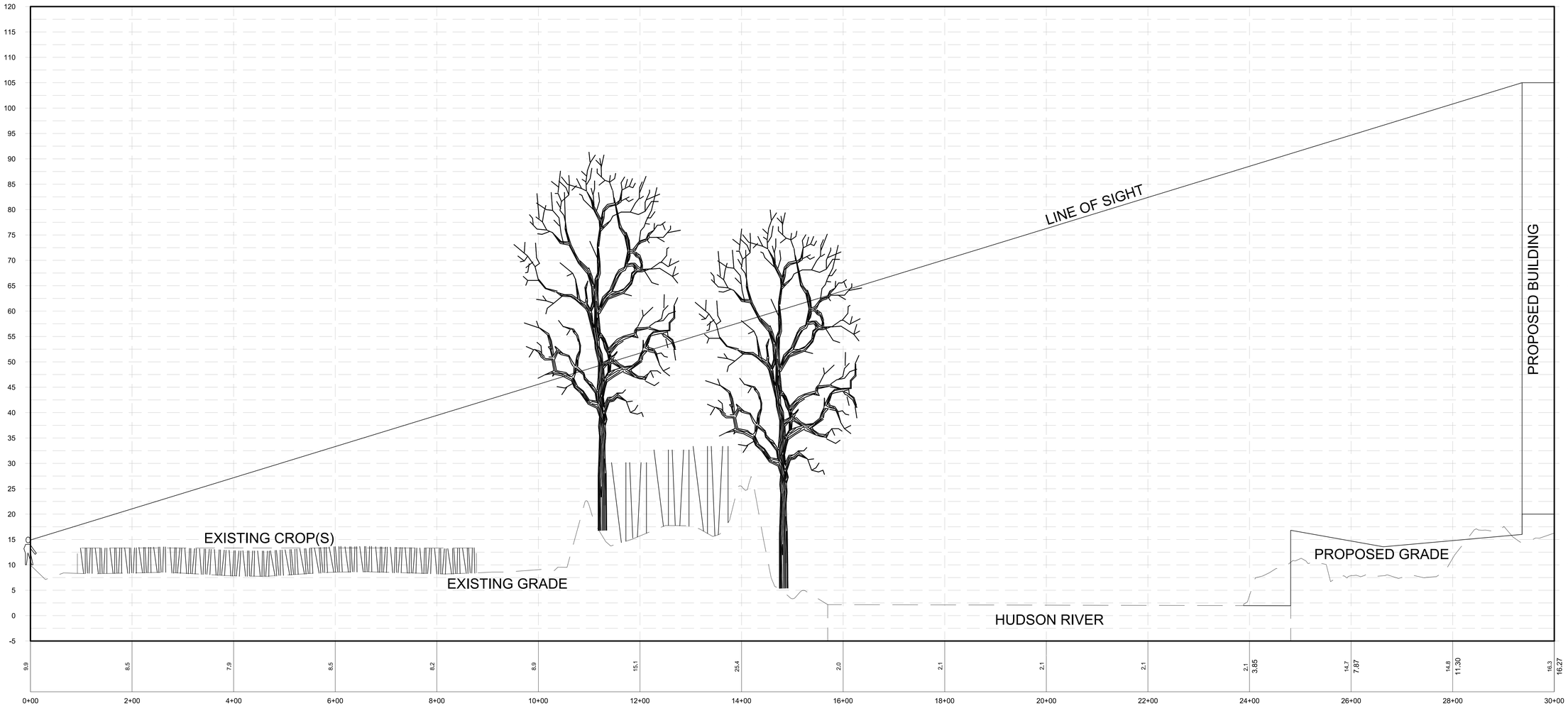
BETHLEHEM, NEW YORK

PROJECT:
PORT OF ALBANY EXPANSION

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

DRAWING TITLE
SECTION VIEW PLAN

DRAWING NUMBER
PR-00



SECTION VIEW 1
Horizontal Scale: 1" = 100'
Vertical Scale: 1" = 10'

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
VISUAL IMPACT

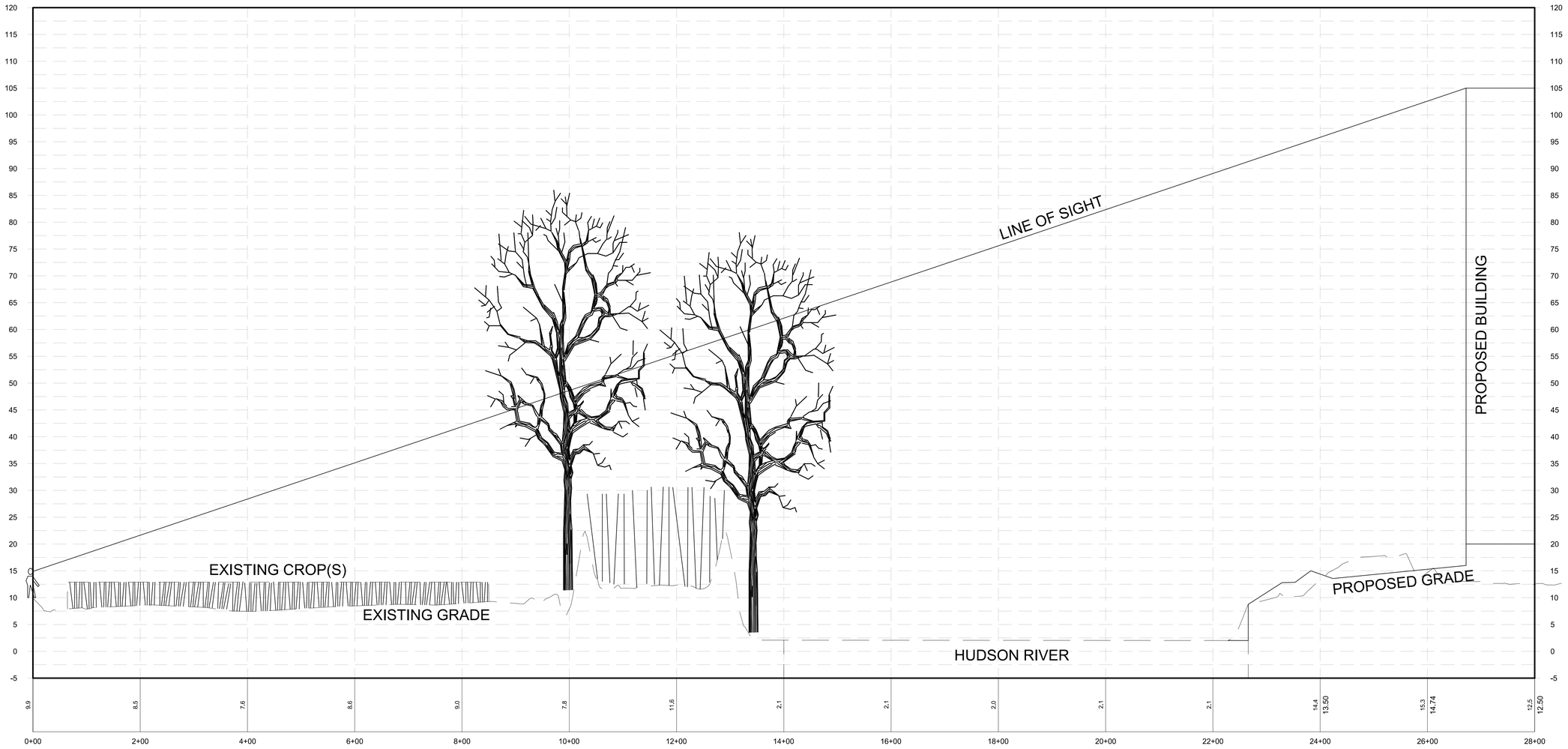
NO.	DATE	DESCRIPTION

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

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=100'
DATE	JULY 2019
PROJECT	18437.00

DRAWING TITLE
SECTION VIEW PROFILES

DRAWING NUMBER
PR-01



SECTION VIEW 2
Horizontal Scale: 1" = 100'
Vertical Scale: 1" = 10'

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
VISUAL IMPACT

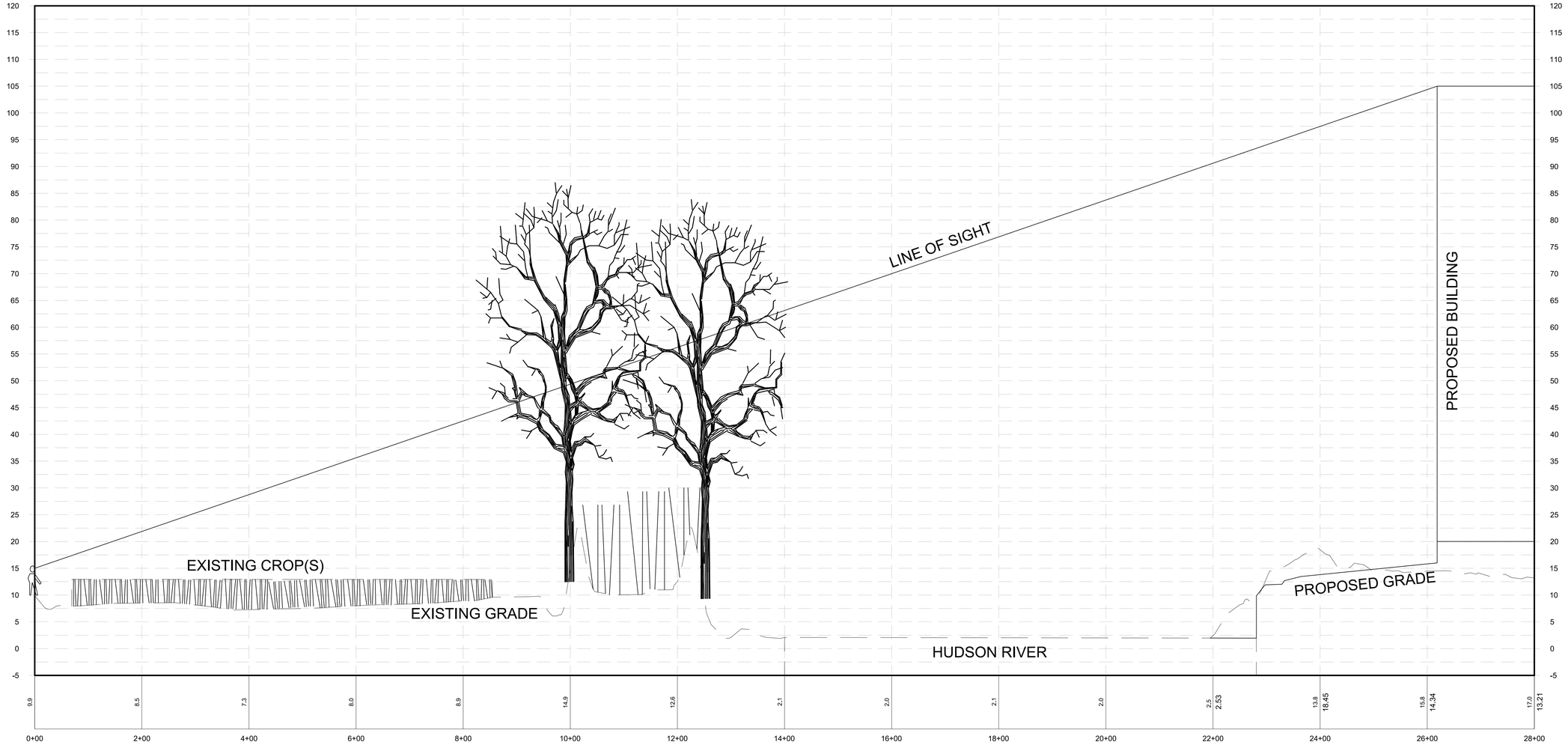
NO.	DATE	DESCRIPTION

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

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=100'
DATE	JULY 2019
PROJECT	18437.00

DRAWING TITLE
SECTION VIEW PROFILES

DRAWING NUMBER
PR-02



SECTION VIEW 3
Horizontal Scale: 1" = 100'
Vertical Scale: 1" = 10'

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
VISUAL IMPACT

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	JULY 2019
PROJECT	18437.00

DRAWING TITLE
SECTION VIEW PROFILES

DRAWING NUMBER
PR-03

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

September 13, 2019

Mr. Andrew Dangler
USACE Update Regulatory Field Office
1 Buffington Street
Building 10, 3rd Floor North
Watervliet, NY 12819

Re: USACE
Albany Port District Commission Industrial Park Project
City of Albany, Town of Bethlehem, Albany County, NY
18PR07273

Dear Mr. Dangler:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the visual simulation and the August 6, 2019 McFarland Johnson letter noting that the proposed building height has changed and could reach 85 feet in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources.

The visual simulation of the proposed building shows that the roof will be visible from the National Register eligible Papscanee Island Historic District. As noted in our November 2009 Determination of Eligibility for Papscanee Island, "Papscanee Island is historically and archaeologically significant for its association with the Upper Hudson Valley's predominate native people, the Mohican…"The rich soil along the flats and on Papscanee Island were flooded annually and generations of Mohicans cleared and cultivated these areas."

While some buildings have been introduced into the landscape, these buildings are not directly across from one of the few remaining cultivated areas on the Island. Since only the top of the building will be visible, the SHPO continues to recommend that this undertaking will have **No Adverse Effect** on historic properties with the **condition** that non-reflective, earth toned roofing materials are utilized. Maintaining a non-reflective roof will minimize any visual intrusions and help maintain the agricultural setting of the Papscanee Island Historic District.

If you have any questions, I can be reached at (518) 268-2179.

Sincerely,

Nancy Herter

Nancy Herter
Archaeology Unit Program Coordinator

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2069 | F: (518) 357-2460
www.dec.ny.gov

September 16, 2019

Town of Bethlehem Planning Board
c/o Robert Leslie, Director of Planning
Town of Bethlehem
445 Delaware Avenue
Delmar, NY 12054

Re: Port of Albany Expansion Project –DGEIS
Supplemental Comments
Bethlehem, Albany County

Dear Mr. Leslie and Planning Board Members:

We write to supplement the comments on the DGEIS submitted to the Town of Bethlehem on September 13, 2019, to clarify the NYS Department of Environmental Conservation's ("Department's") position with respect to Environmental Justice review.

As you are aware, the Department issued Commissioner Policy CP-29, Environmental Justice and Permitting ("Policy"), to ensure meaningful participation and education of at-risk, minority, and low-income areas in the permitting process. The Port Expansion will require permits from the Department, and as part of the Department's environmental review, the Port District will be required to conduct Environmental Justice outreach in accordance with the Policy to provide information to these communities, including Ezra Prentice, and encourage public participation.

We recognize the potential value of the Port Expansion Project to the regional economy, particularly considering the potential use of the Albany Port to support the development of offshore wind as a critical part of the State's clean energy and climate roadmap. As government agencies, however, we should consider and seek to mitigate potential impacts of the Port Expansion on the environment, including any air quality impacts on the environmental justice community in the south end of Albany centered around the Ezra Prentice community.

As you are also aware, the Department has been conducting a comprehensive year-long air quality monitoring study in the south end of Albany, which will be released shortly. This study is the most thorough and painstaking evaluation of air pollution from motor vehicles and other nearby sources that DEC has ever taken and will provide important information for agencies to consider in evaluating and making decisions regarding projects in or around the Port of Albany.

We believe that our unprecedented study will provide a sound foundation for consideration of potential air quality impacts that would inform the identification of mitigation measures that would benefit the residents of the south end of Albany. We can assure you that once a permit application is received by the Department, a robust Environmental Justice effort will commence to fully educate the public and encourage meaningful public participation in the review process.

Thank you for your consideration of our views and we look forward to further coordination on this matter.

Sincerely,

Nancy M. Baker

Nancy M. Baker
Regional Permit Administrator

APPENDIX D

UPDATED DRAINAGE REPORT

DRAINAGE DESIGN REPORT

FOR

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT
BEACON ISLAND EXPANSION
TOWN OF BETHLEHEM
ALBANY COUNTY
NEW YORK

MAY 2019
(REVISED JANUARY 2020)

CREATED FOR:

PORT OF ALBANY

ALBANY PORT DISTRICT COMMISSION
106 Smith Boulevard
Albany, NY 12202
518 463-8763
www.portofalbany.us

CREATED BY:

McFarland Johnson

60 Railroad Place, Suite 402
Saratoga Springs, NY 12866
518-580-9380
www.mjinc.com

Table of Contents

I. General Information

A. Project Description

This Stormwater Management Report has been developed for a Draft Generic Environmental Impact Report (DGEIS) for a proposed development at the Port of Albany. The proposed development is an industrial park on 81.62 acres of land at the Beacon Island site, located at the confluence of the Normans Kill and Hudson River. The property owner, 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 use in the Town of Bethlehem, Albany County, New York, collectively to be known as the Albany Port District Commission Port of Albany Expansion. The project is generic in nature with no specific tenant(s) identified, therefore the stormwater impacts of an industrial park concept including a 1,130,000 square foot warehouse, distribution center, and typical industrial uses has been analyzed. The project will also include an access road through the site connecting to South Port Street in the north and to River Road/Route 144 in the south; the existing railroad adjacent South Port Street will be extended south into the site; two bridges over the Normans Kill will be added, one for the access road and one for the railway; and finally a wharf will be added along the Hudson River for maritime use.

Historically the project site was composed of small islands and river channels subject to natural shifts due to flows associated with the Hudson River and the former Island Creek, a side channel of the Hudson River. Island Creek historically flowed along the western side of the site through the current power line corridor and discharged to the Hudson River at the southern end of the site. Based on available mapping, sometime between 1936 and 1961, Island Creek channel was diverted at the north end of the site directly to the Hudson River, whereupon it was referred to solely as Normans Kill, the main tributary to this former channel. The site was subject to historic fills to create lands and a portion of the site was operated as a coal ash (fly ash) disposal site by Niagara Mohawk from approximately 1952 to 1970. As such, there are large areas of fly ash deposits on the site that must considered when designing the stormwater management of the site.

The purpose of this report is to assess the stormwater quality, quantity, and erosion and sediment control for the development of the site. This report has been developed in accordance with the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002 (Permit) and the NYSDEC Stormwater Management Design Manual (The Manual). The project site is located within the Town of Bethlehem, Albany County, New York, which is an MS4 community, requiring this report and project to receive approval from the Town of Bethlehem.

B. Soil Classification

According to the Natural Resources Conservation Service (NRCS) web soil survey, there are four (4) mapped soil units identified within the project boundary (see Appendix D). The majority of the soil falls within the hydrologic soil group B/D. The first letter corresponds to drained soil's properties under drained conditions and the second to saturated conditions. Group B soils have moderate infiltration and runoff rates while group D have a low infiltration rate and a high runoff rate. The soils with dual group identifiers have been modeled with the more conservative of the two, in this case a D soils group.

The complete list of soils found on the project site is identified in the table below (see Appendix D for NRCS Soils Report).

Table I – Soils Summary

Symbol	Soil Name	Hydrologic Soil Group
NrD	Nassau very channery silt loam, hilly, very rocky	D
Ug	Udorthents, loamy	A
Ur	Urban land	
Wo	Wayland soils complex, non-calcareous substratum, 0 to 3 percent slopes, frequently flooded	B/D

Due to the presence of coal fly ash and bottom ash, further subsurface investigations are required to adequately assess the potential for contaminants across the site. Engineering and institutional controls developed in coordination with the NYSDEC will mitigate any potential effects to the environment and human health. It is anticipated that the engineering controls may include a cover system consisting of 1 to 2 feet of soil or engineered fill to be placed over a demarcation maker overlying the coal ash. The cover system (cap), may consist of impervious pavement, concrete building slab, or a 1'-2' thick earthen berm. A soil management plan (SMP) prepared in accordance with the NYSDEC regulations will be required prior to construction for management of the coal ash soils and this plan will also address procedures for constructing underground utilities and the future maintenance of the below grade infrastructure. It is possible that some coal ash may need to be transported off-site to a permitted disposal site due to elevated levels of heavy metals, and a long-term ground water monitoring program may be required, all of which will be regulated by the NYSDEC. Any stormwater management practice required will be designed with an impervious lining to prevent infiltration of stormwater through the coal ash.

For additional soil information see the TOWN OF BETHLEHEM PLANNING BOARD, DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT For ALBANY PORT DISTRICT COMMISSION PORT OF ALBANY EXPANSION PROJECT, Section 3.1: Soils, Geology, and Topography,

specifically Section 3.1.3: Soils, Geology, and Topography, Mitigation Measures.

II. Hydrology

A. Existing Conditions

The existing drainage area is comprised of a total of 81.62 +/- acres, bordered by the Normans Kill to the north and the Hudson River to the east. At the south boundary there is a Public Service Energy Group (PSEG) power plant, and to the west a parcel owned by Niagara Mohawk Power Corporation that conveys overhead electric transmission lines as well as an underground gas main. The site consists primarily of brush and trees with a small gravel area as well as abandoned railroad tracks. The existing pervious area is 78.02 +/- acres, and the existing impervious area is 3.60 +/- acres. Runoff from the site travels via sheet and shallow concentrated flow directly to the Normans Kill and Hudson River. There are four delineated wetlands within the affected drainage area. Wetland 1 (1.26 acres) is a freshwater emergent and forested wetland located in the northwest portion of the property and functions as storage during flooding events. Wetland 3 (0.07 acres) and Wetland 4 (0.003 acres) are both located on the bank of the Hudson River and are freshwater tidal wetlands. Wetland 9 (0.04 acres) is located on the north side of the Normans Kill and is a freshwater emergent wetland. See Appendix A for existing conditions plans and watershed mapping.

The existing site falls within the Normans Kill watershed of the Middle Hudson Sub-Basin for the Lower Hudson River Basin (HUC10: 0202000602, Water Index No H-221-4) which is listed as a Class C water. Neither the Normans Kill nor the Hudson River are listed in the Manual's Appendix C as a watershed where enhanced phosphorus removal standards are required. Additionally, neither are listed in the Manual's Appendix E as a watershed impaired by pollutants related to construction activity.

B. Proposed Conditions

The proposed development is a 1,130,000 square foot warehouse with ancillary impervious areas including parking for automobiles and trucks, a roadway, railroad, and a maritime wharf. There will also be pervious areas of grass and unaltered brush and trees. The site will consist of approximately 49.63 acres of impervious cover and approximately 31.99 acres of pervious cover.

Runoff from the proposed impervious areas will travel via sheet and shallow concentrated flow to one of five closed drainage systems with an outlet into either a bioretention facility or a water quality pond. The bioretention/water quality ponds will provide runoff reduction and water quality volume to treat the water prior to being discharged into the Normans Kill and/or Hudson River. The overall drainage plan incorporates multiple separate systems with outlets to the Normans Kill and/or Hudson River to avoid a more concentrated larger outlet for the site. See Appendix B for proposed conditions plans and watershed mapping.

The proposed drainage condition is split up into four drainage areas that can be compared with the four drainage areas from the existing condition. However, drainage area 3 is split up into four subareas, P3A, P3B, P3C, and P3D. Each of these subareas drain into the Hudson River and area analyzed in the same design point. See Appendix B for the Proposed Conditions Drainage Map.

III. Stormwater Management & SPDES Requirements

Since the subject site will have land disturbance of more than 1-acre, a full SPDES permit will be required as part of the project. A Stormwater Pollution Prevention Plan (SWPPP) will be developed in accordance with the Permit regulations. Due to the presence of fly ash, in addition to a NYSDEC SPDES, and a Site Management Plan (SMP) will be prepared in accordance with 6 NYCRR Part 375 and DER Technical Guidance for Site Investigation and Remediation and submitted to the NYSDEC, Division of Environmental Remediation and the NYSDOH for their review and approval. The SMP will in include at a minimum a: Health and Safety Plan (HASP), to inform and protect the contractor and their work force; a Community Air Monitoring Plan (CAMP), to monitor and protect the surrounding communities; and Excavation Work Plan (EWP), to direct the activities of the contractor during construction. The EWP will include a detailed description of the work to be performed, the anticipated environmental conditions, and engineering controls to mitigate the movement of fly ash.

The SWPPP will be prepared in compliance with the Manual and meet the following criteria as the principle objectives contained in an approved SWPPP.

- Reduction or elimination of erosion and sediment loading to water-bodies during construction activities. Controls will be designed in accordance with the NYSDEC's New York State Standards and Specifications for Erosion and Sediment Control.
- Mitigate the impact of stormwater runoff on the water quality of the receiving waters.
- Mitigate the increased peak runoff rate of runoff during and after construction.
- Maintenance of stormwater controls during and after completion of construction.

These objectives will be accomplished by incorporating design criteria outlined within the Technical Guidelines provided by The Manual and summarized below.

A. Methodology

To analyze the hydrologic impacts of the proposed development, a storm water management model was developed in accordance with the Manual. HydroCAD™, by HydroCAD Software Solutions LLC was used to model both the existing and proposed conditions: soil data from the NRCS Web Soil Survey was entered into the software; land coverage areas were estimated using aerial photography and site visits; watershed areas were developed using the surveyed topography; time of concentrations were estimated using USDA, Urban Hydrology for Small

Watersheds, TR-55 (TR-55) methodology; and finally runoff and routing calculations were performed using the SCS Unit Hydrograph method.

Green Infrastructure practices were designed in accordance with the Manual using the NYSDEC Runoff Reduction Worksheets available through the NYSDEC's Construction Stormwater Toolbox, available on their website.

The following general steps are followed when conducting a stormwater design:

1. Site Planning:
   The existing natural resource areas and drainage patterns including wetlands, waterways, floodplains, and soils are identified. Conservation of natural resources are maximized given the proposed site.
2. Pre and Post-Development Conditions Analysis:
   The pre and post-development stormwater runoff conditions for the 1, 10, and 100-year storm events are determined using HydroCAD (detailed HydroCAD reports for this project can be found in Appendices A and B).
3. Water Quality:
   The Water Quality Volume and Runoff Reduction Volume are calculated using Chapter 4 of the Manual and Green Infrastructure Worksheets (provided in Appendix C).
4. Water Quantity:
   Peak runoff and stormwater retention/detention are evaluated using the Manual.

B. Water Quality Volume (WQv) / Runoff Reduction Volume (RRv)

Section 4.2 of the Manual states that Water Quality Volume (WQv) is intended to improve the water quality by capturing and treating runoff from small, frequent storm events that contain higher pollutant levels created through the increase of impervious surfaces. Impervious surfaces accumulate pollutants that quickly wash off and rapidly enter downstream waters as well as prevent natural groundwater recharge.

The WQv required for the proposed site is based upon the 90% rainfall event number, percent of impervious cover, and the total site area. Calculations were done using the Green Infrastructure worksheets and can be found in Appendix C. The total WQv required is 208,176 cubic feet.

Runoff Reduction Volume (RRv) is the reduction of the total WQv by application of green infrastructure techniques and stormwater management practices to more closely replicate pre-development hydrology. The intent of RRv is to recognize the water quality benefits of certain site design practices to address flow as a pollutant of concern.

According to Section 4.3 of the Manual, RRv may be calculated based on three methods:

1. Reduction of the practice contributing area in WQv
2. Reduction of runoff volume by storage capacity of the practice

3. Reduction using standard SMPs with runoff reduction capacity

The minimum RRv required by the proposed site is based on the total area of new impervious cover and the Hydrologic Soil Group (HSG) Specific Reduction Factor (S). The specific reduction factor is based on the HSGs present at the existing site. Calculations were done using the Green Infrastructure worksheets and can be found in Appendix C. The minimum RRv was determined to be 41,076 cubic feet.

To best suit the stormwater requirements of the proposed site, three bioretention basins and two stormwater ponds were designed. The bioretention basin was sized in accordance with Section 6.4, Stormwater Filtering Systems of the Manual; because the majority of the native soils of the site are of NRCS soil group D, an underdrain has been included in the design. The ponds were designed in accordance with Section 6.1, Stormwater Ponds, of the Manual. The ponds were sized to provide WQv. However, the ponds do not provide any storm event flow mitigation (see section III.C through III.E below). Bioretention basins and stormwater ponds will be designed in full detail using the Manual. All measures will be designed with an impervious layer to prevent the infiltration of stormwater into and through the flyash. The RRv and WQv that each of these SMPs provide is summarized in Table II below:

Table II – Stormwater Management Practice Summary

SMP	RRv	WQv	Total
Pond 1	-	25,000	25,000
Pond 2	-	100,425	100,425
Bioretention Basin 1	12,910	12,033	24,943
Bioretention Basin 2	14,054	17,137	31,191
Bioretention Basin 3	14,256	20,128	34,384
Totals	**41,220**	174,723	**215,943**
Required	41,076	-	208,176

C. Channel Protection Volume (CPv)

Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. The Manual was used to determine the water quantity requirements of CPv; specifically, providing 24-hour extended detention for the 1-year storm event or discharging directly to tidal waters.

According to Section 4.4, Stream Channel Protection Volume Requirements (CPv) of the Manual the CPv requirement does not apply when the site discharges to a tidal waterbody.

The Cpv requirement does not apply in certain conditions, including the following:

- Reduction of the entire Cpv volume is achieved at a site through green infrastructure or infiltration systems.
- The site discharges directly tidal waters or fifth order (fifth downstream) or larger

streams.

The Hudson River and Normans kill are tidal at the project site. Therefore, the project site discharges directly to tidal waters in both the existing and proposed conditions and 24-hour extended detention of the 1-year storm event is not required for this project.

The change in hydrology for the 1-year storm event from existing to proposed is shown in the HydroCAD Report printouts provided in Appendix B for reference.

D. Overbank Flood Control (Qp)

The primary purpose of the overbank flood control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development. The Manual was used to determine the water quantity requirements of Qp; specifically, providing sufficient retention volume to discharge all runoff from the proposed 10-year storm event at a rate equal to or less than the existing peak 10-year runoff rate or discharging directly to tidal waters.

According to Section 4.5, Overbank Flood Control Criteria (Qp) of the Manual the Qp requirement does not apply when the site discharges to a tidal waterbody.

> The overbank flood control requirement (Qp) does not apply in certain conditions, including:
>
> - The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams. Refer to Section 4.3 for instructions.

The Hudson River and Normans kill are tidal at the project site. Therefore, the project site discharges directly to tidal waters in both the existing and proposed conditions and retention of the 10-year storm event is not required for this project.

The change in hydrology for the 10-year storm event from existing to proposed is shown in the HydroCAD Report printouts provided in Appendix B for reference.

E. Extreme Flood Control (Qf)

The intent of the extreme flood criteria is to prevent the increased risk of flood damage from large storm events, maintain the boundaries of the predevelopment 100-year floodplain, and protect the physical integrity of stormwater management practices. The Manual was used to determine the water quantity requirements of Qf; specifically, providing sufficient retention volume to discharge all runoff from the proposed 100-year storm event at a rate equal to or less than the existing peak 100-year runoff rate or discharging directly to tidal waters.

According to Section 4.6, Extreme Flood Control Criteria (Qf) the Manual the Qf requirement

does not apply when the site discharges to a tidal waterbody.

The 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams. Refer to Section 4.3 for instructions.

The Hudson River and Normans kill are tidal at the project site. Therefore, the project site discharges directly to tidal waters in both the existing and proposed conditions and retention of the 100-year storm event is not required for this project.

The change in hydrology for the 100-year storm event from existing to proposed is shown in the HydroCAD Report printouts provided in Appendix B for reference.

IV. Summary of Findings

A. Summary of Results

Table II (reiterated below from Section III,B) lists the required and provided RRv and WQv for the project. As shown the project is capable of meeting the required volumes using standard practices from the Manual.

Table II – Stormwater Management Practice Summary

SMP	RRv	WQv	Total
Pond 1	-	25,000	25,000
Pond 2	-	100,425	100,425
Bioretention Basin 1	12,910	12,033	24,943
Bioretention Basin 2	14,054	17,137	31,191
Bioretention Basin 3	14,256	20,128	34,384
Totals	**41,220**	174,723	**215,943**
Required	41,076	-	208,176

Tables III and IV below depict the peak discharge in the existing and proposed conditions for 10-year and 100-year design storms. The peak discharge for both storm events exceeds the existing value; however, as described in Sections III,C through E above, this requirement does not apply to this project and these values are shown for reference only.

Table III – Peak Discharge for 10-Year Design Storm

Drainage Area	10-Year Design Storm Discharge (cfs)	
	Existing	Proposed
1	10.23	5.70
2	21.02	13.92
3	17.27	195.21
4	11.19	135.45

Total	**59.71**	**350.28**

Table IV – Peak Discharge for 100-Year Design Storm

Drainage Area	100-Year Design Storm Discharge (cfs)	
	Existing	**Proposed**
1	23.56	12.55
2	48.31	30.95
3	40.08	350.59
4	26.06	239.90
Total	**138.01**	**633.99**

B. Conclusion

Based upon the analysis provided in this report, the proposed development can meet all of the requirements of the Manual and the Permit with a SWPPP. During construction activities Erosion and Sediment Control will be designed and enforced in accordance with the NYSDEC New York State Standards and Specifications for Erosion and Sediment Control. Standard stormwater management practices can provide the required RRv and WQv for the proposed conditions. The elements of the Manual and the Permit that relate to stormwater quantity controls, specifically CPv, Qp, and Qf, are not required at this site as the site discharges directly to a tidal water. All elements of the closed drainage system will be designed to be non-erosive during a 2-year storm event and capable of conveying a 10-year storm event. In addition to a SWPPP, a Site Management Plan (SMP) will be prepared in accordance with 6 NYCRR Part 375 and DER Technical Guidance for Site Investigation and Remediation and submitted to the NYSDEC, Division of Environmental Remediation and the NYSDOH for their review and approval. After construction, a maintenance and operation report program and agreement will be made between the site operator and town to ensure all stormwater management practices are maintained over the life of the site's operations. Example maintenance checklists have been provided in Appendix E.

Appendix A

Existing Conditions Drainage Map and HydroCAD Report

PRE-DEVELOPMENT WATERSHEDS:

AREA 1:
1.60 ACRES IMPERVIOUS
20.75 ACRES PERVIOUS

AREA 2:
2.00 ACRES IMPERVIOUS
28.25 ACRES PERVIOUS

AREA 3:
10.41 ACRES PERVIOUS

AREA 4:
8.51 ACRES PERVIOUS

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 SITE PLAN

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	MAY 2019
PROJECT	18437.00

DRAWING TITLE
EXISTING DRAINAGE CONDITIONS

DRAWING NUMBER
D-01

---- OF ----

Summary for Subcatchment 1S: EX 1

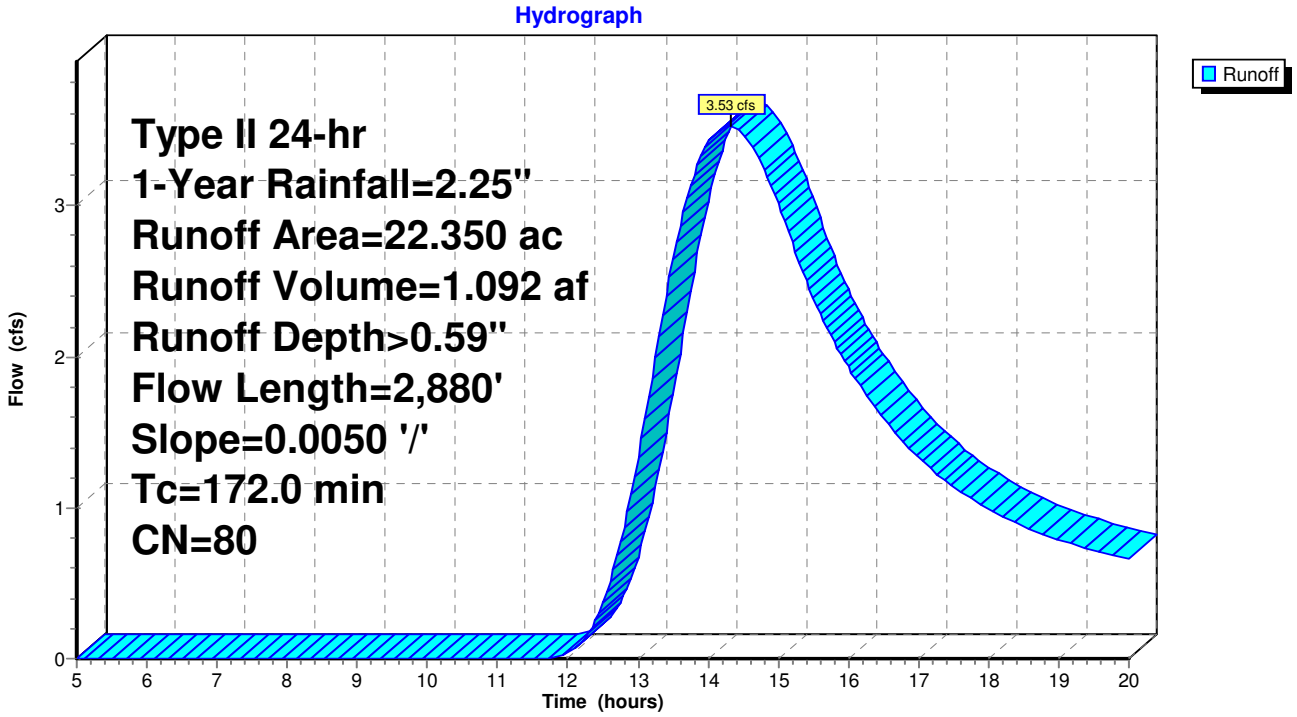
Runoff = 3.53 cfs @ 14.32 hrs, Volume= 1.092 af, Depth> 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

	Area (ac)	CN	Description
	20.750	79	Woods, Fair, HSG D
*	1.600	98	Railroad
	22.350	80	Weighted Average
	20.750		92.84% Pervious Area
	1.600		7.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.9	100	0.0050	0.04		**Sheet Flow, Sheet - Woods** Woods: Light underbrush n= 0.400 P2= 2.67"
131.1	2,780	0.0050	0.35		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
172.0	2,880	Total			

Subcatchment 1S: EX 1



Summary for Subcatchment 2S: EX 2

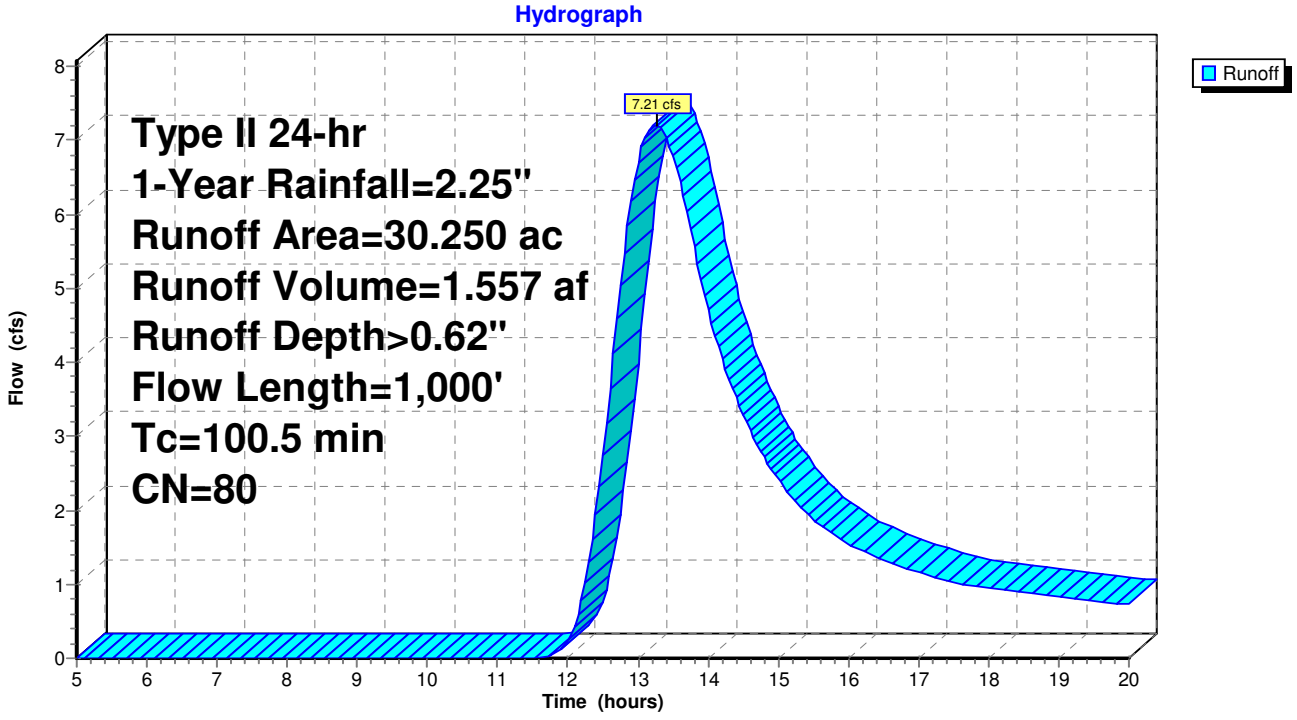
Runoff = 7.21 cfs @ 13.27 hrs, Volume= 1.557 af, Depth> 0.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (ac)	CN	Description
28.250	79	Woods, Fair, HSG D
2.000	96	Gravel surface, HSG D
30.250	80	Weighted Average
30.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.4	100	0.0030	0.05		**Sheet Flow, Sheet** Grass: Dense n= 0.240 P2= 2.67"
67.1	900	0.0020	0.22		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
100.5	1,000	Total			

Subcatchment 2S: EX 2



Summary for Subcatchment 3S: EX 3

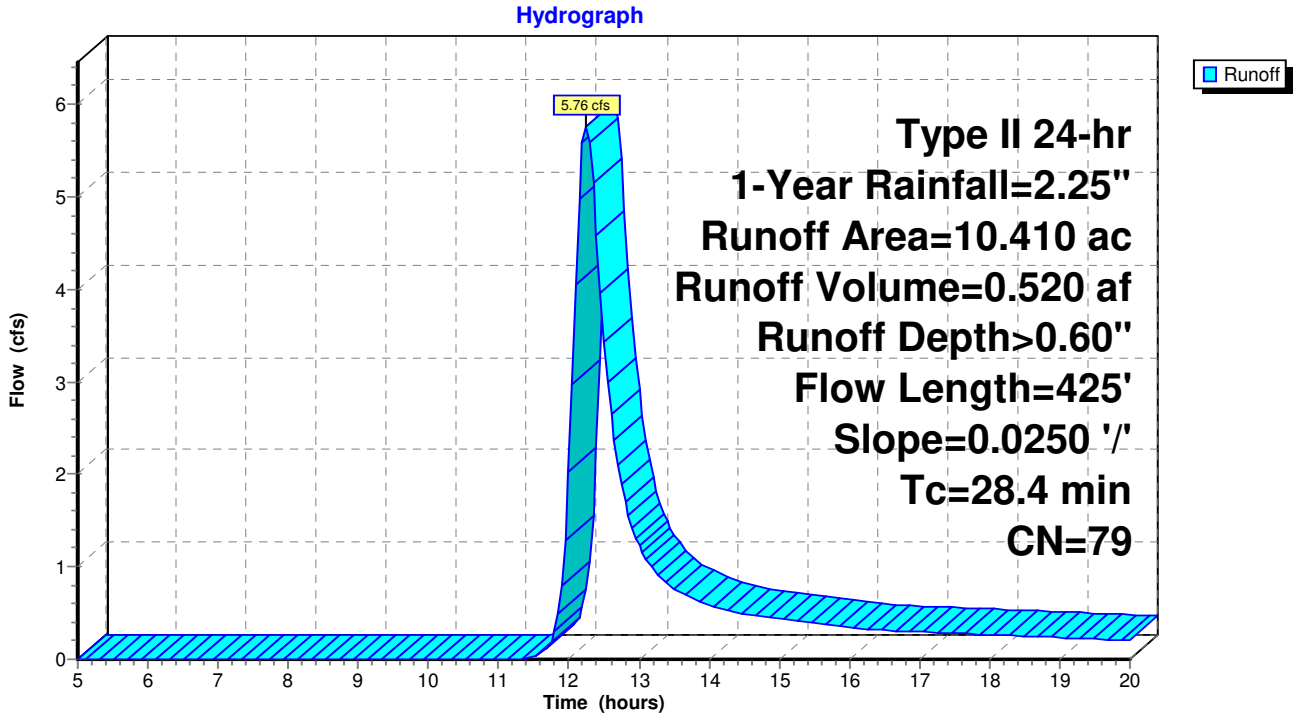
Runoff = 5.76 cfs @ 12.25 hrs, Volume= 0.520 af, Depth> 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (ac)	CN	Description
10.410	79	Woods, Fair, HSG D
10.410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	100	0.0250	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 2.67"
6.9	325	0.0250	0.79		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
28.4	425	Total			

Subcatchment 3S: EX 3



Summary for Subcatchment 4S: EX 4

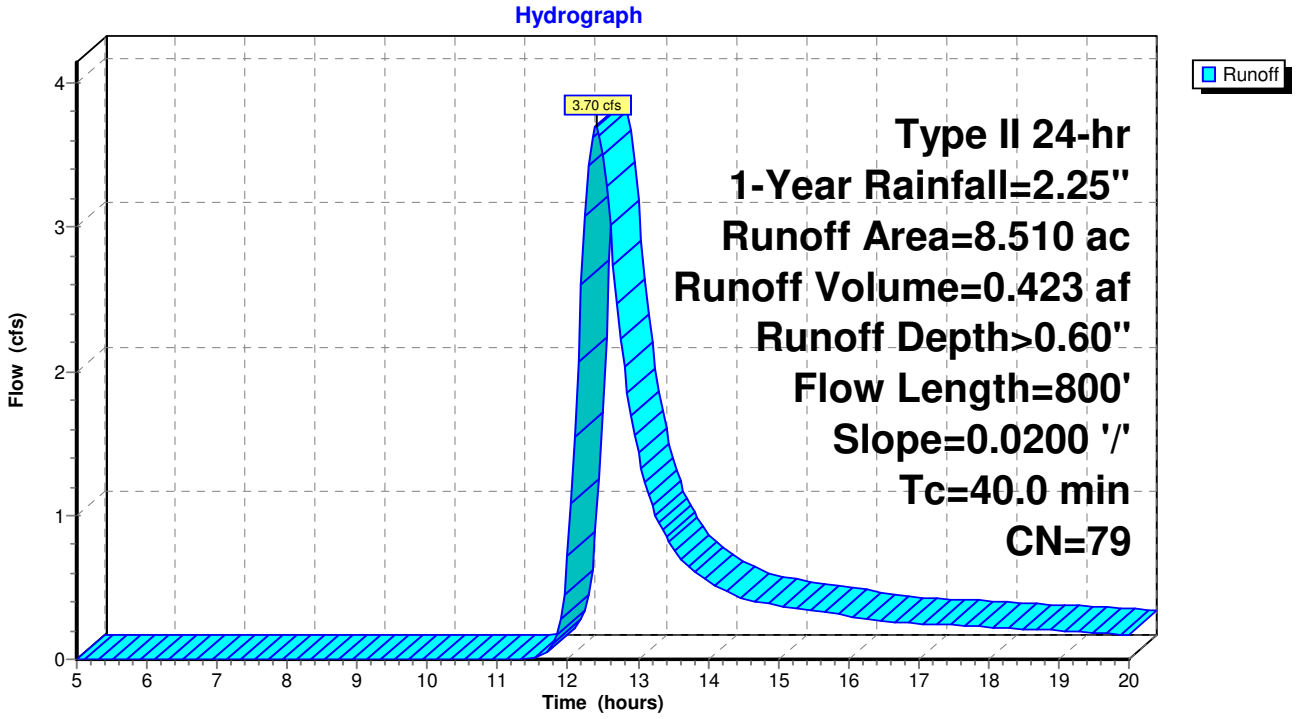
Runoff = 3.70 cfs @ 12.40 hrs, Volume= 0.423 af, Depth> 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (ac)	CN	Description
8.510	79	Woods, Fair, HSG D
8.510		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	100	0.0200	0.07		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 2.67"
16.5	700	0.0200	0.71		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
40.0	800	Total			

Subcatchment 4S: EX 4



Summary for Subcatchment 1S: EX 1

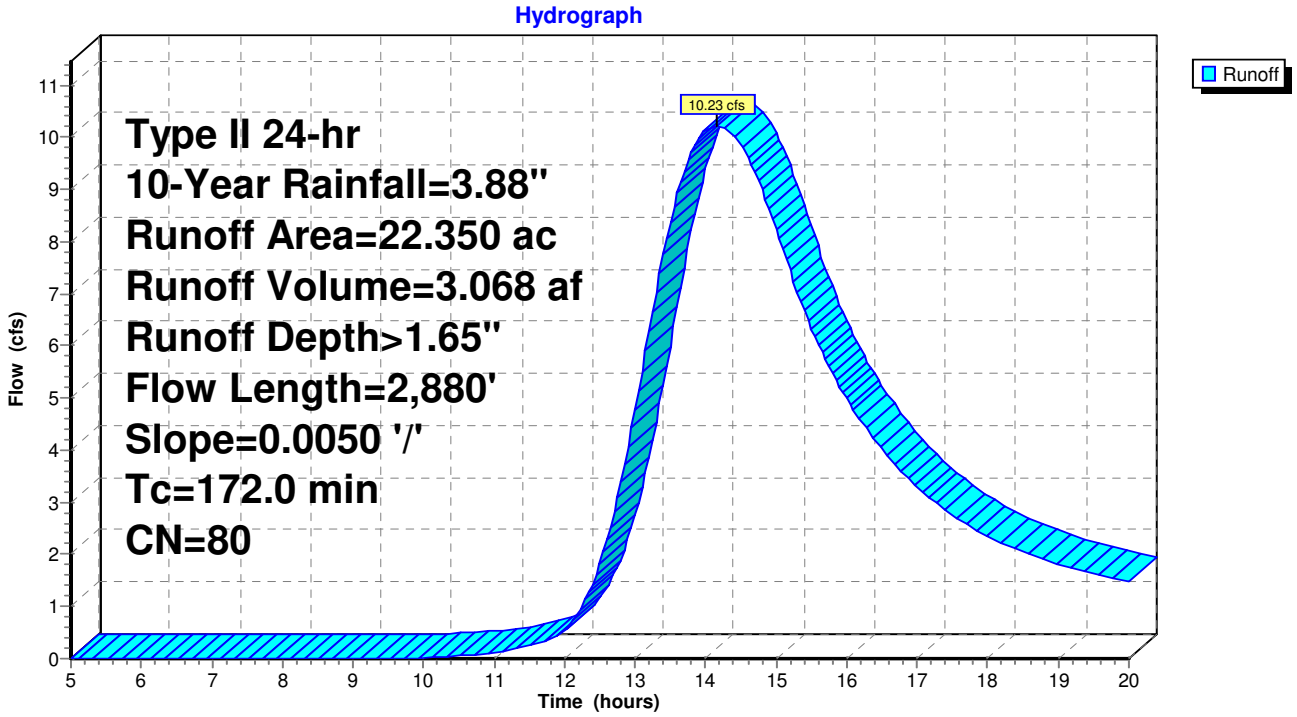
Runoff = 10.23 cfs @ 14.16 hrs, Volume= 3.068 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

	Area (ac)	CN	Description
	20.750	79	Woods, Fair, HSG D
*	1.600	98	Railroad
	22.350	80	Weighted Average
	20.750		92.84% Pervious Area
	1.600		7.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.9	100	0.0050	0.04		**Sheet Flow, Sheet - Woods** Woods: Light underbrush n= 0.400 P2= 2.67"
131.1	2,780	0.0050	0.35		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
172.0	2,880	Total			

Subcatchment 1S: EX 1



Summary for Subcatchment 2S: EX 2

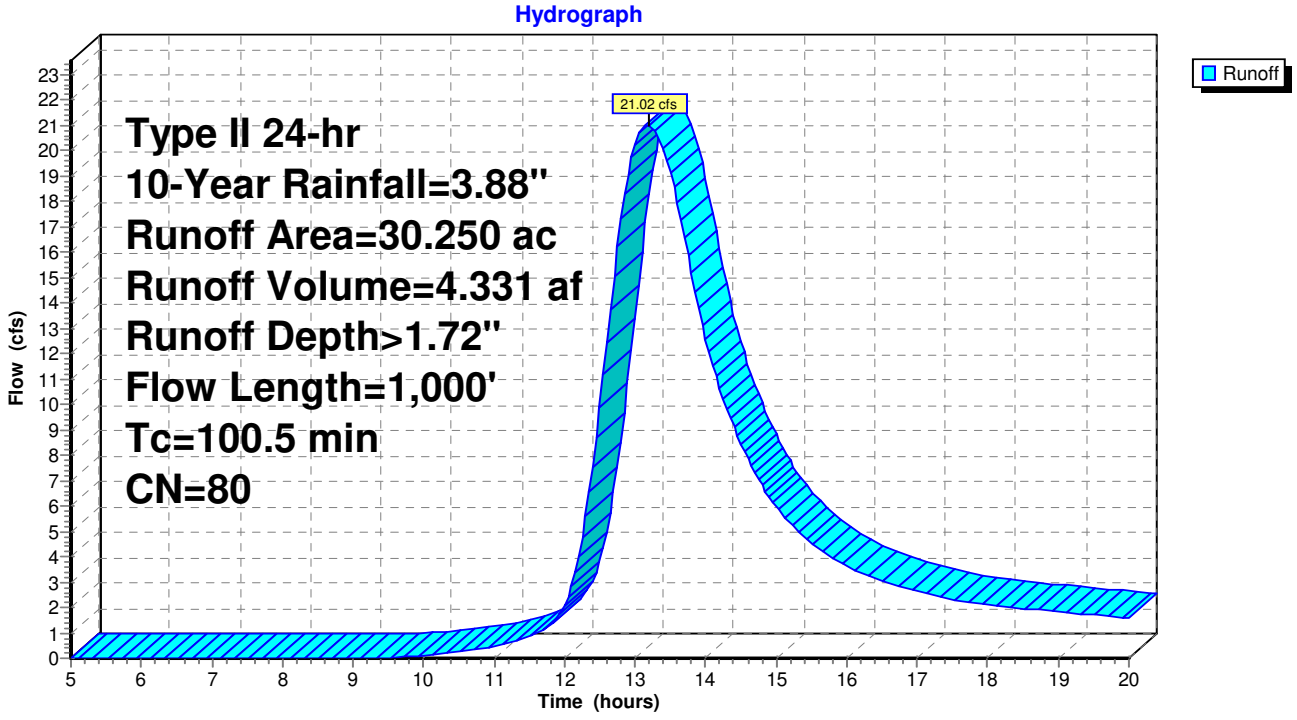
Runoff = 21.02 cfs @ 13.19 hrs, Volume= 4.331 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (ac)	CN	Description
28.250	79	Woods, Fair, HSG D
2.000	96	Gravel surface, HSG D
30.250	80	Weighted Average
30.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.4	100	0.0030	0.05		**Sheet Flow, Sheet** Grass: Dense n= 0.240 P2= 2.67"
67.1	900	0.0020	0.22		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
100.5	1,000	Total			

Subcatchment 2S: EX 2



Summary for Subcatchment 3S: EX 3

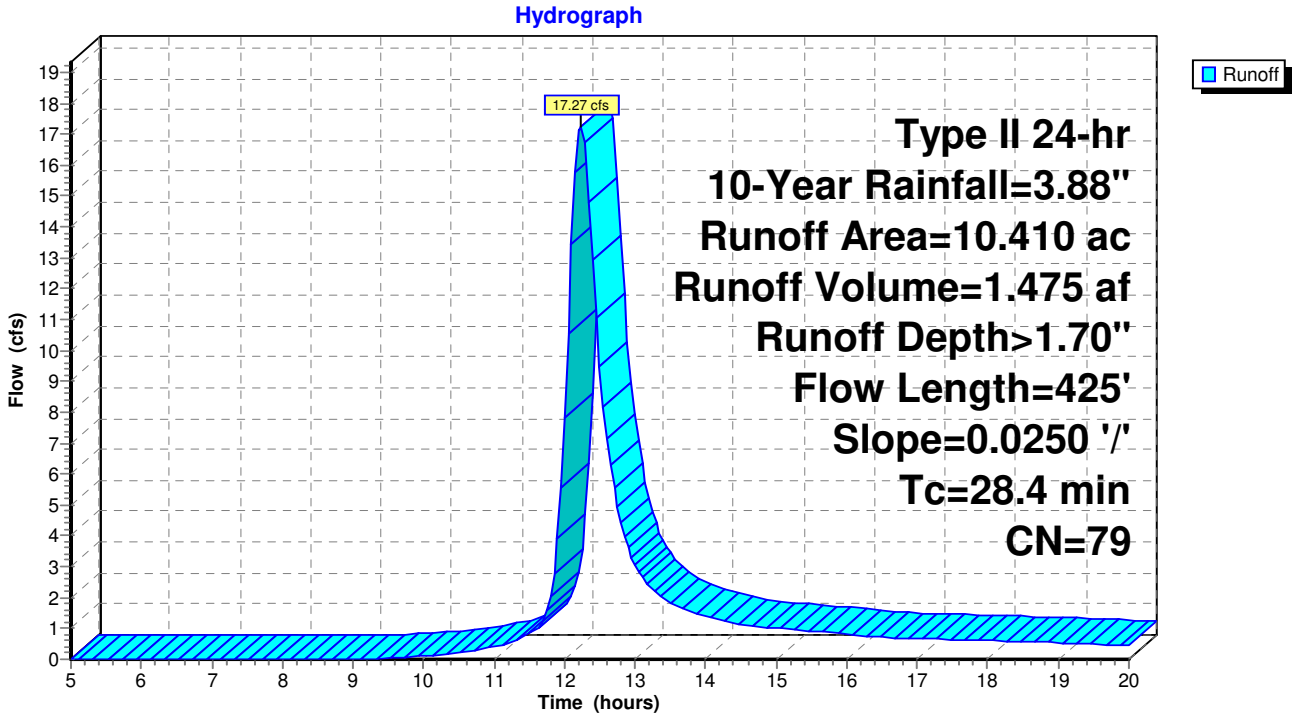
Runoff = 17.27 cfs @ 12.23 hrs, Volume= 1.475 af, Depth> 1.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (ac)	CN	Description
10.410	79	Woods, Fair, HSG D
10.410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	100	0.0250	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 2.67"
6.9	325	0.0250	0.79		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
28.4	425	Total			

Subcatchment 3S: EX 3



Summary for Subcatchment 4S: EX 4

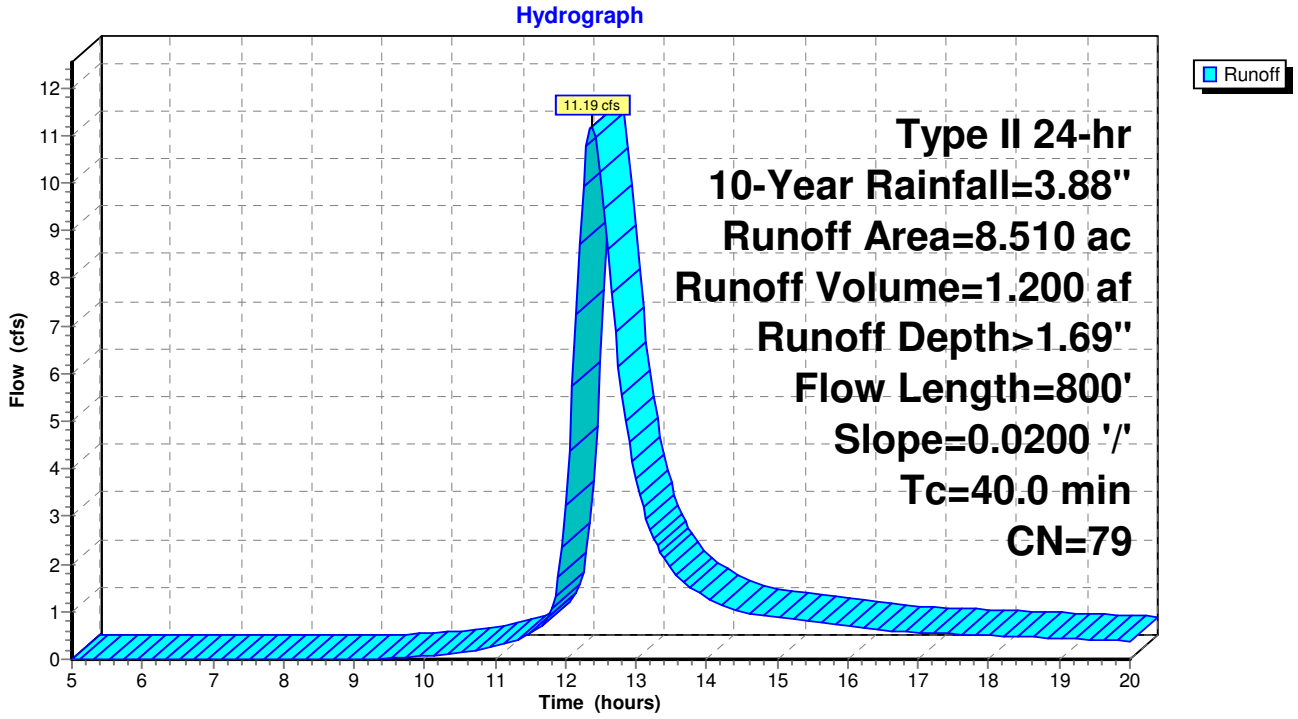
Runoff = 11.19 cfs @ 12.38 hrs, Volume= 1.200 af, Depth> 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (ac)	CN	Description
8.510	79	Woods, Fair, HSG D
8.510		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	100	0.0200	0.07		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 2.67"
16.5	700	0.0200	0.71		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
40.0	800	Total			

Subcatchment 4S: EX 4



Summary for Subcatchment 1S: EX 1

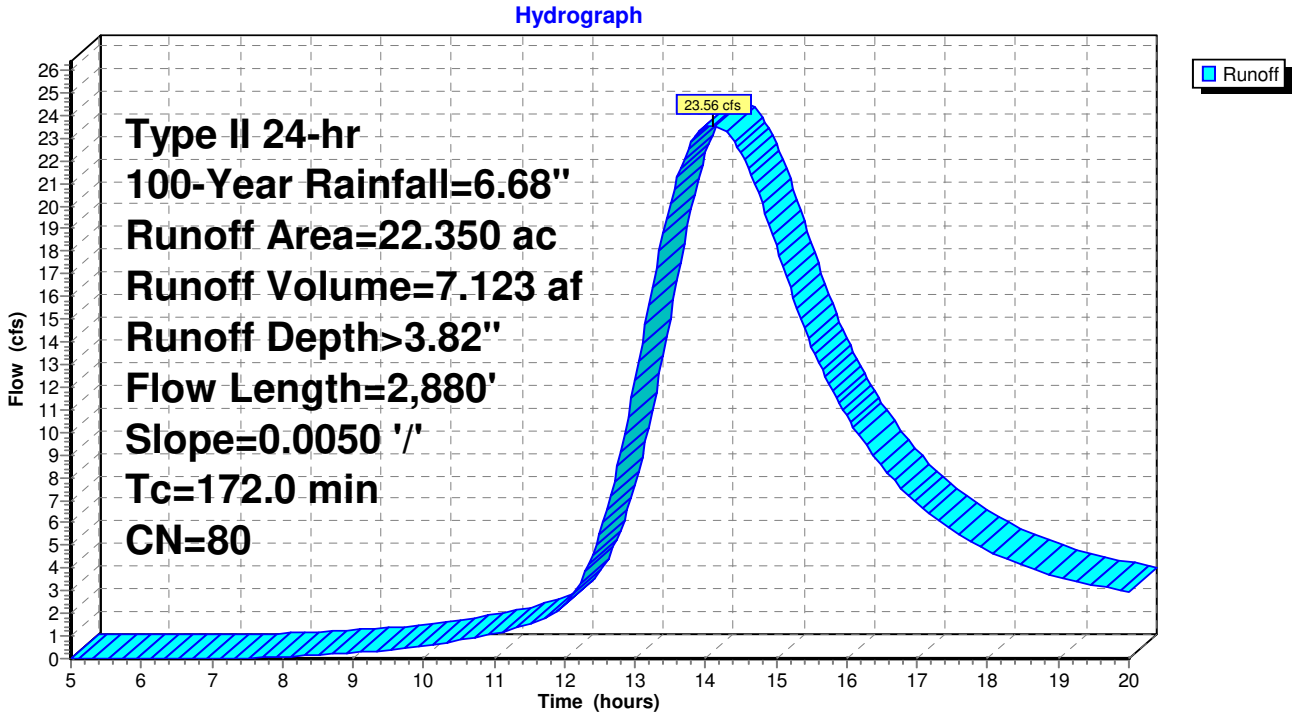
Runoff = 23.56 cfs @ 14.10 hrs, Volume= 7.123 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

	Area (ac)	CN	Description
	20.750	79	Woods, Fair, HSG D
*	1.600	98	Railroad
	22.350	80	Weighted Average
	20.750		92.84% Pervious Area
	1.600		7.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.9	100	0.0050	0.04		**Sheet Flow, Sheet - Woods** Woods: Light underbrush n= 0.400 P2= 2.67"
131.1	2,780	0.0050	0.35		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
172.0	2,880	Total			

Subcatchment 1S: EX 1



Summary for Subcatchment 2S: EX 2

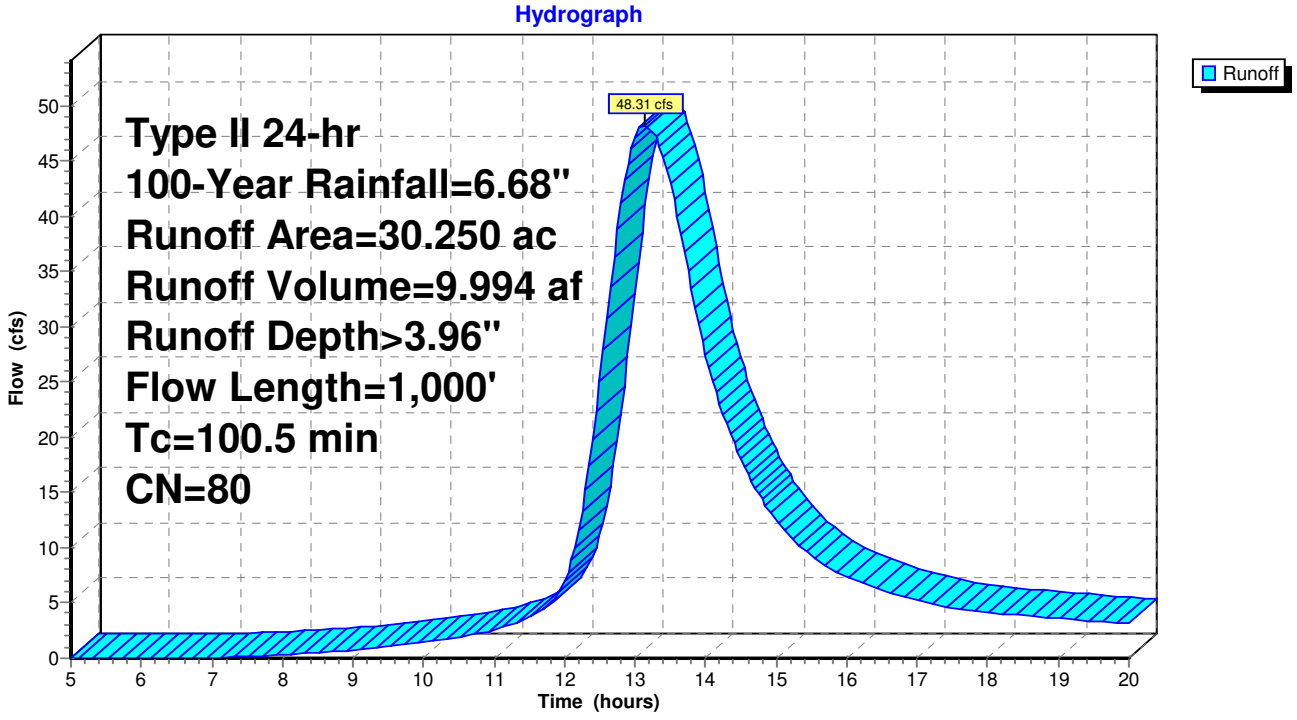
Runoff = 48.31 cfs @ 13.13 hrs, Volume= 9.994 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (ac)	CN	Description
28.250	79	Woods, Fair, HSG D
2.000	96	Gravel surface, HSG D
30.250	80	Weighted Average
30.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.4	100	0.0030	0.05		**Sheet Flow, Sheet** Grass: Dense n= 0.240 P2= 2.67"
67.1	900	0.0020	0.22		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
100.5	1,000	Total			

Subcatchment 2S: EX 2



Summary for Subcatchment 3S: EX 3

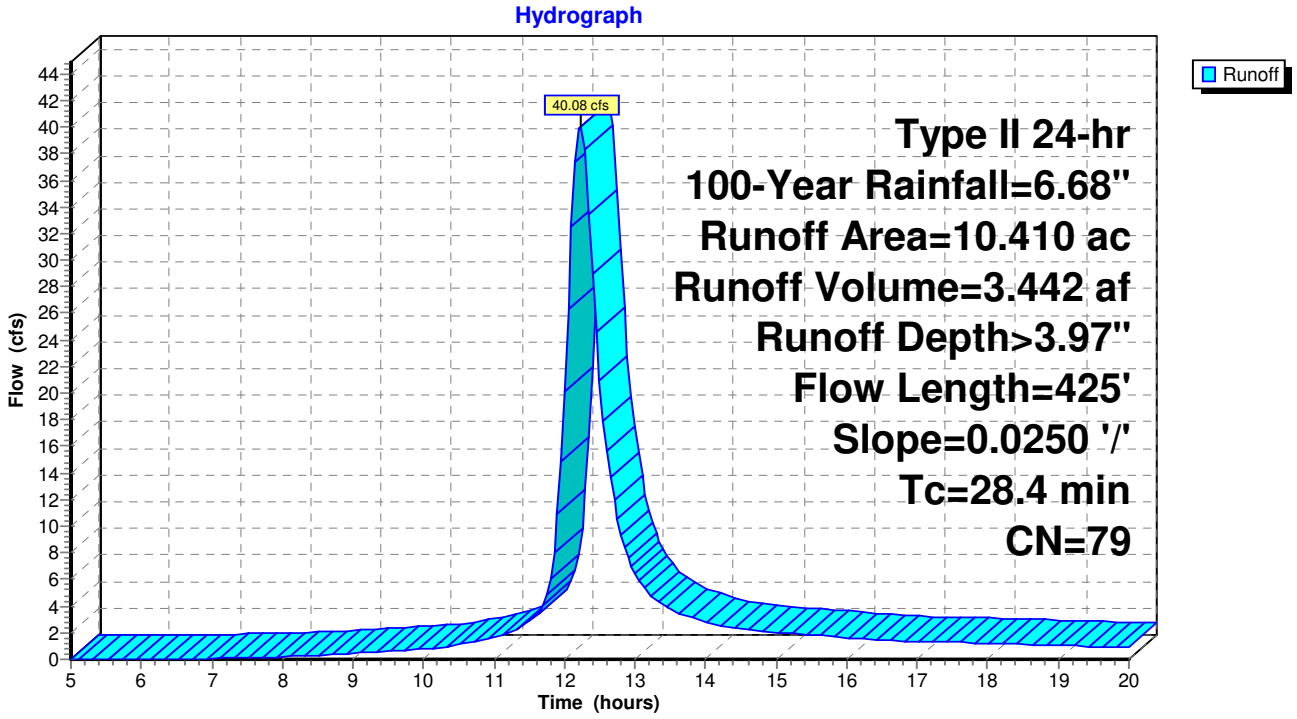
Runoff = 40.08 cfs @ 12.22 hrs, Volume= 3.442 af, Depth> 3.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (ac)	CN	Description
10.410	79	Woods, Fair, HSG D
10.410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	100	0.0250	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 2.67"
6.9	325	0.0250	0.79		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
28.4	425	Total			

Subcatchment 3S: EX 3



Summary for Subcatchment 4S: EX 4

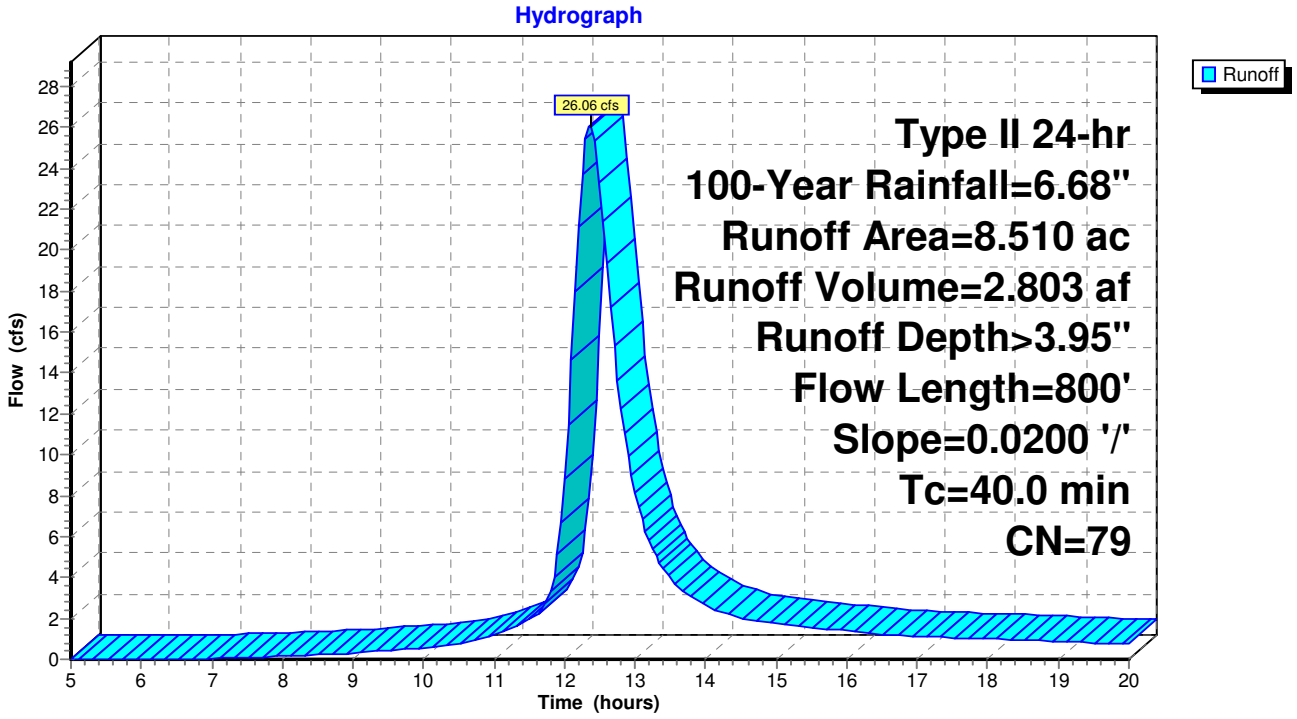
Runoff = 26.06 cfs @ 12.36 hrs, Volume= 2.803 af, Depth> 3.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (ac)	CN	Description
8.510	79	Woods, Fair, HSG D
8.510		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	100	0.0200	0.07		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 2.67"
16.5	700	0.0200	0.71		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
40.0	800	Total			

Subcatchment 4S: EX 4



Appendix B

Proposed Conditions Drainage Map and HydroCAD Report

POST-DEVELOPMENT WATERSHEDS:

AREA P1:
5.11 ACRES PERVIOUS

AREA P2:
3.87 ACRES PERVIOUS

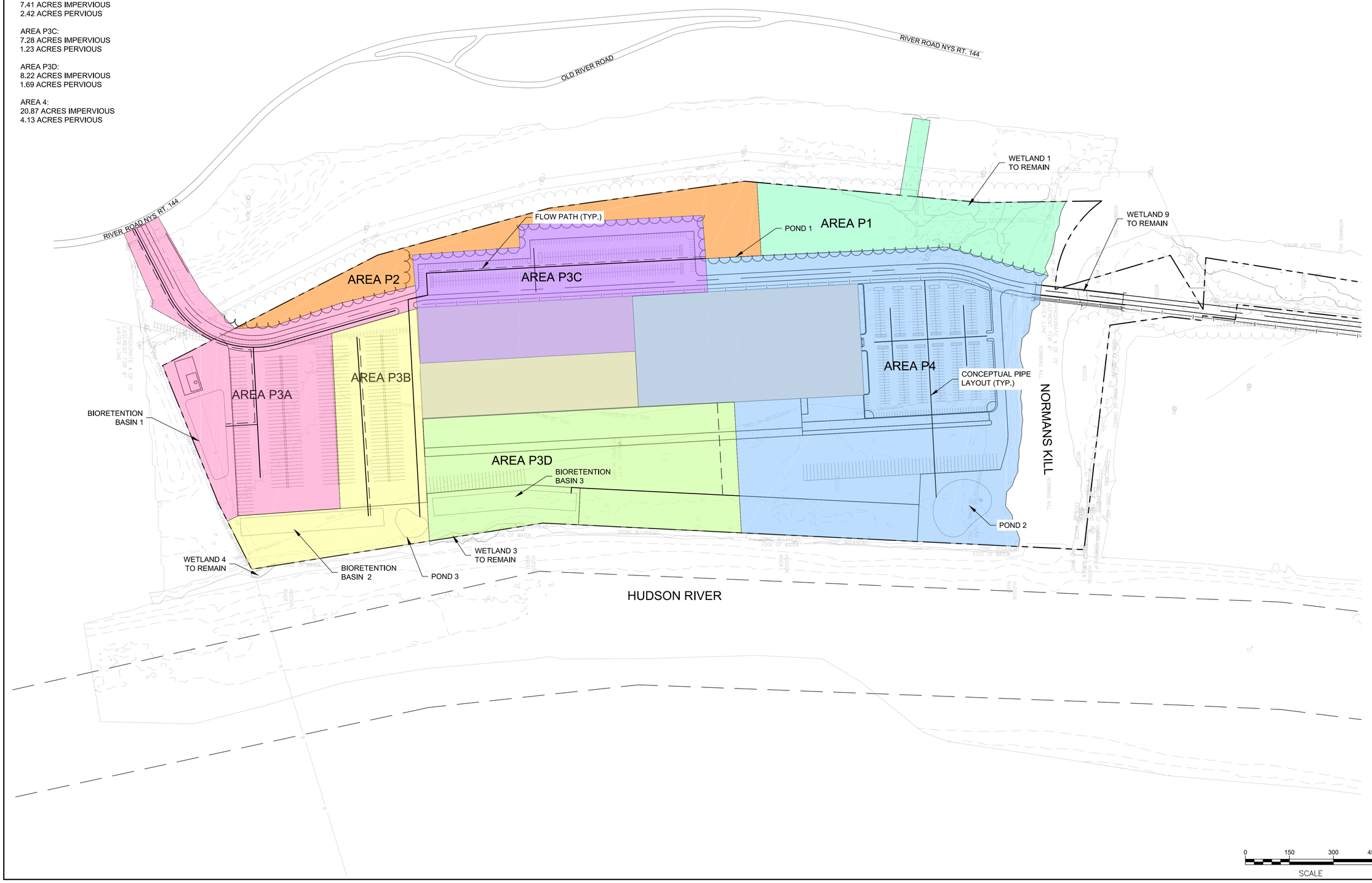
AREA P3A:
5.85 ACRES IMPERVIOUS
3.37 ACRES PERVIOUS

AREA P3B:
7.41 ACRES IMPERVIOUS
2.42 ACRES PERVIOUS

AREA P3C:
7.28 ACRES IMPERVIOUS
1.23 ACRES PERVIOUS

AREA P3D:
8.22 ACRES IMPERVIOUS
1.69 ACRES PERVIOUS

AREA 4:
20.87 ACRES IMPERVIOUS
4.13 ACRES PERVIOUS



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	--
SCALE	1"=150'
DATE	MAY 2019
PROJECT	18437.00

DRAWING TITLE
PROPOSED DRAINAGE CONDITIONS

DRAWING NUMBER
D-02

---- OF ----

Summary for Subcatchment 1S: PROP 1

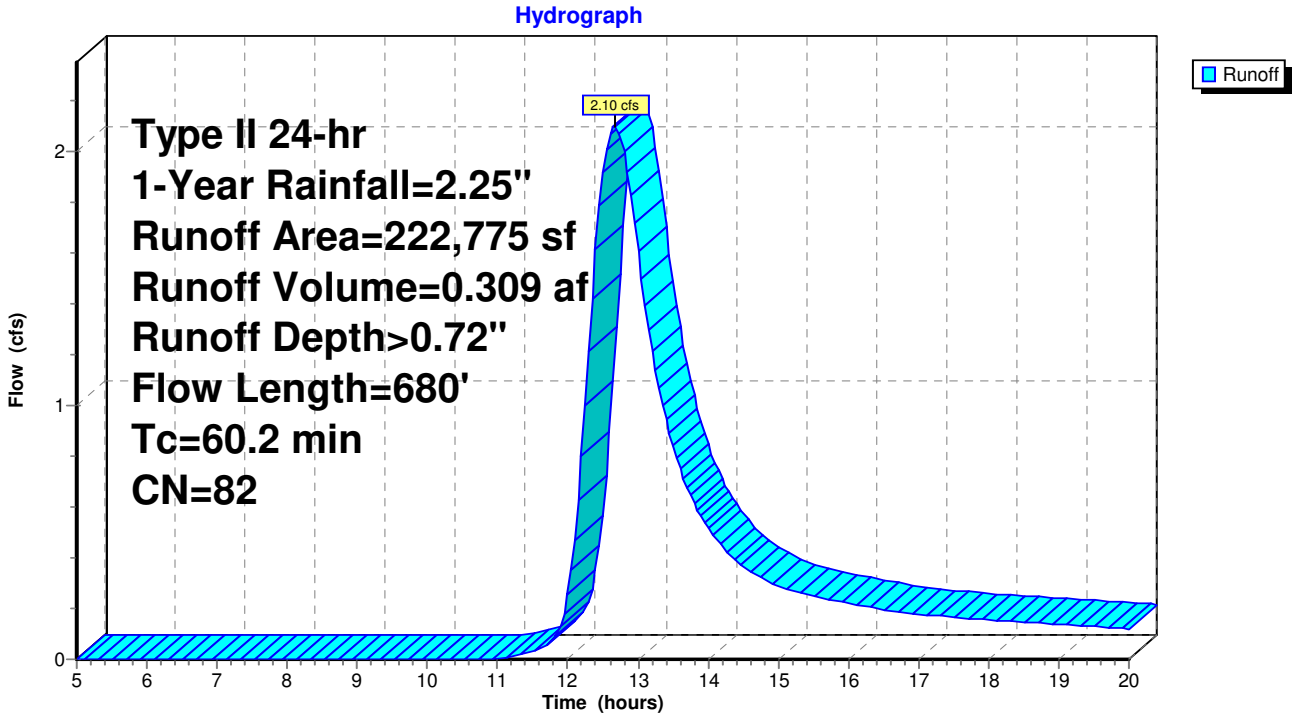
Runoff = 2.10 cfs @ 12.66 hrs, Volume= 0.309 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (sf)	CN	Description
222,775	82	Woods/grass comb., Fair, HSG D
222,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.9	100	0.0050	0.04		**Sheet Flow, Sheet - Woods** Woods: Light underbrush n= 0.400 P2= 2.67"
19.3	580	0.0100	0.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
60.2	680	Total			

Subcatchment 1S: PROP 1



Summary for Subcatchment 2S: PROP 2

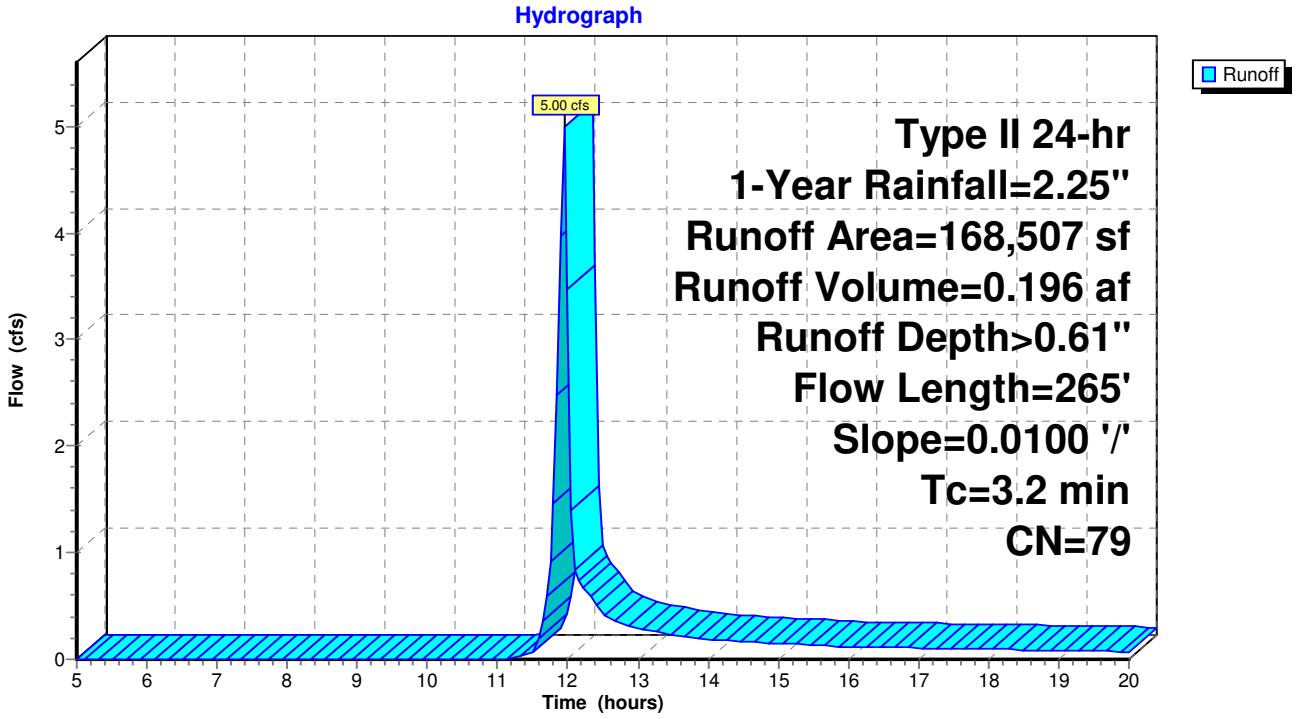
Runoff = 5.00 cfs @ 11.95 hrs, Volume= 0.196 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (sf)	CN	Description
168,507	79	Woods, Fair, HSG D
168,507		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.95		**Sheet Flow, Sheet - Asphalt** Smooth surfaces n= 0.011 P2= 2.67"
1.4	165	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Asphalt** Paved Kv= 20.3 fps
3.2	265	Total			

Subcatchment 2S: PROP 2

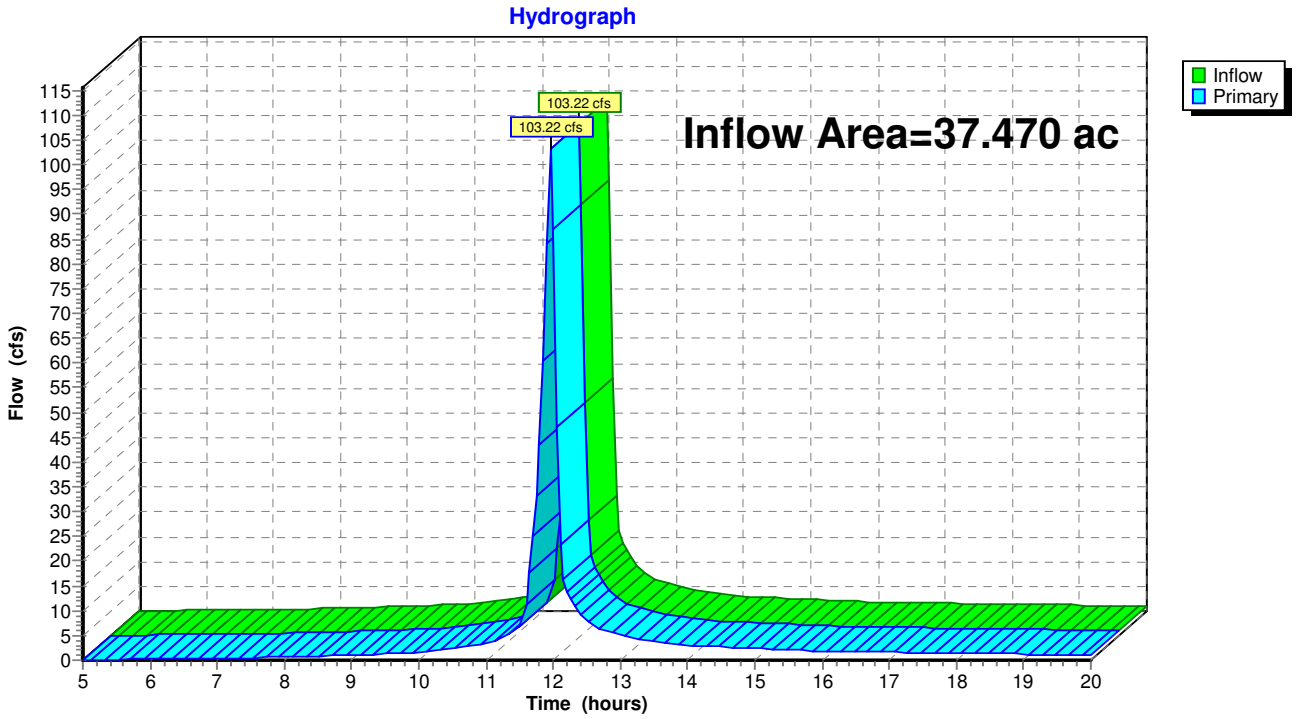


Summary for Link 1L: PROP 3

Inflow Area = 37.470 ac, 76.75% Impervious, Inflow Depth > 1.51" for 1-Year event
Inflow = 103.22 cfs @ 11.95 hrs, Volume= 4.720 af
Primary = 103.22 cfs @ 11.95 hrs, Volume= 4.720 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: PROP 3



Summary for Subcatchment 7S: PROP 4

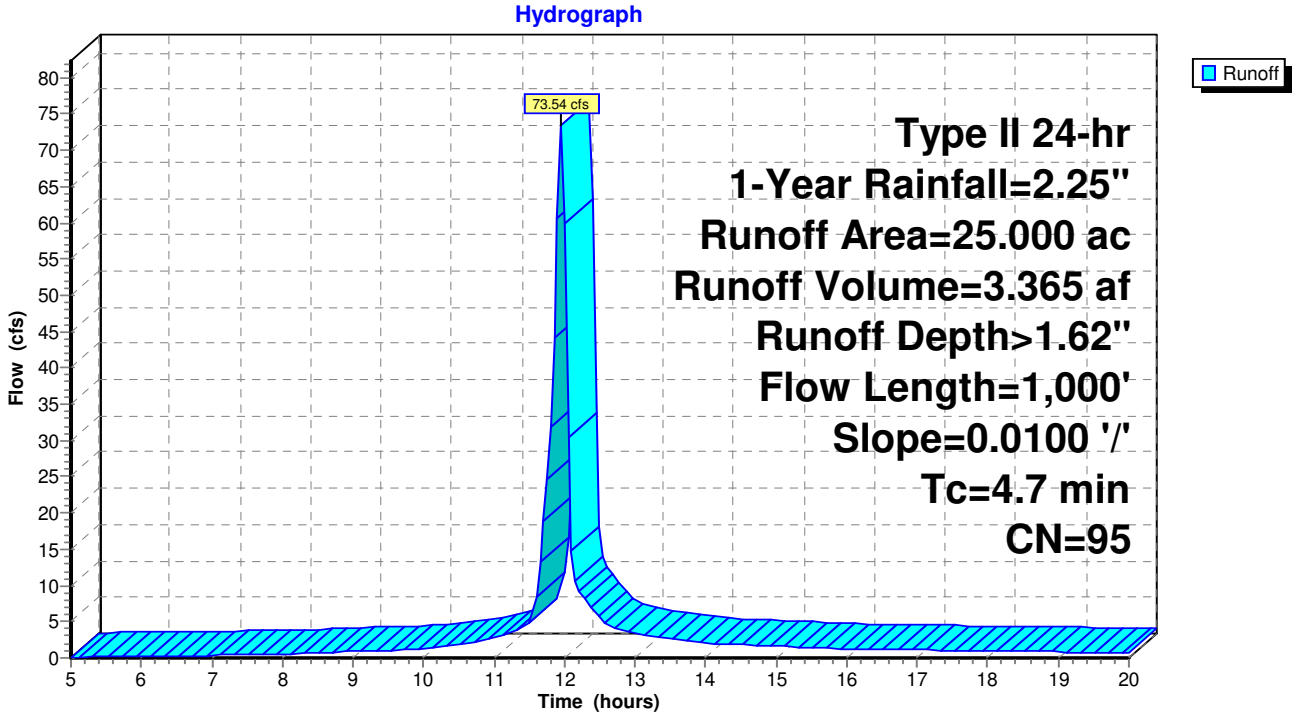
Runoff = 73.54 cfs @ 11.95 hrs, Volume= 3.365 af, Depth> 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

	Area (ac)	CN	Description
*	20.870	98	Impervious
	4.130	80	>75% Grass cover, Good, HSG D
	25.000	95	Weighted Average
	4.130		16.52% Pervious Area
	20.870		83.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.95		**Sheet Flow, Sheet Flow - Asphalt** Smooth surfaces n= 0.011 P2= 2.67"
1.2	150	0.0100	2.03		**Shallow Concentrated Flow, Shallow concentrated** Paved Kv= 20.3 fps
1.7	750	0.0100	7.20	22.62	**Pipe Channel, Pipe Flow** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
4.7	1,000	Total			

Subcatchment 7S: PROP 4



Summary for Subcatchment 1S: PROP 1

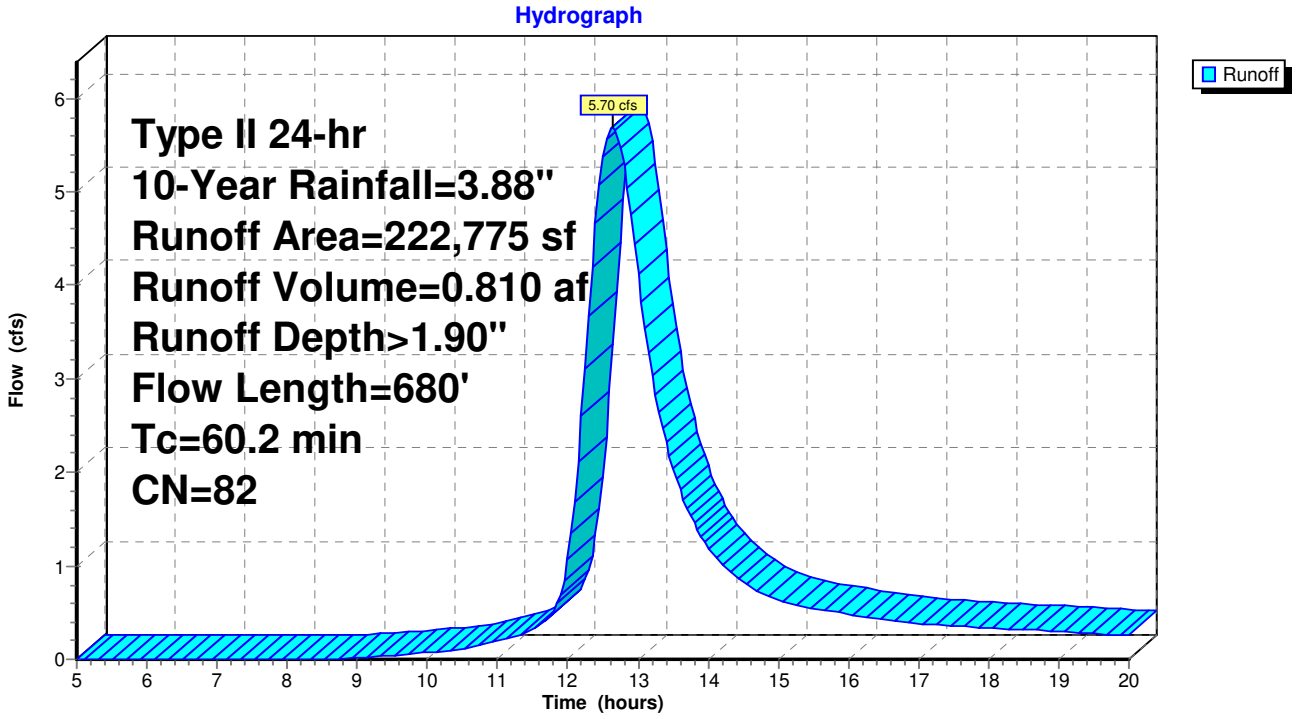
Runoff = 5.70 cfs @ 12.64 hrs, Volume= 0.810 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (sf)	CN	Description
222,775	82	Woods/grass comb., Fair, HSG D
222,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.9	100	0.0050	0.04		**Sheet Flow, Sheet - Woods** Woods: Light underbrush n= 0.400 P2= 2.67"
19.3	580	0.0100	0.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
60.2	680	Total			

Subcatchment 1S: PROP 1



Summary for Subcatchment 2S: PROP 2

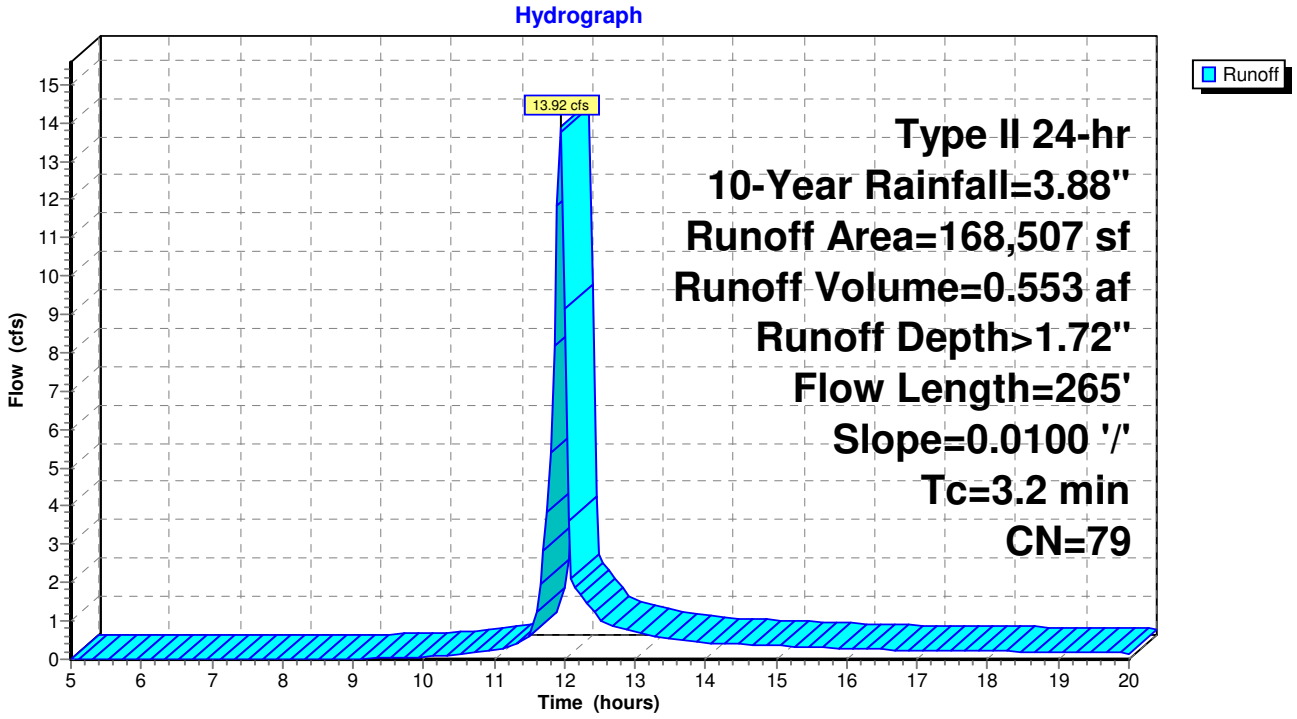
Runoff = 13.92 cfs @ 11.94 hrs, Volume= 0.553 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (sf)	CN	Description
168,507	79	Woods, Fair, HSG D
168,507		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.95		**Sheet Flow, Sheet - Asphalt** Smooth surfaces n= 0.011 P2= 2.67"
1.4	165	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Asphalt** Paved Kv= 20.3 fps
3.2	265	Total			

Subcatchment 2S: PROP 2

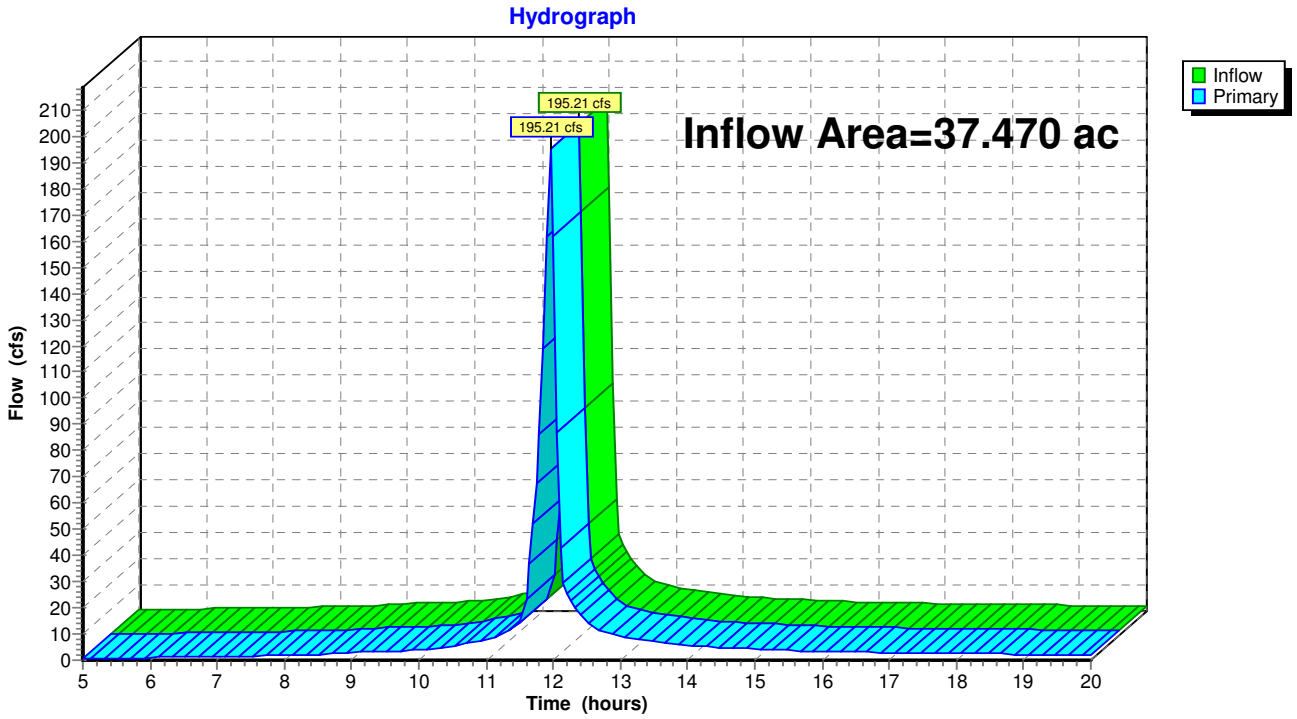


Summary for Link 1L: PROP 3

Inflow Area = 37.470 ac, 76.75% Impervious, Inflow Depth > 2.98" for 10-Year event
Inflow = 195.21 cfs @ 11.95 hrs, Volume= 9.312 af
Primary = 195.21 cfs @ 11.95 hrs, Volume= 9.312 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: PROP 3



Summary for Subcatchment 7S: PROP 4

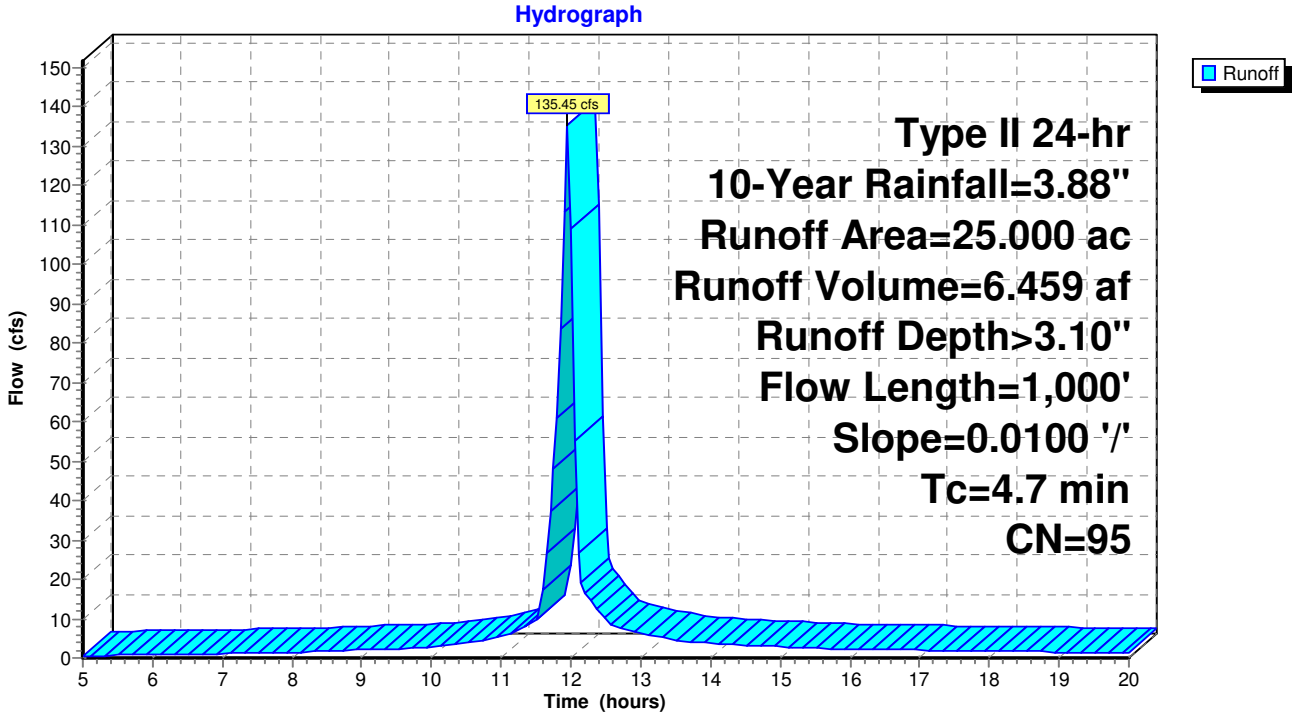
Runoff = 135.45 cfs @ 11.95 hrs, Volume= 6.459 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

	Area (ac)	CN	Description
*	20.870	98	Impervious
	4.130	80	>75% Grass cover, Good, HSG D
	25.000	95	Weighted Average
	4.130		16.52% Pervious Area
	20.870		83.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.95		**Sheet Flow, Sheet Flow - Asphalt** Smooth surfaces n= 0.011 P2= 2.67"
1.2	150	0.0100	2.03		**Shallow Concentrated Flow, Shallow concentrated** Paved Kv= 20.3 fps
1.7	750	0.0100	7.20	22.62	**Pipe Channel, Pipe Flow** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
4.7	1,000	Total			

Subcatchment 7S: PROP 4



Summary for Subcatchment 1S: PROP 1

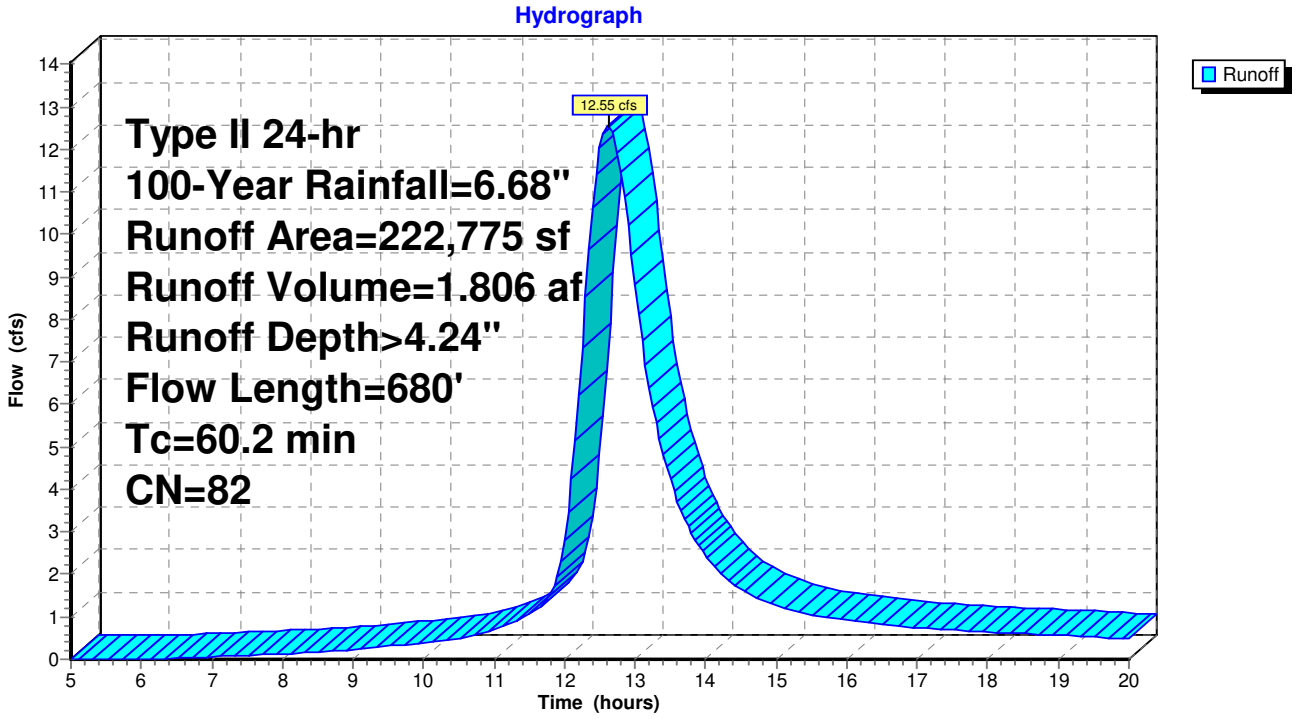
Runoff = 12.55 cfs @ 12.62 hrs, Volume= 1.806 af, Depth> 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (sf)	CN	Description
222,775	82	Woods/grass comb., Fair, HSG D
222,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.9	100	0.0050	0.04		**Sheet Flow, Sheet - Woods** Woods: Light underbrush n= 0.400 P2= 2.67"
19.3	580	0.0100	0.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
60.2	680	Total			

Subcatchment 1S: PROP 1



Summary for Subcatchment 2S: PROP 2

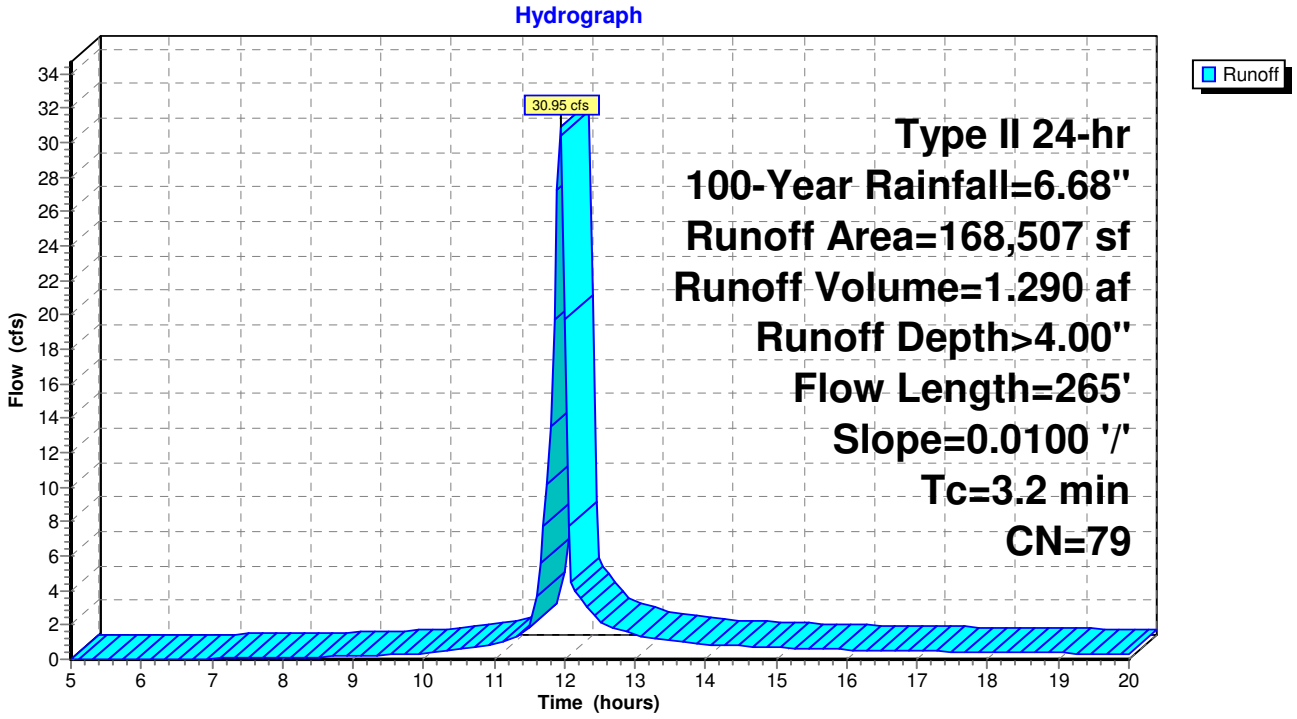
Runoff = 30.95 cfs @ 11.94 hrs, Volume= 1.290 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (sf)	CN	Description
168,507	79	Woods, Fair, HSG D
168,507		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.95		**Sheet Flow, Sheet - Asphalt** Smooth surfaces n= 0.011 P2= 2.67"
1.4	165	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Asphalt** Paved Kv= 20.3 fps
3.2	265	Total			

Subcatchment 2S: PROP 2

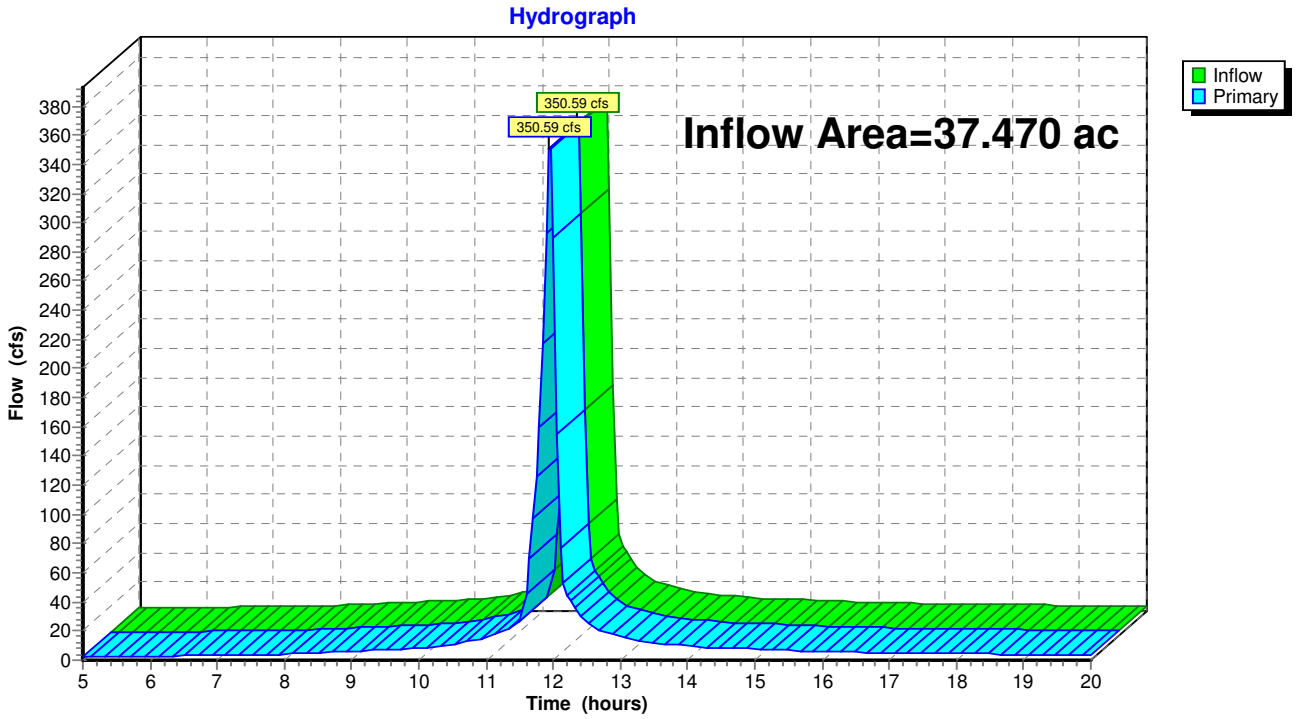


Summary for Link 1L: PROP 3

Inflow Area = 37.470 ac, 76.75% Impervious, Inflow Depth > 5.53" for 100-Year event
Inflow = 350.59 cfs @ 11.95 hrs, Volume= 17.280 af
Primary = 350.59 cfs @ 11.95 hrs, Volume= 17.280 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: PROP 3



Summary for Subcatchment 7S: PROP 4

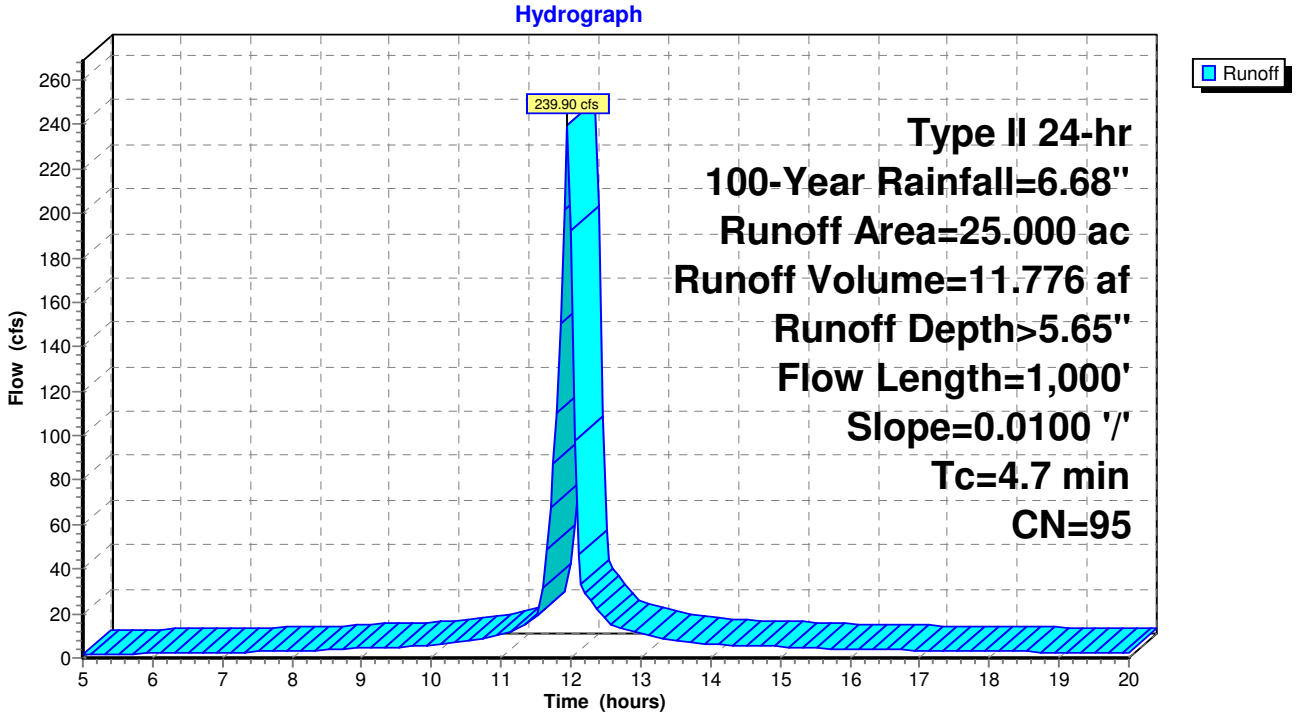
Runoff = 239.90 cfs @ 11.95 hrs, Volume= 11.776 af, Depth> 5.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

	Area (ac)	CN	Description
*	20.870	98	Impervious
	4.130	80	>75% Grass cover, Good, HSG D
	25.000	95	Weighted Average
	4.130		16.52% Pervious Area
	20.870		83.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0100	0.95		**Sheet Flow, Sheet Flow - Asphalt** Smooth surfaces n= 0.011 P2= 2.67"
1.2	150	0.0100	2.03		**Shallow Concentrated Flow, Shallow concentrated** Paved Kv= 20.3 fps
1.7	750	0.0100	7.20	22.62	**Pipe Channel, Pipe Flow** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
4.7	1,000	Total			

Subcatchment 7S: PROP 4



Appendix C

Water Quality and Runoff Reduction Volume Calculations

Version 1.6
Last Updated: 03/28/2014

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	1	
P=	1.20	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	9.22	5.85	63%	0.62	24,943	3a
2	9.83	7.41	75%	0.73	31,191	3b
3	8.51	7.28	86%	0.82	30,394	3c
4	9.91	8.22	83%	0.80	34,384	3d
5	25.00	20.87	83%	0.80	87,264	p4
6						
7						
8						
9						
10						
Subtotal (1-30)	62.47	49.63	79%	0.76	**208,176**	**Subtotal 1**
Total	62.47	49.63	79%	0.76	**208,176**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	62.47	49.63	79%	0.76	208,176
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**62.47**	**49.63**	79%	0.76	208,176
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	62.47	49.63	79%	0.76	**208,176**
WQv reduced by Area Reduction techniques					0

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**cf**	**cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	0.00			
	Bioretention & Infiltration Bioretention	F-5	28.96	21.48	41220	49298
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				25000.000
	Wet Extended Detention (P-3)	P-3				100425.000
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
Totals by Area Reduction →			0.00	0.00	0	
Totals by Volume Reduction →			0.00	0.00	0	
Totals by Standard SMP w/RRV →			28.96	21.48	41220	49298
Totals by Standard SMP →			0.00	0.00		125425
Totals (Area + Volume + all SMPs) →			28.96	21.48	41,221	174,723
	Impervious Cover √	error				

Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C		30%
D	**63.95**	20%
Total Area	63.95	
Calculate the Minimum RRv		
S =	**0.20**	
Impervious =	49.63	*acre*
Precipitation	1.2	*in*
Rv	0.95	
Minimum RRv	**41,076**	***ft3***
	0.94	af

NOI QUESTIONS

#	NOI Question	Reported Value	
		cf	af
28	Total Water Quality Volume (WQv) Required	208176	*4.779*
30	Total RRV Provided	41221	*0.946*
31	Is RRv Provided ≥WQv Required?	No	
32	Minimum RRv	41076	*0.943*
32a	Is RRv Provided ≥ Minimum RRv Required?	Yes	
33a	Total WQv Treated	174723	*4.011*
34	Sum of Volume Reduced & Treated	215944	*4.957*
34	Sum of Volume Reduced and Treated	215944	*4.957*
35	Is Sum RRv Provided and WQv Provided ≥WQv Required?	Yes	

Apply Peak Flow Attenuation			
36	Channel Protection	*Cpv*	
37	Overbank	*Qp*	
37	Extreme Flood Control	*Qf*	
	Are Quantity Control requirements met?	*Yes*	Plan Completed

Planning

Practice	Description	Application
Preservation of Undisturbed Areas	Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	Considered & Applied
Preservation of Buffers	Define, delineate and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	Considered & Applied
Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Considered & Applied
Locating Development in Less Sensitive Areas	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	Considered & Not Applied
Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	Considered & Applied
Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of post construction practices. ***Treat compacted areas as impervious cover in WQv Calculation Worksheet and modify curve number as specified in Section 5.1.6, page 5-21***	Considered & Not Applied
Roadway Reduction	Minimize roadway widths and lengths to reduce site impervious area	Considered & Applied
Sidewalk Reduction	Minimize sidewalk lengths and widths to reduce site impervious area	Considered & Applied
Driveway Reduction	Minimize driveway lengths and widths to reduce site impervious area	Considered & Applied
Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	Considered & Applied
Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	Considered & Applied
Parking Reduction	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimensions, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	Considered & Applied

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	9.22	5.85	0.63	0.62	24943.11	1.20	3a
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	63%	0.62	24,943	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.10	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		24,943	*ft^3*	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**20786**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	164	*ft*	
Filter Length	164	*ft*	
Filter Area	26896	*ft^2*	
Actual Volume Provided	32275	*ft^3*	

Determine Runoff Reduction			
Is the Bioretention contributing flow to another practice?	No	Select Practice	N/A
RRv	12,910		
RRv applied	**12,910**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***
Volume Treated	12,033	*ft^3*	*This is the portion of the WQv that is not reduced in the practice.*
Volume Directed	0	*ft^3*	This volume is directed another practice

Bioretention Worksheet

Sizing √	OK		*Check to be sure Area provided ≥ Af*

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor & Schueler, 1996)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
2	9.83	7.41	0.75	0.73	31191.14	1.20	3b
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	75%	0.73	31,191	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	ft^3	

Soil Information

Soil Group	D		
Soil Infiltration Rate	0.10	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area

		Value	Units	Notes
WQv		31,191	ft^3	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**25993**	ft^2	

Determine Actual Bio-Retention Area

Filter Width	488	*ft*	
Filter Length	60	*ft*	
Filter Area	29280	ft^2	
Actual Volume Provided	35136	ft^3	

Determine Runoff Reduction

Is the Bioretention contributing flow to another practice?	No	Select Practice	N/A
RRv	14,054		
RRv applied	**14,054**	ft^3	***This is 40% of the storage provided or WQv whichever is less.***
Volume Treated	17,137	ft^3	*This is the portion of the WQv that is not reduced in the practice.*
Volume Directed	0	ft^3	This volume is directed another practice

Bioretention Worksheet

Sizing √	OK		*Check to be sure Area provided ≥ Af*

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
4	9.91	8.22	0.83	0.80	34384.09	1.20	3d
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	83%	0.80	34,384	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	*ft^3*	

Soil Information

Soil Group	D		
Soil Infiltration Rate	0.10	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area

		Value	Units	Notes
WQv		34,384	*ft^3*	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**28653**	***ft^2***	

Determine Actual Bio-Retention Area

Filter Width	495	*ft*	
Filter Length	60	*ft*	
Filter Area	29700	*ft^2*	
Actual Volume Provided	35640	*ft^3*	

Determine Runoff Reduction

Is the Bioretention contributing flow to another practice?	No	Select Practice	N/A
RRv	14,256		
RRv applied	**14,256**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***
Volume Treated	20,128	*ft^3*	*This is the portion of the WQv that is not reduced in the practice.*
Volume Directed	0	*ft^3*	This volume is directed another practice

Appendix D

NRCS Soils Report

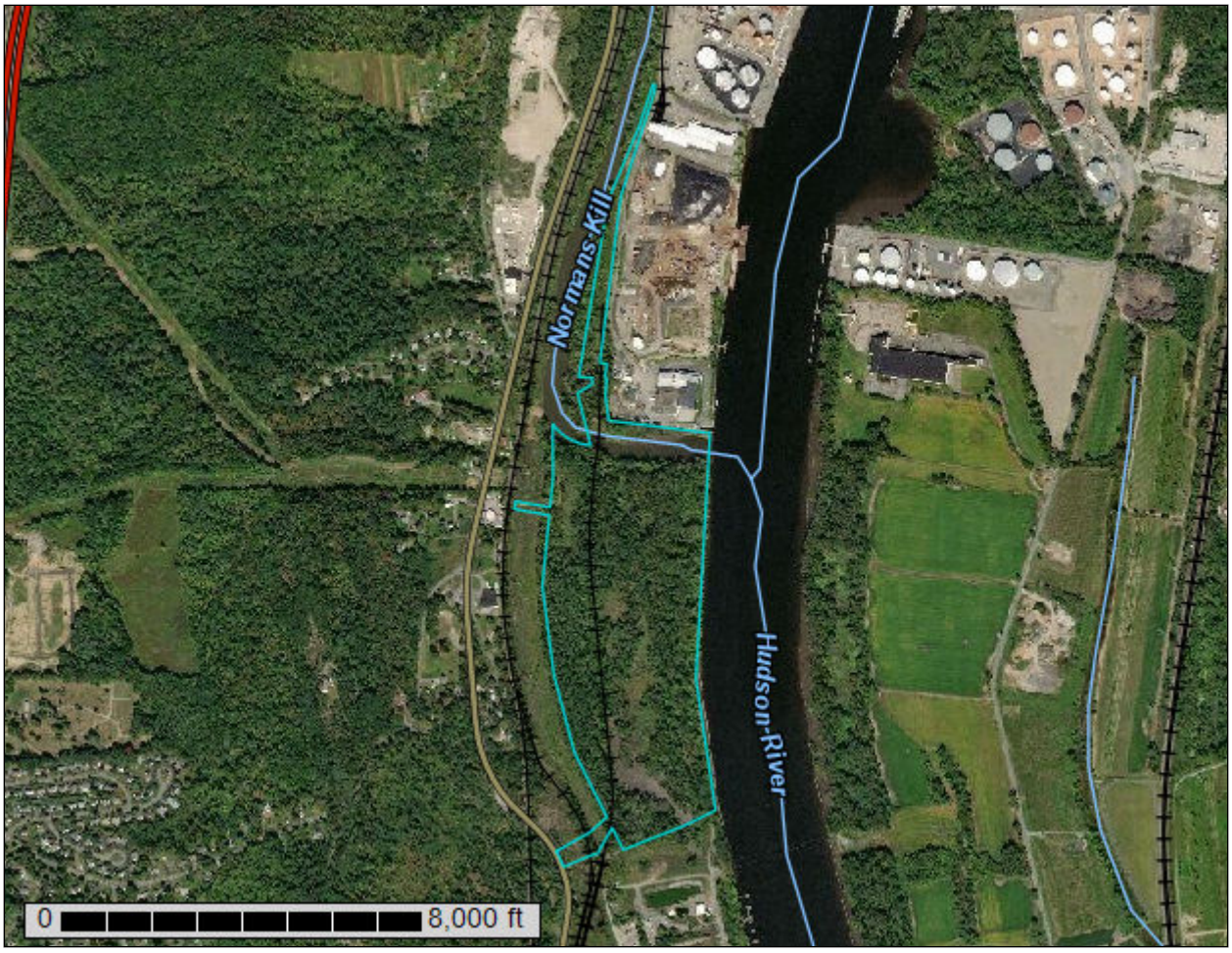
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Albany County, New York



March 25, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

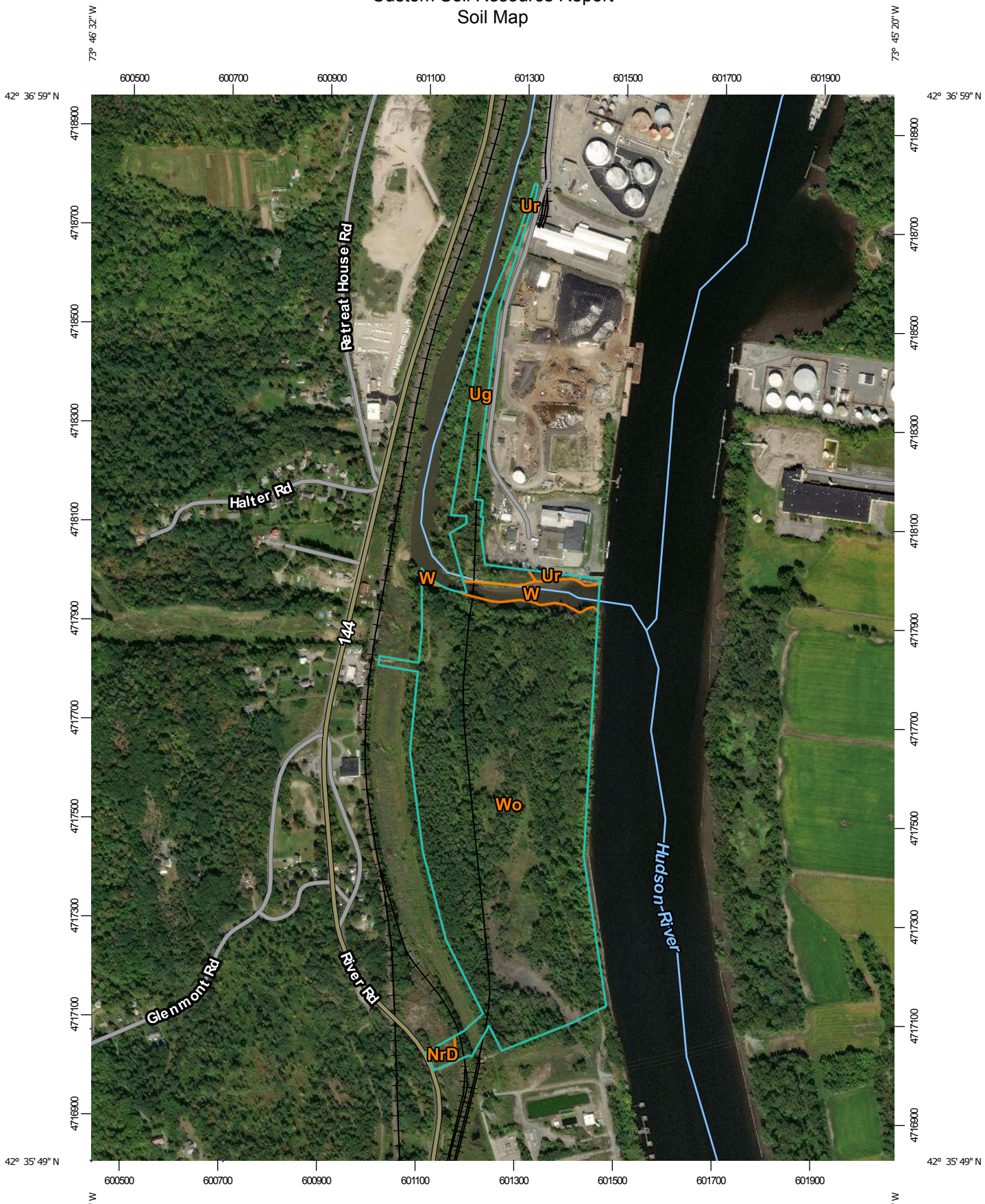
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:10,500 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Albany County, New York
Survey Area Data: Version 16, Sep 1, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 1, 2014—Sep 22, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NrD	Nassau very channery silt loam, hilly, very rocky	0.6	0.7%
Ug	Udorthents, loamy	7.0	8.4%
Ur	Urban land	0.7	0.8%
W	Water	2.9	3.5%
Wo	Wayland soils complex, non-calcareous substratum, 0 to 3 percent slopes, frequently flooded	72.2	86.6%
Totals for Area of Interest		**83.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Albany County, New York

NrD—Nassau very channery silt loam, hilly, very rocky

Map Unit Setting

National map unit symbol: 9ph1
Elevation: 600 to 1,800 feet
Mean annual precipitation: 36 to 41 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Nassau, hilly, and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau, Hilly

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 8 inches: very channery silt loam
H2 - 8 to 16 inches: very channery silt loam
H3 - 16 to 20 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 9 percent
Hydric soil rating: Unranked

Manlius
Percent of map unit: 8 percent
Hydric soil rating: No

Unnamed soils
Percent of map unit: 8 percent

Lordstown
Percent of map unit: 5 percent
Hydric soil rating: No

Ug—Udorthents, loamy

Map Unit Setting
National map unit symbol: 9pj1
Mean annual precipitation: 36 to 41 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition
Udorthents, loamy, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Loamy

Typical profile
H1 - 0 to 4 inches: loam
H2 - 4 to 70 inches: channery loam

Properties and qualities
Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.5 inches)

Minor Components

Unnamed soils
Percent of map unit: 10 percent

Ur—Urban land

Map Unit Setting

National map unit symbol: 9pj8
Mean annual precipitation: 36 to 41 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Minor Components

Unnamed soils

Percent of map unit: 10 percent

Udorthents

Percent of map unit: 5 percent
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Wo—Wayland soils complex, non-calcareous substratum, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2srgt
Elevation: 160 to 1,970 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 43 to 52 degrees F

Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wayland and similar soils: 60 percent
Wayland, very poorly drained, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 9 inches: silt loam
Bg - 9 to 21 inches: silt loam
Cg1 - 21 to 28 inches: silt loam
Cg2 - 28 to 47 inches: silt loam
Cg3 - 47 to 54 inches: silt loam
Cg4 - 54 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 9 inches: mucky silt loam
Bg - 9 to 21 inches: silt loam
Cg1 - 21 to 28 inches: silt loam
Cg2 - 28 to 47 inches: silt loam
Cg3 - 47 to 54 inches: silt loam
Cg4 - 54 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Very high (about 13.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Holderton

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

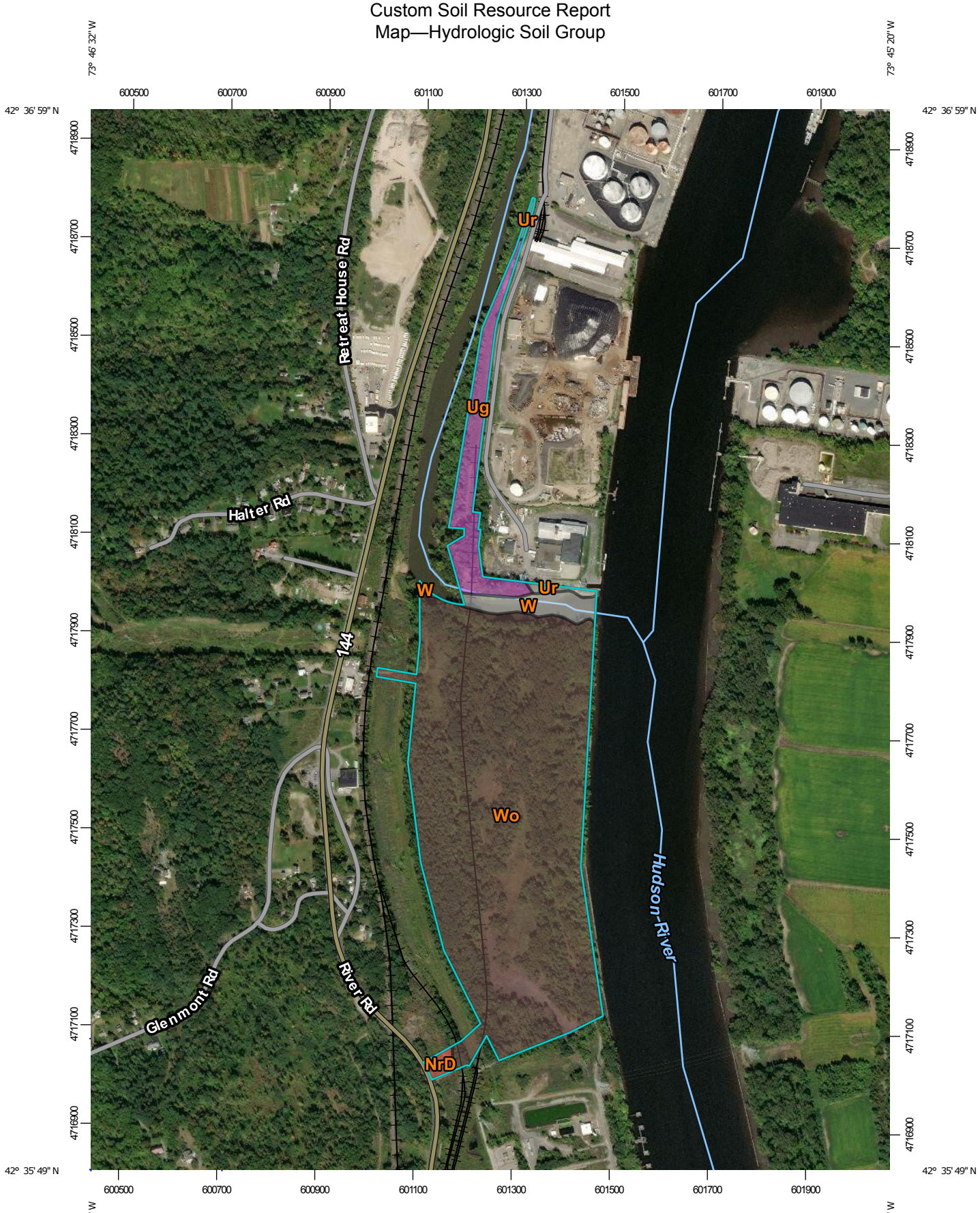
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:10,500 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Albany County, New York
Survey Area Data: Version 16, Sep 1, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 1, 2014—Sep 22, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
NrD	Nassau very channery silt loam, hilly, very rocky	D	0.6	0.7%
Ug	Udorthents, loamy	A	7.0	8.4%
Ur	Urban land		0.7	0.8%
W	Water		2.9	3.5%
Wo	Wayland soils complex, non-calcareous substratum, 0 to 3 percent slopes, frequently flooded	B/D	72.2	86.6%
Totals for Area of Interest			**83.4**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Appendix E

Stormwater Management Practices Maintenance Checklists

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

APPENDIX E

UPDATED TRAFFIC IMPACT STUDY

TRAFFIC IMPACT STUDY

FOR THE

PORT OF ALBANY EXPANSION PROJECT

ALBANY, NEW YORK

MAY 14, 2019
(Revised January 20, 2020)

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

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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 total building space, Phase II consisting of 600,000 GSF of total building space 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.

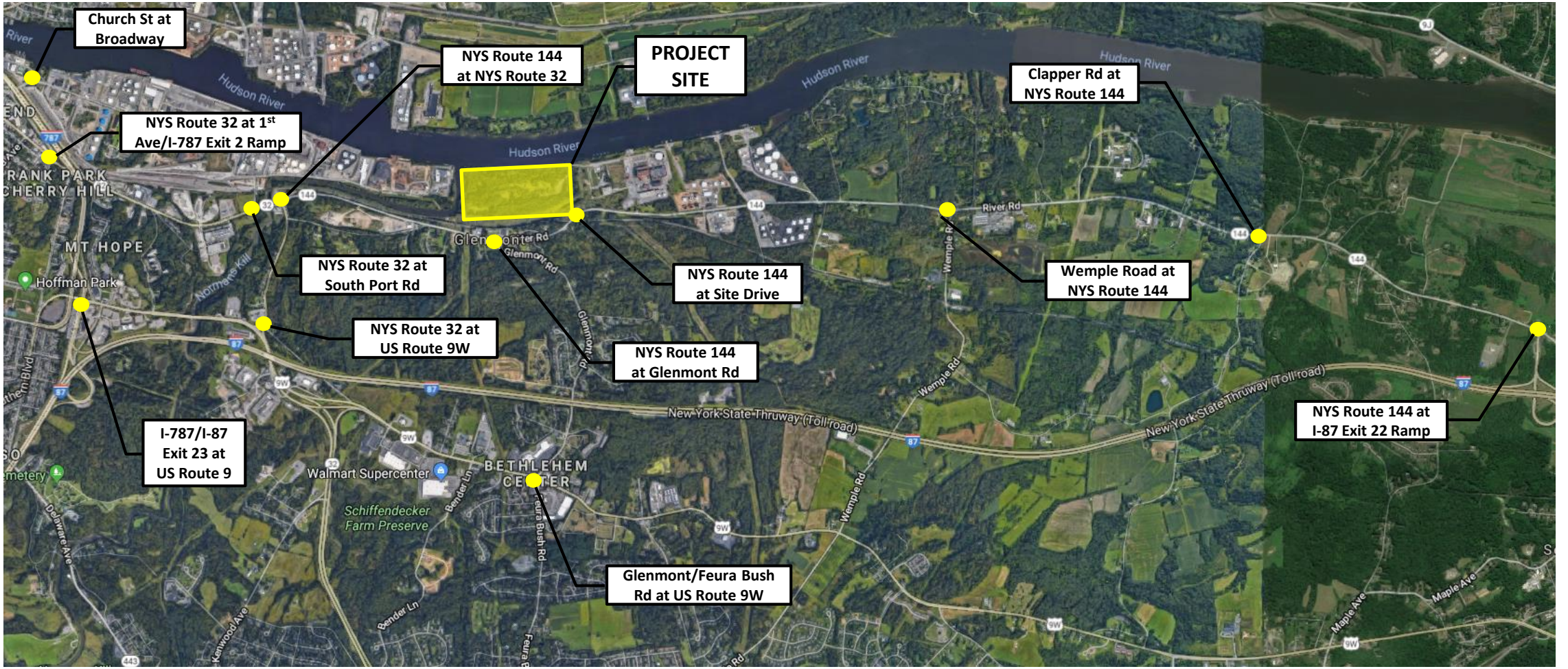
Scope of the Study

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.



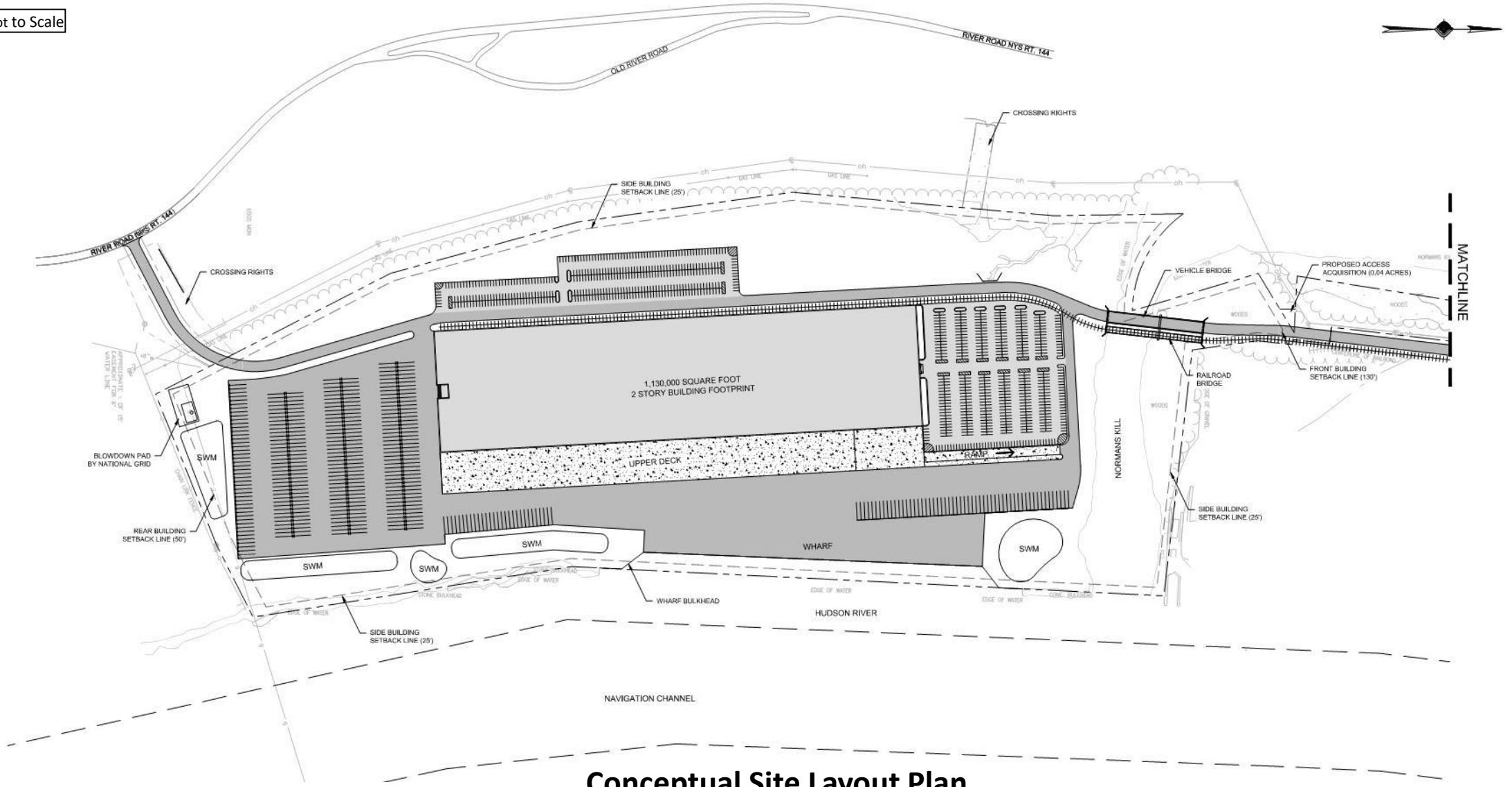
LEGEND

- Project Site
- Study Area Intersection

Not to Scale

PROJECT LOCATION MAP

Not to Scale



Conceptual Site Layout Plan

McFarland Johnson

FIGURE 2

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.

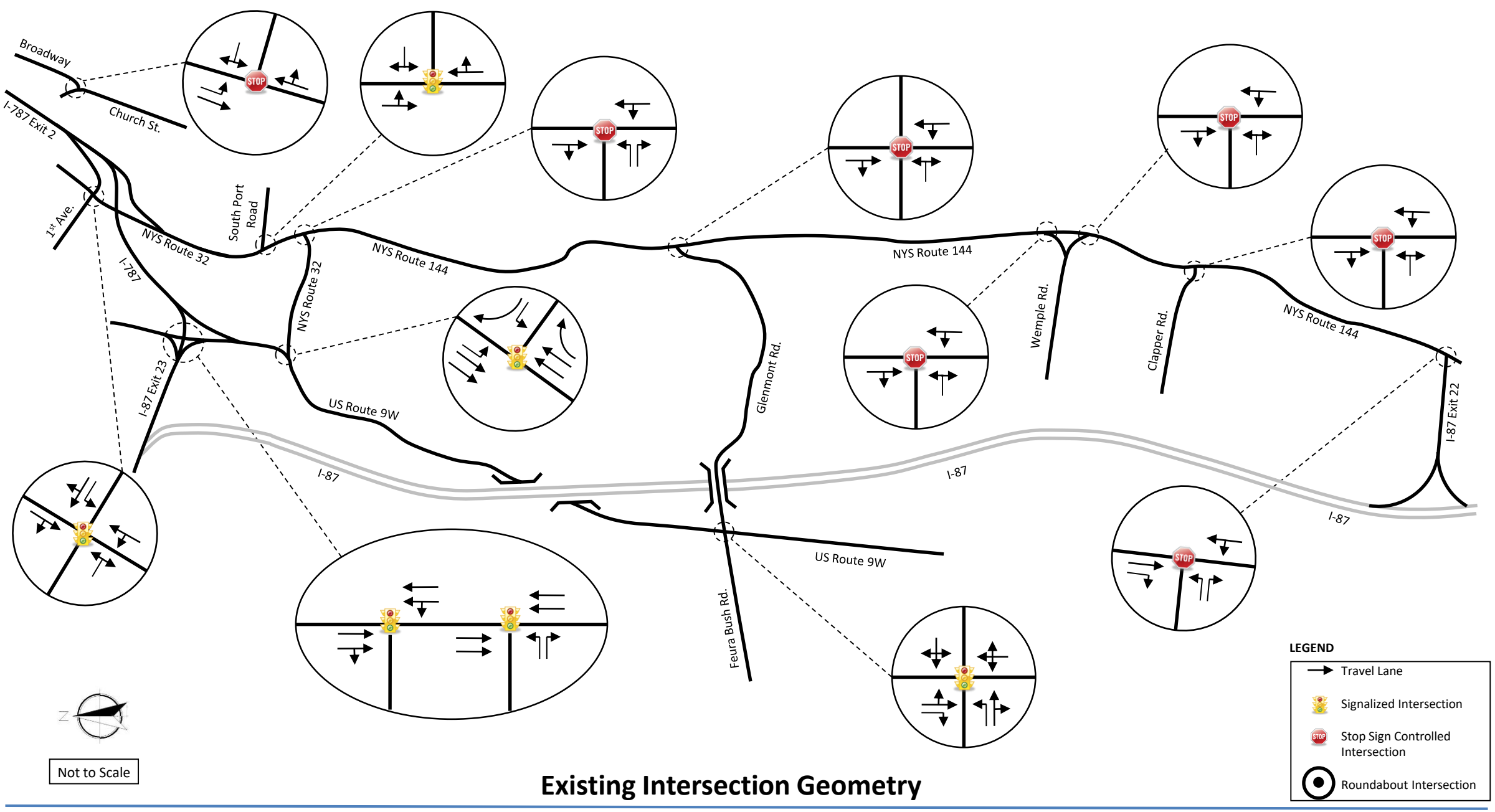
In addition to the TMC data, a field review was conducted of the proposed study area. During the visit, information regarding signal timings, peak hour queue lengths, existing pedestrian signage, and auxiliary pedestrian safety devices was recorded and used to more accurately model the existing conditions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

2019 Existing Traffic Volumes

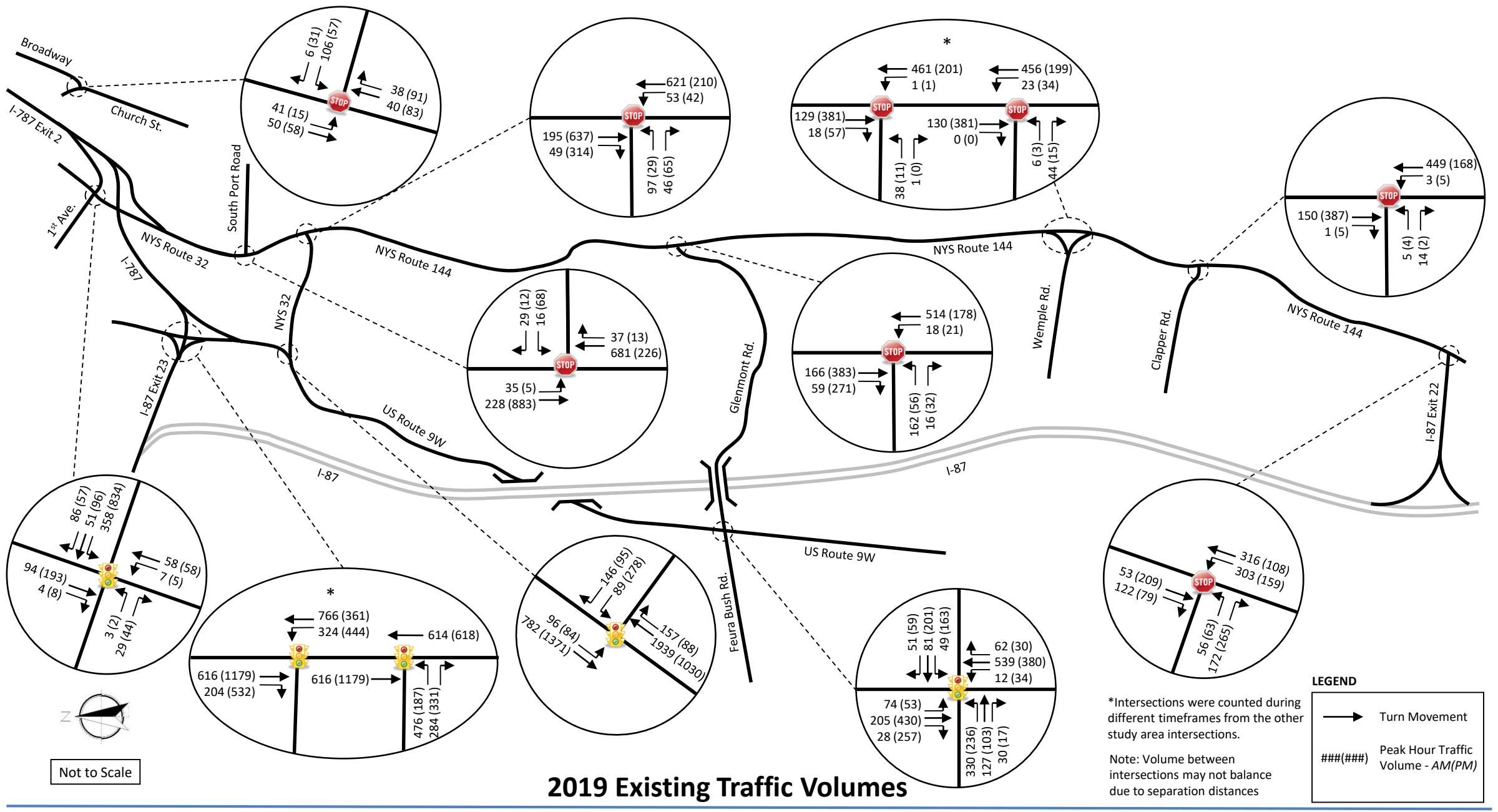
The 2019 traffic volumes in the study area were established, verified for accuracy, and are shown in Figure 4. To determine if the TMCs required adjustment due to seasonal variation, a seasonal adjustment factor data was obtained from the New York State Department of Transportation - Highway Data Services 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


Broadway
Church St.
I-787 Exit 2
1st Ave.
South Port Road
NYS Route 32
I-787
NYS 32
I-87 Exit 23
NYS Route 144
US Route 9W
I-87
Glenmont Rd.
Feura Bush Rd.
Wemple Rd.
Clapper Rd.
NYS Route 144
I-87 Exit 22
6 (31)
106 (57)
38 (91)
40 (83)
41 (15)
50 (58)
621 (210)
53 (42)
195 (637)
49 (314)
97 (29)
46 (65)
*
461 (201)
1 (1)
456 (199)
23 (34)
129 (381)
18 (57)
130 (381)
0 (0)
38 (11)
1 (0)
6 (3)
44 (15)
449 (168)
3 (5)
150 (387)
1 (5)
5 (4)
14 (2)
29 (12)
16 (68)
37 (13)
681 (226)
35 (5)
228 (883)
514 (178)
18 (21)
166 (383)
59 (271)
162 (56)
16 (32)
86 (57)
51 (96)
358 (834)
58 (58)
7 (5)
94 (193)
4 (8)
3 (2)
29 (44)
*
766 (361)
324 (444)
614 (618)
616 (1179)
204 (532)
616 (1179)
476 (187)
284 (331)
146 (95)
89 (278)
96 (84)
782 (1371)
157 (88)
1939 (1030)
51 (59)
81 (201)
49 (163)
62 (30)
539 (380)
12 (34)
74 (53)
205 (430)
28 (257)
330 (236)
127 (103)
30 (17)
316 (108)
303 (159)
53 (209)
122 (79)
56 (63)
172 (265)
N
Not to Scale
2019 Existing Traffic Volumes
*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
###(###)
Peak Hour Traffic Volume - AM(PM)

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 and accepted after their 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 (which is no longer active), 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.

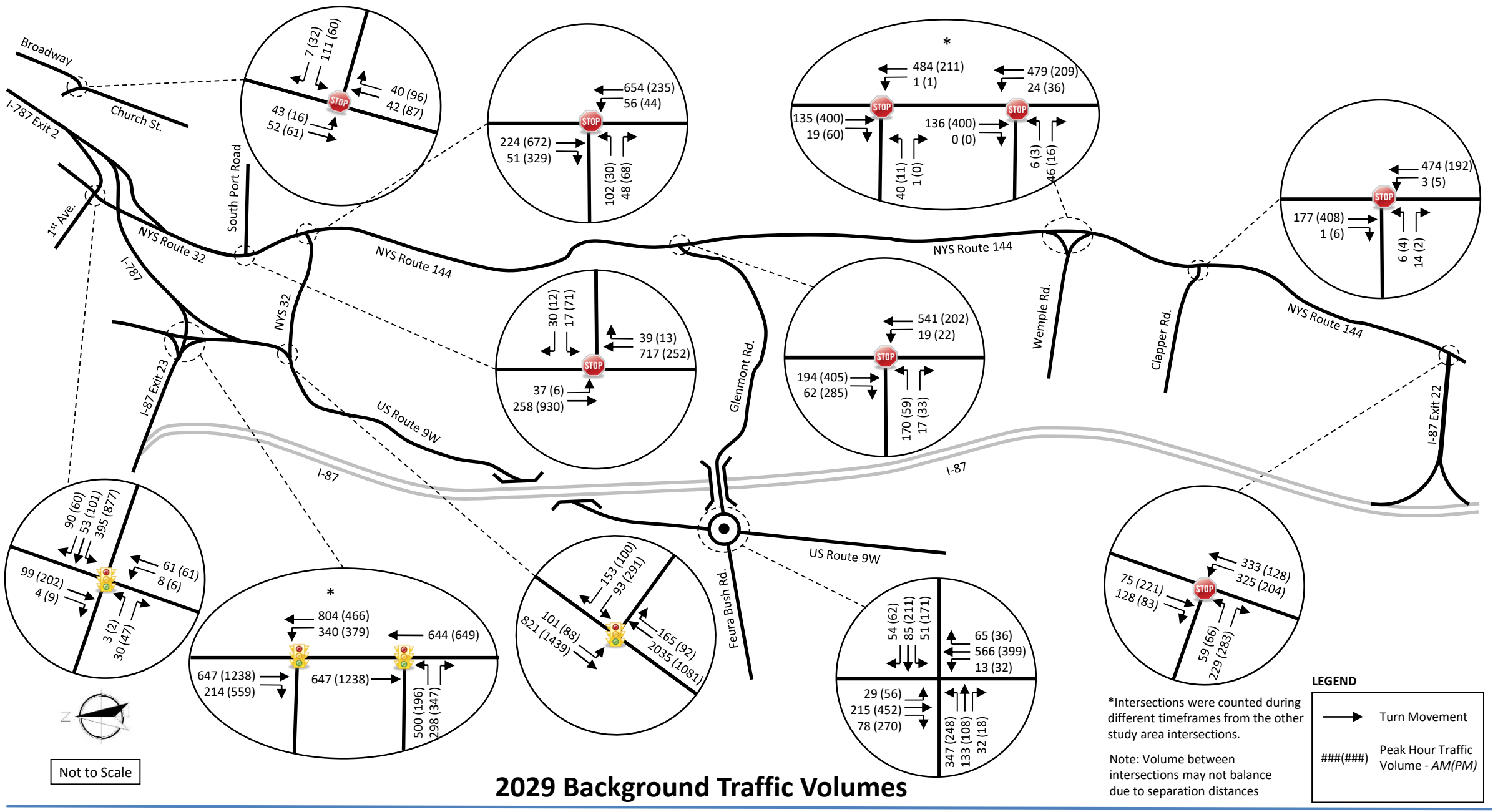
The Beacon Heights Senior Community project will be located off of River Road, Anders Lane and Glenmont Road, consisting of a two-story 89,000 square foot, 72 unit assisted living facility with parking. A two-story, 20,000 square foot commercial building with additional parking is also proposed. Due 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.

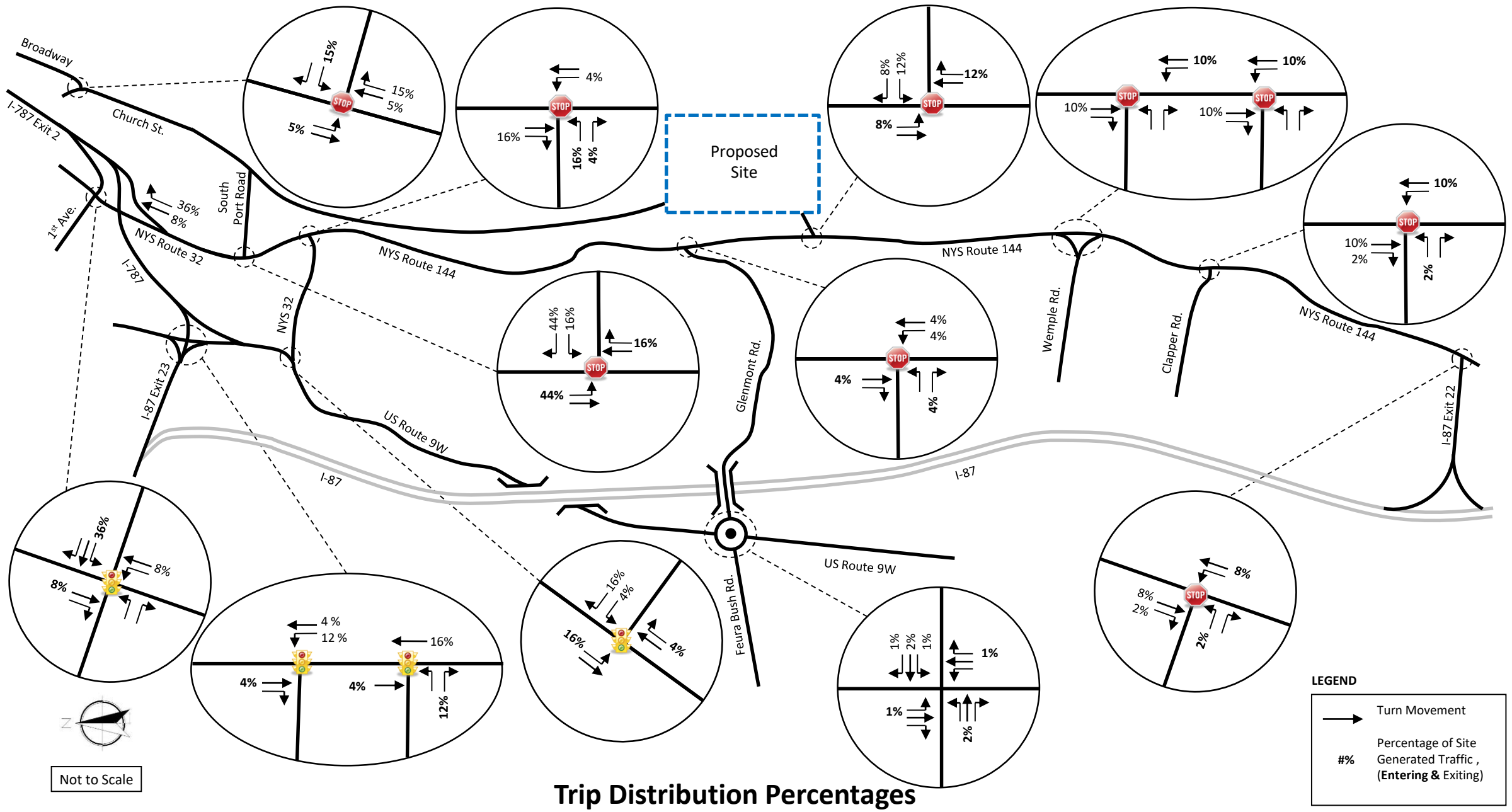
Shown in Table 1 are the resulting trip generation volumes calculated for the proposed project.

Table 1 – Trip Generation Table

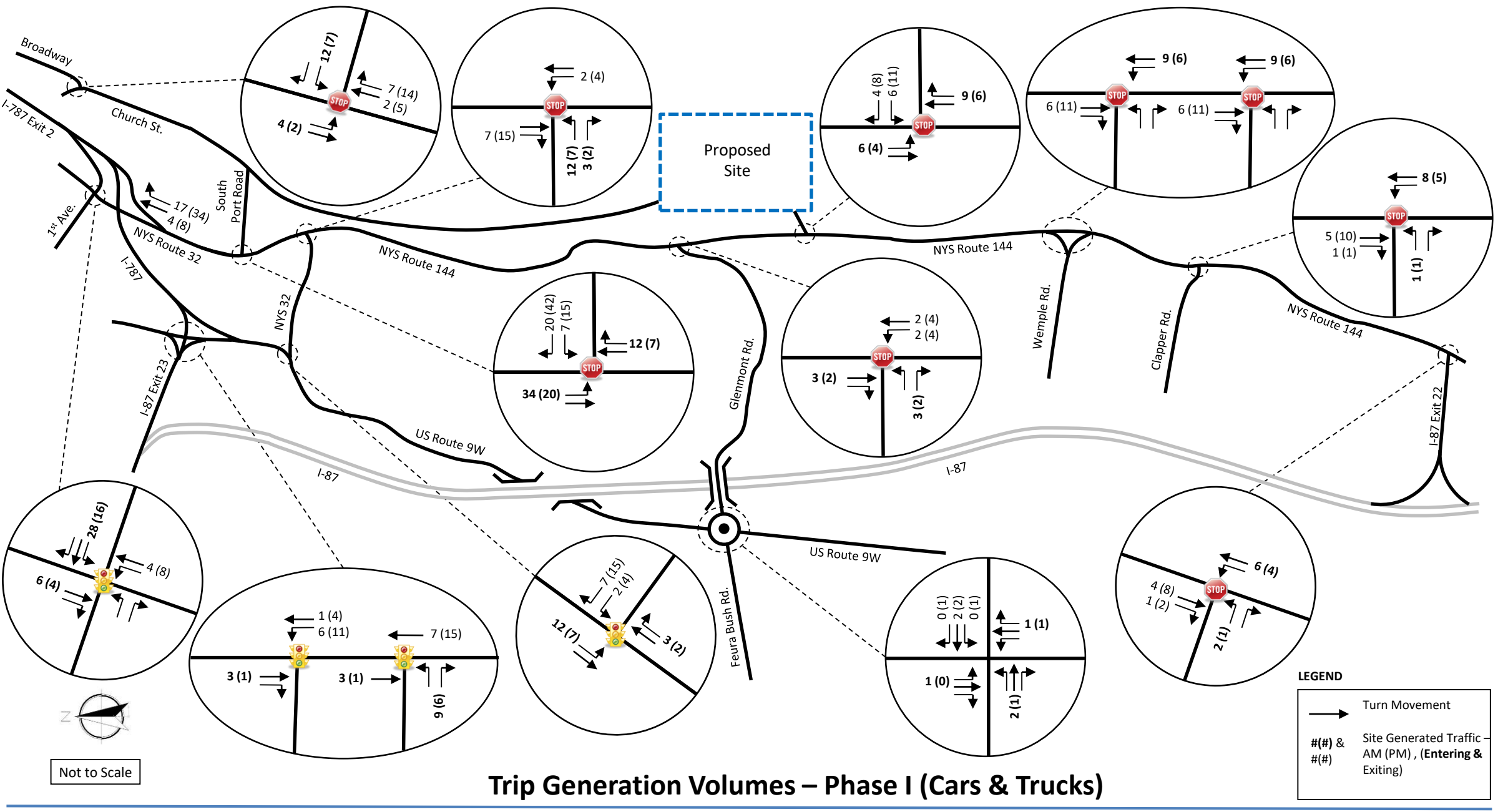
Type of Land Use	ITE Code*	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
2029 Build - Phase I	NA	300 1000 SF	Generation Rate =		0.41	Generation Rate =		0.47
			62%	38%	100%	33%	67%	100%
			77	46	124	46	95	141
Total Projected Trips			**77**	**46**	**124**	**46**	**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.

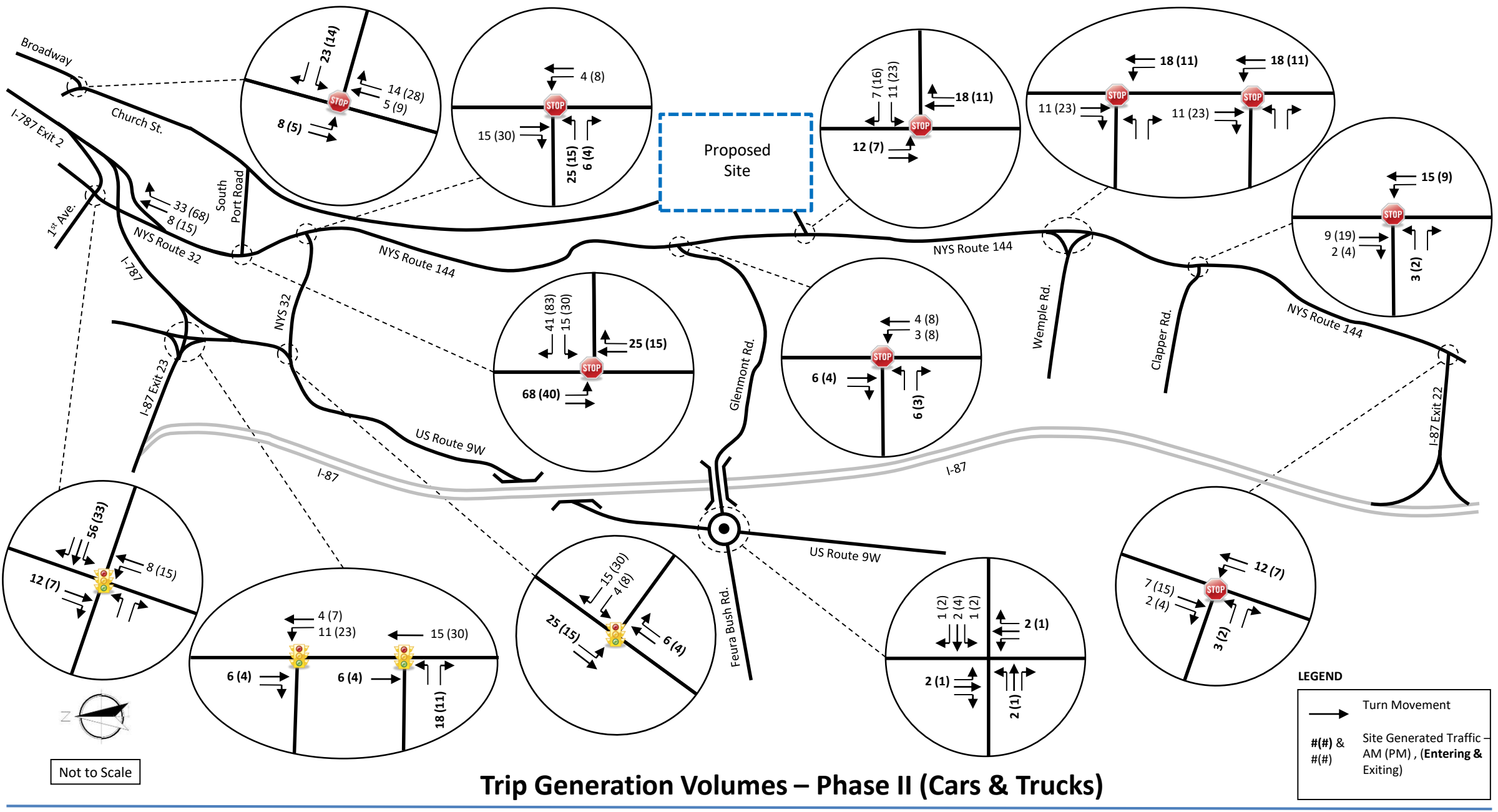
Additional data and calculation sheets used to develop the trip generations rates are included in Appendix B, including a breakdown of projected traffic associated with comparable ITE land uses.



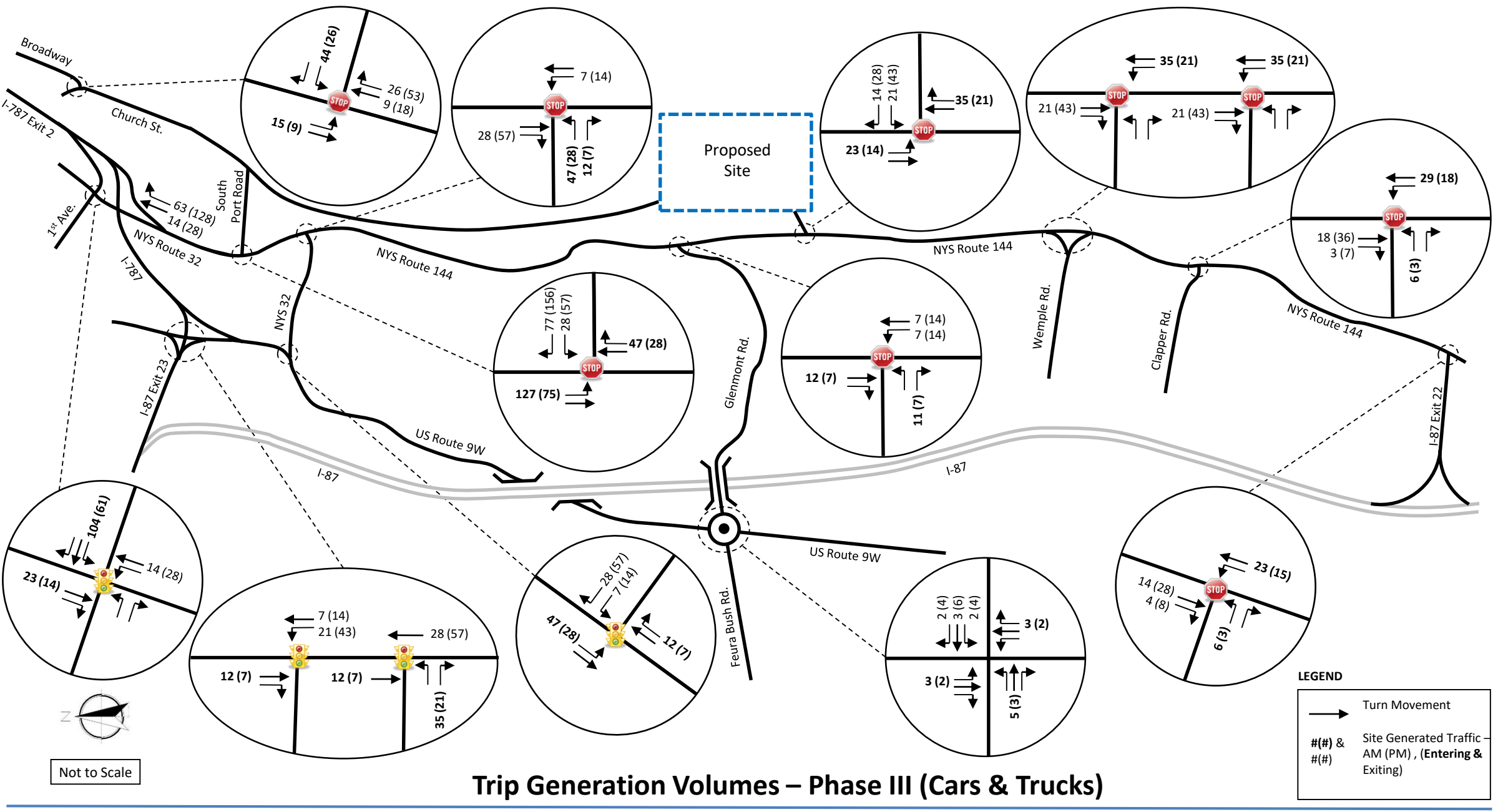
Trip Distribution Percentages



Trip Generation Volumes – Phase I (Cars & Trucks)



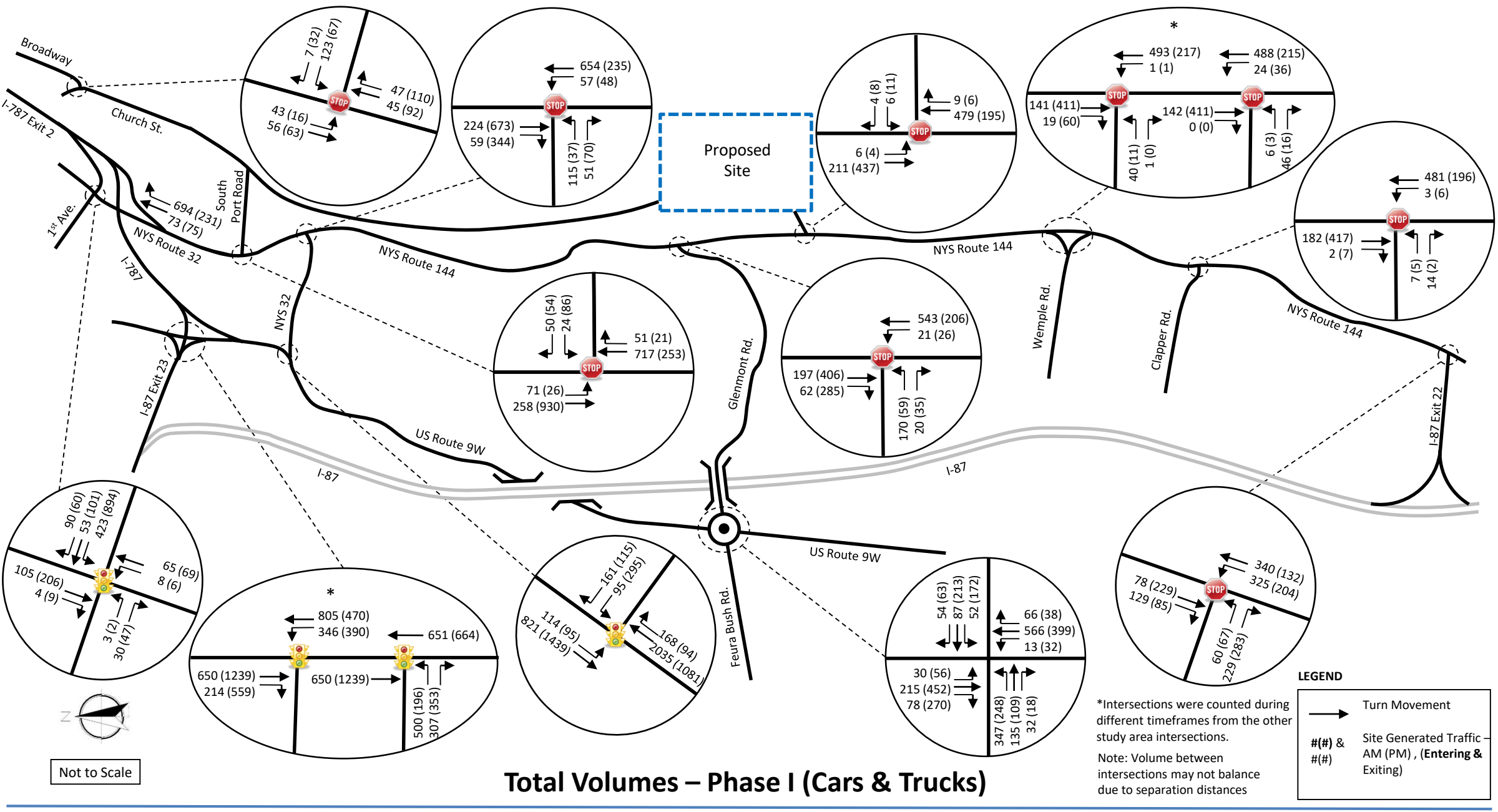
Trip Generation Volumes – Phase II (Cars & Trucks)



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.

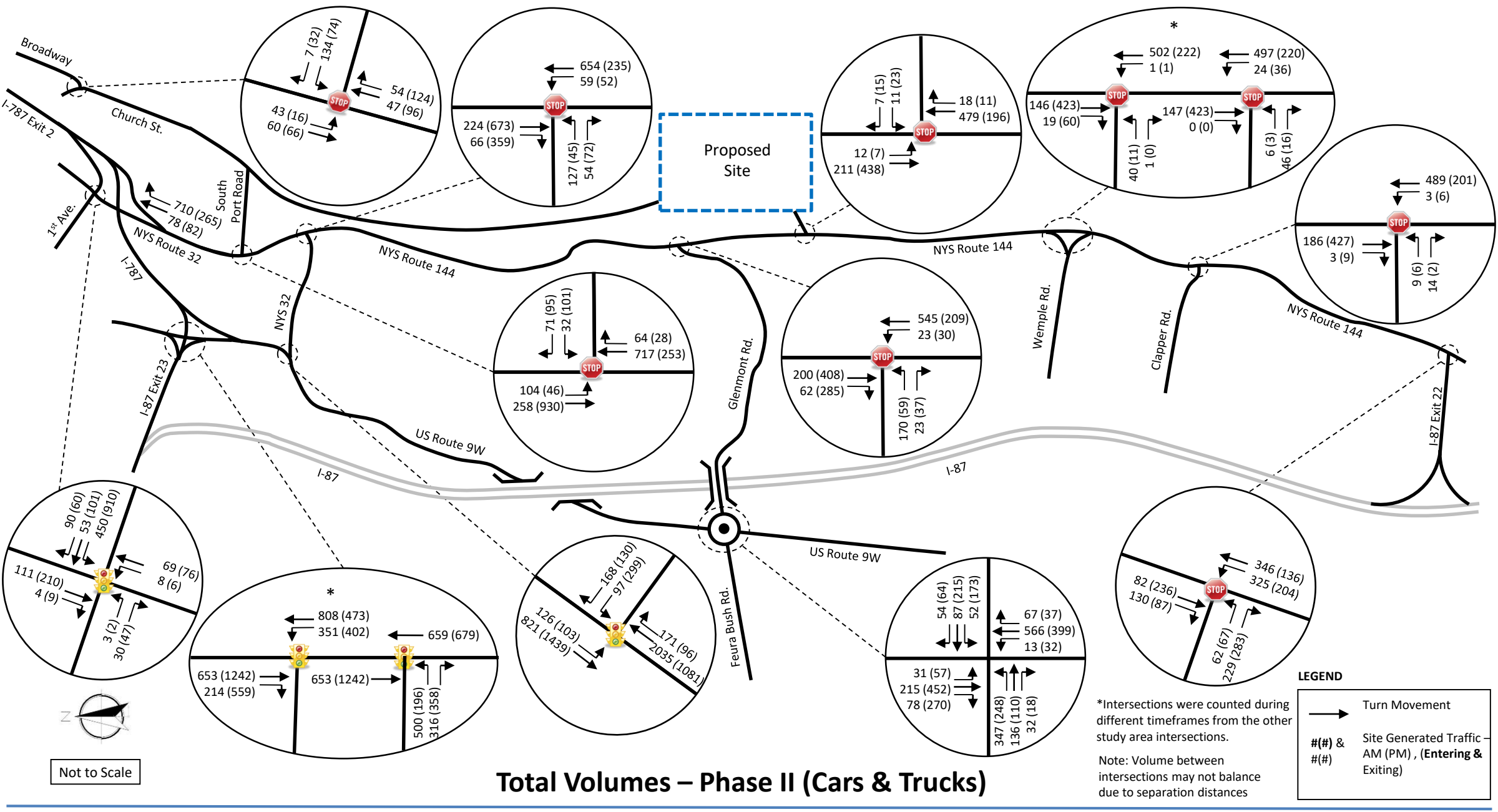


Not to Scale

*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)



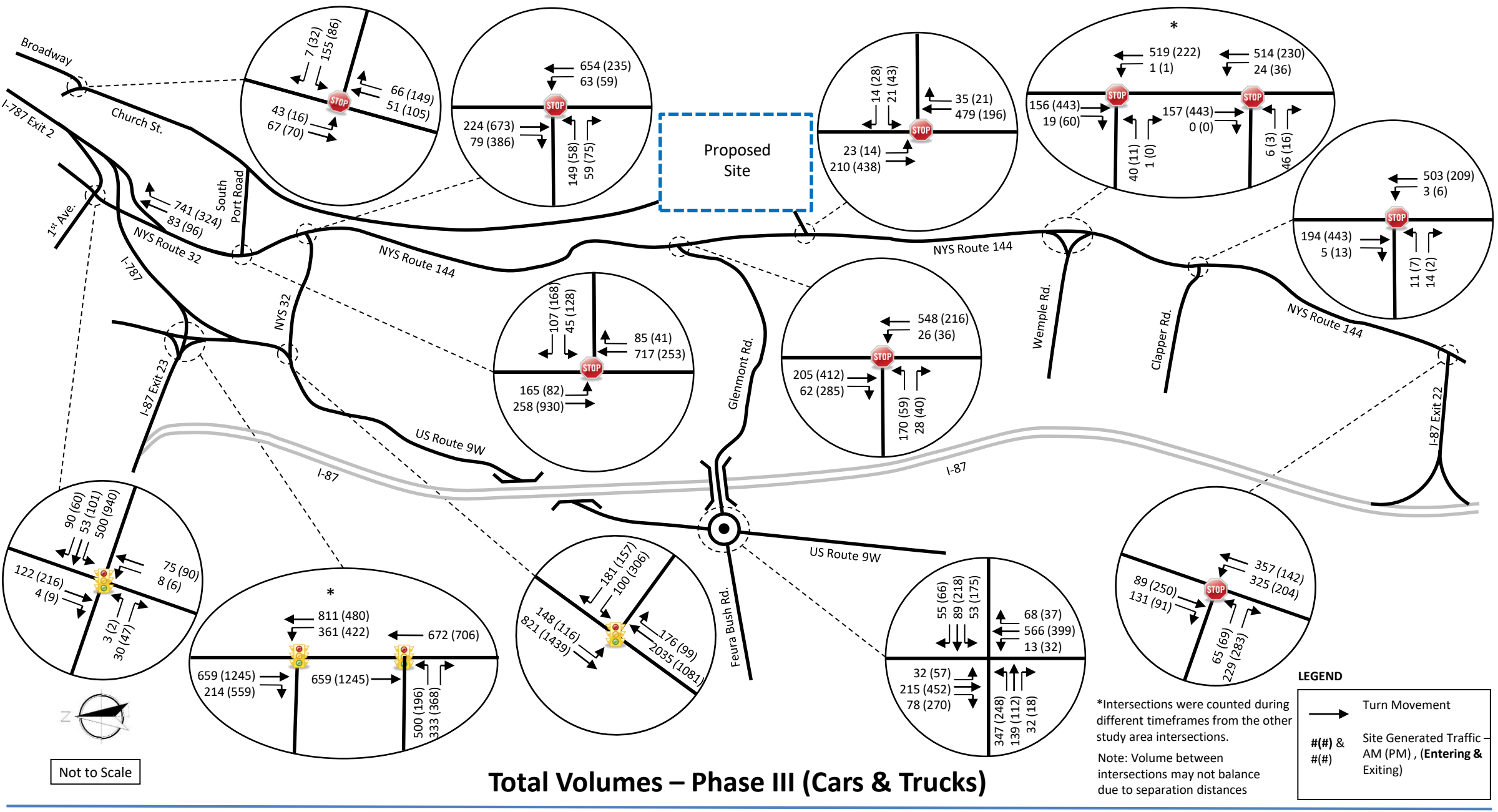
Total Volumes – Phase II (Cars & Trucks)

*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	T	14.6	B	14.8	B	14.9	B	14.9	B	15.0	B		
	Southbound	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
	Southbound	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 – Projected Truck Volumes (Current Truck Distribution)

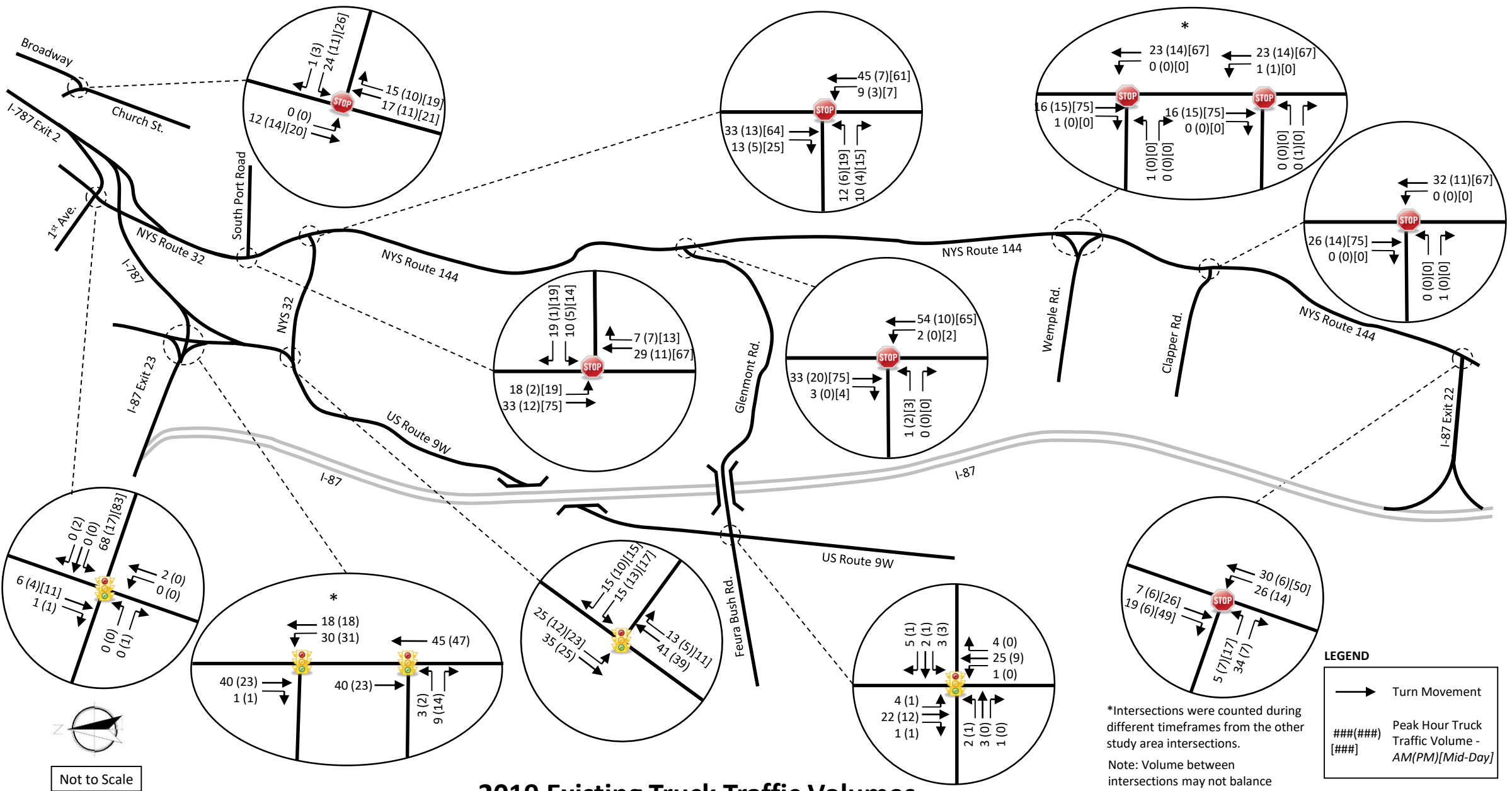
MID-DAY PEAK HOUR

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%

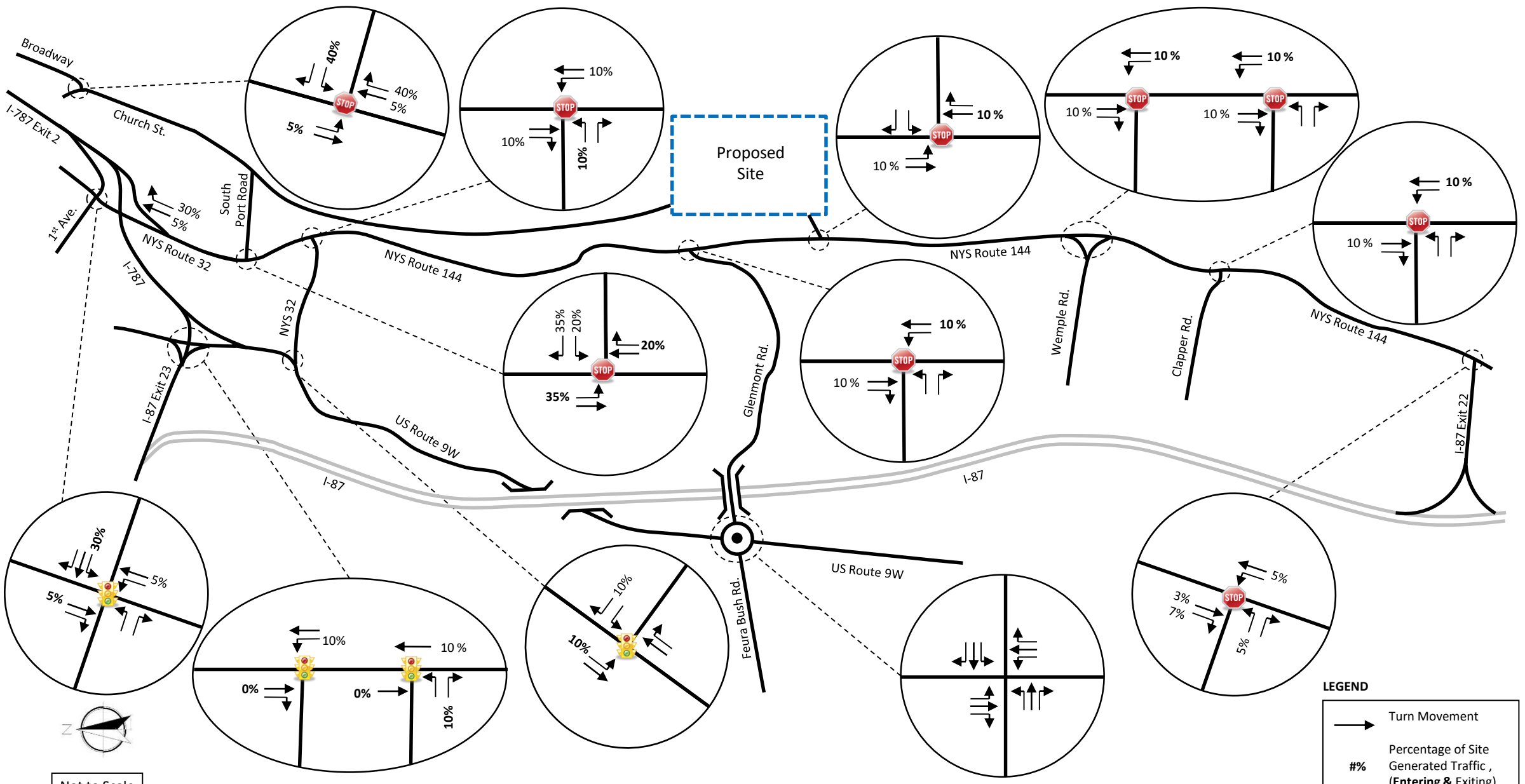
Based on this information the proposed development will increase the number of trucks on the surrounding roadway network from 8.9% to 31.3% during the peak truck timeframe (Midday), while no increase in trucks is anticipated on Glenmont Road.

As shown in Figure 14, 45% 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 55% of trucks entering and exiting the site from the north (35%), 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.

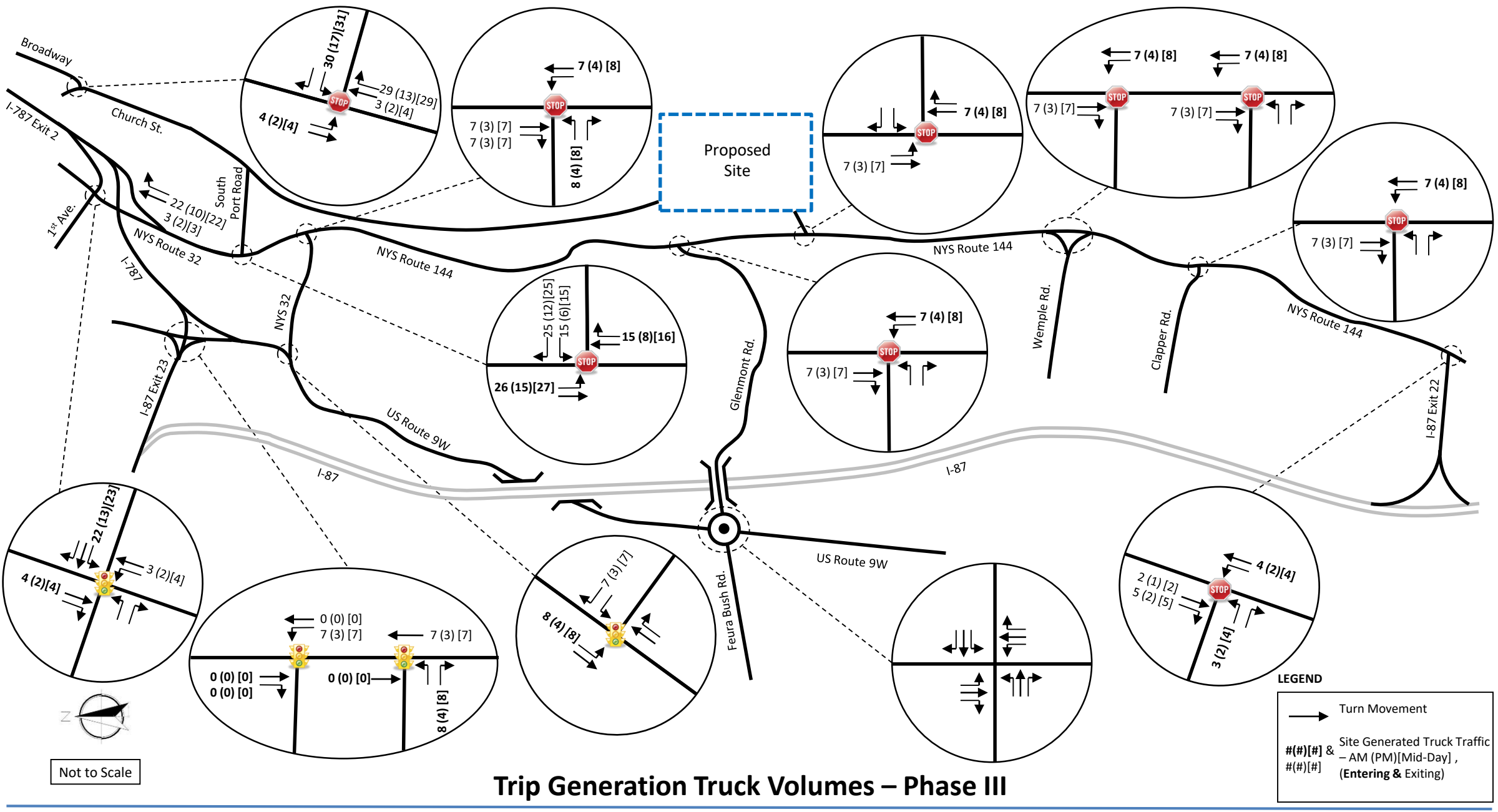
Oversized loads may be required access to/from the proposed Port Expansion site in a similar manner to the existing Port site. These deliveries require a specific traffic control plan for the intended route developed on a case by case basis with the approval of NYSDOT and any other municipality that 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.



2019 Existing Truck Traffic Volumes



Proposed Truck Trip Distribution Percentages



Trip Generation Truck Volumes – Phase III

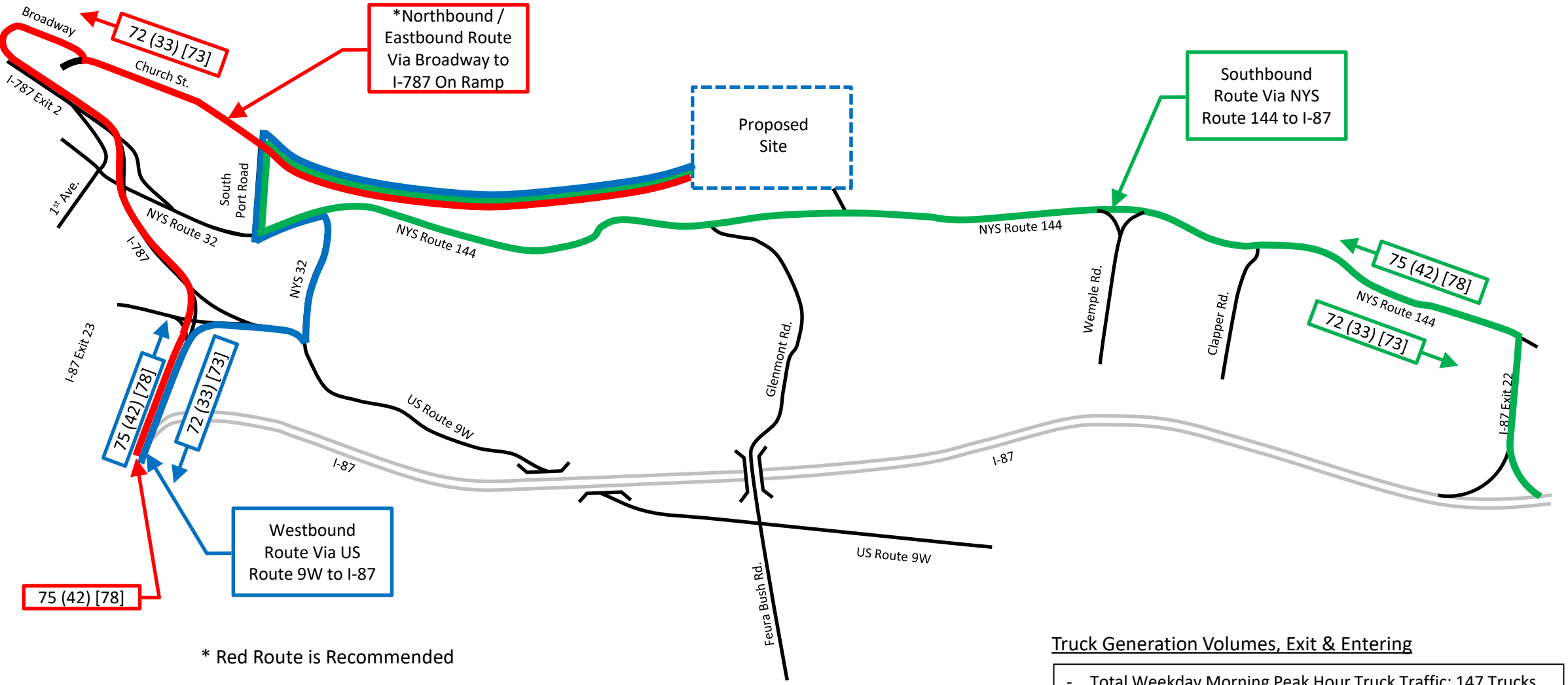
Truck Sensitivity Analysis

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.



* 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

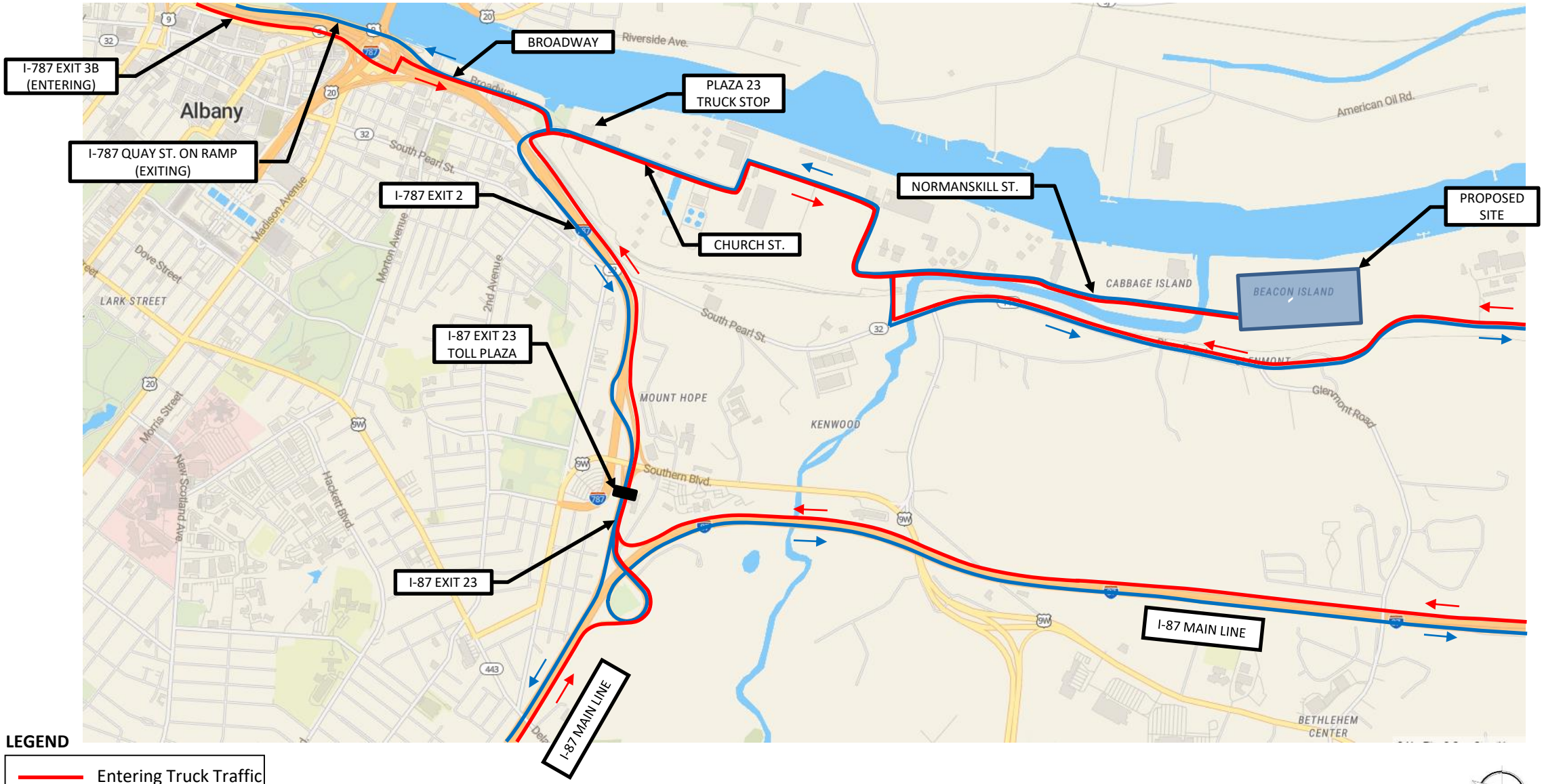
Conclusion

The recommended truck route is shown on Figure 17 and includes the two-primary means of truck access to the proposed site, via Church Street and Broadway to the north to access I-787 and the NYS Route 144 at South Port Road to head south on NYS Route 144. This recommended truck route also includes a restriction on right-turns for proposed trucks exiting the site via South Port Road and traveling north, to limit any impact that the proposed trucks may have on the environmentally sensitive areas along South Pearl Street, including the Ezra Prentice community. This restriction minimizes the anticipated impact from the proposed development on the surrounding roadway network related to the volume of trucks during the midday peak timeframe, as shown in Table 6a below. Figures 18 and 19 show the trip distribution percentages and the resulting truck trip generation volumes when accounting for this right-turn restriction.

Table 6a – Projected Truck Volumes (Proposed Truck Routes)

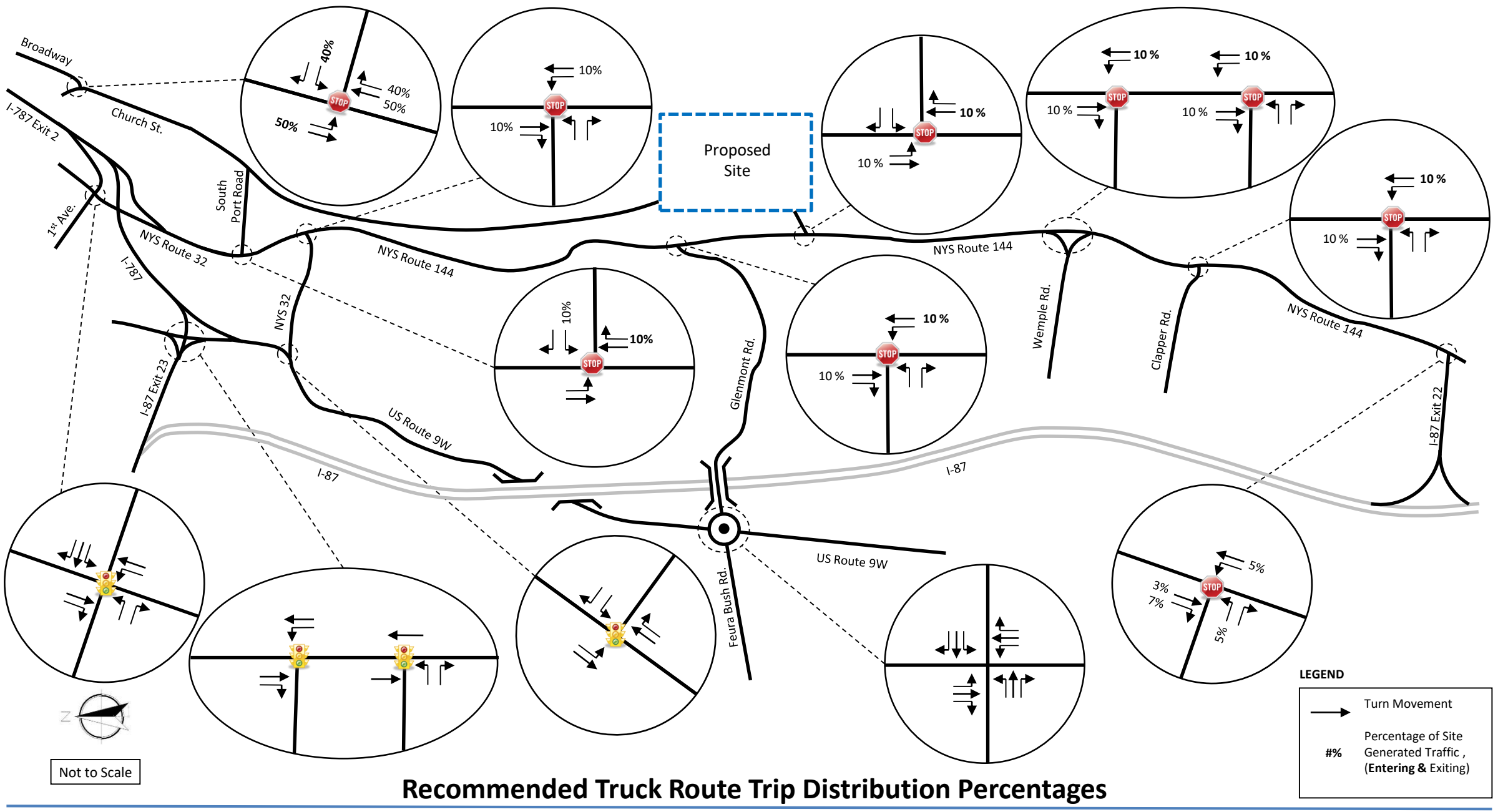
MID-DAY PEAK HOUR

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	34	32	0.0%	0.0%
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	83	86	0.0%	0.0%
NYS Route 144 from NYS Route 32 to Glenmont Rd. (North/South)	68	79	72	82	5.9%	3.8%
NYS Route 144 from Glenmont Rd. to Clapper Rd. (North/South)	67	75	71	78	6.0%	4.0%
NYS Route 144 from Clapper Rd. to I-87 Exit 22 (North/South)	67	75	71	78	6.0%	4.0%

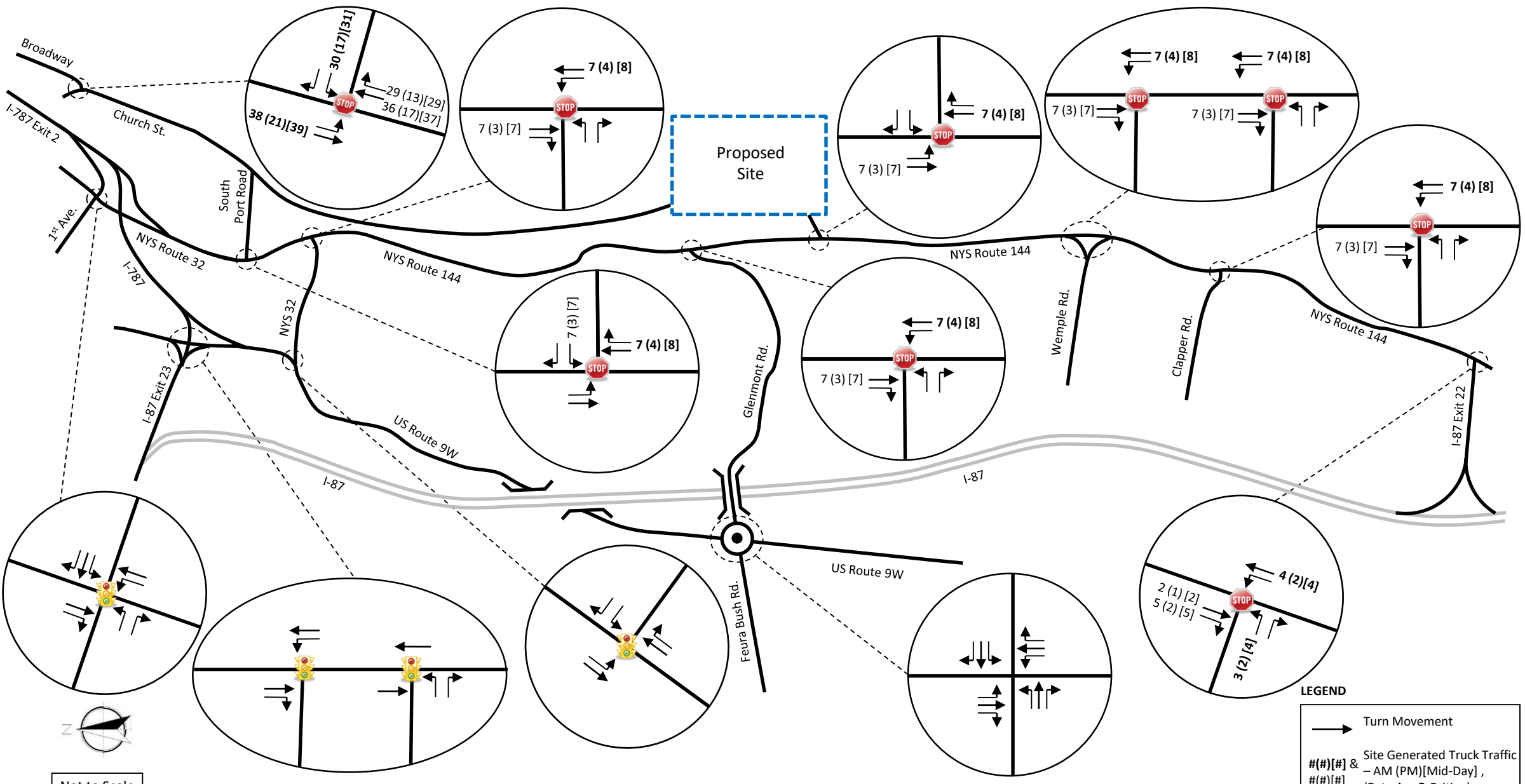


Recommended Truck Routes To/From Proposed Site

Not to Scale



Recommended Truck Route Trip Distribution Percentages



Recommended Truck Route Trip Generation Volumes – Phase III

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 7 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, Normans Kill 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 Normans Kill 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.

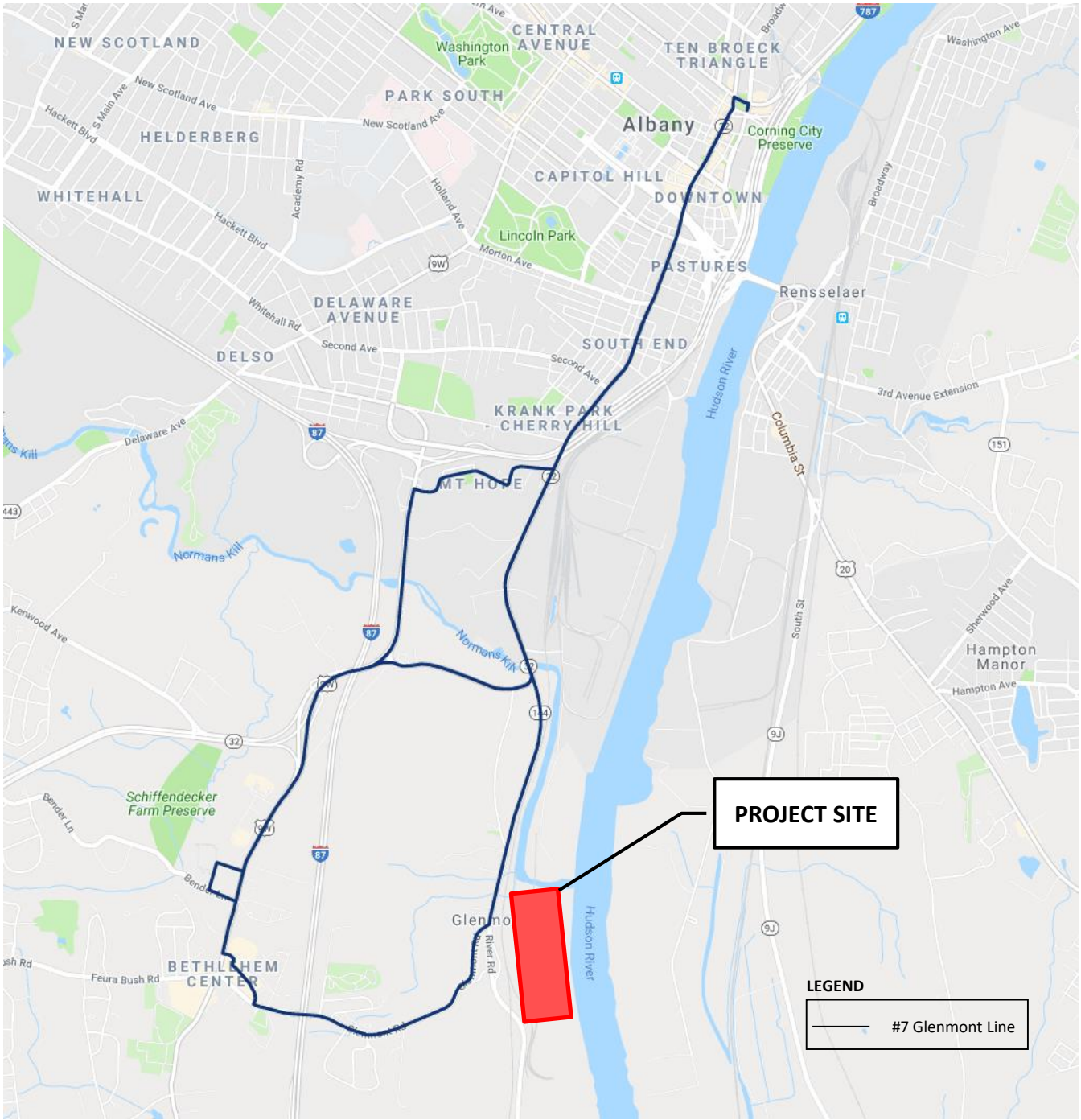
The proposed developments impact on rail operation will be dependent on the tenant/end user. Regardless of the tenant, the only impact to the public will continue to be through the CSX train running on the secondary line to the Selkirk Rail Yard. The projected worst-case scenario operations consist of 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 20 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 density in the ramp influence area of the merging highway on I-787 is currently 27.0 pc/mi/ln, or LOS 'C' in the morning peak hour and 15.4 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' (27.9 pc/mi/ln) and LOS 'B' (15.9 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 Normans Kill 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 regulatory 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 shown on Figure 17 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:

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- 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)

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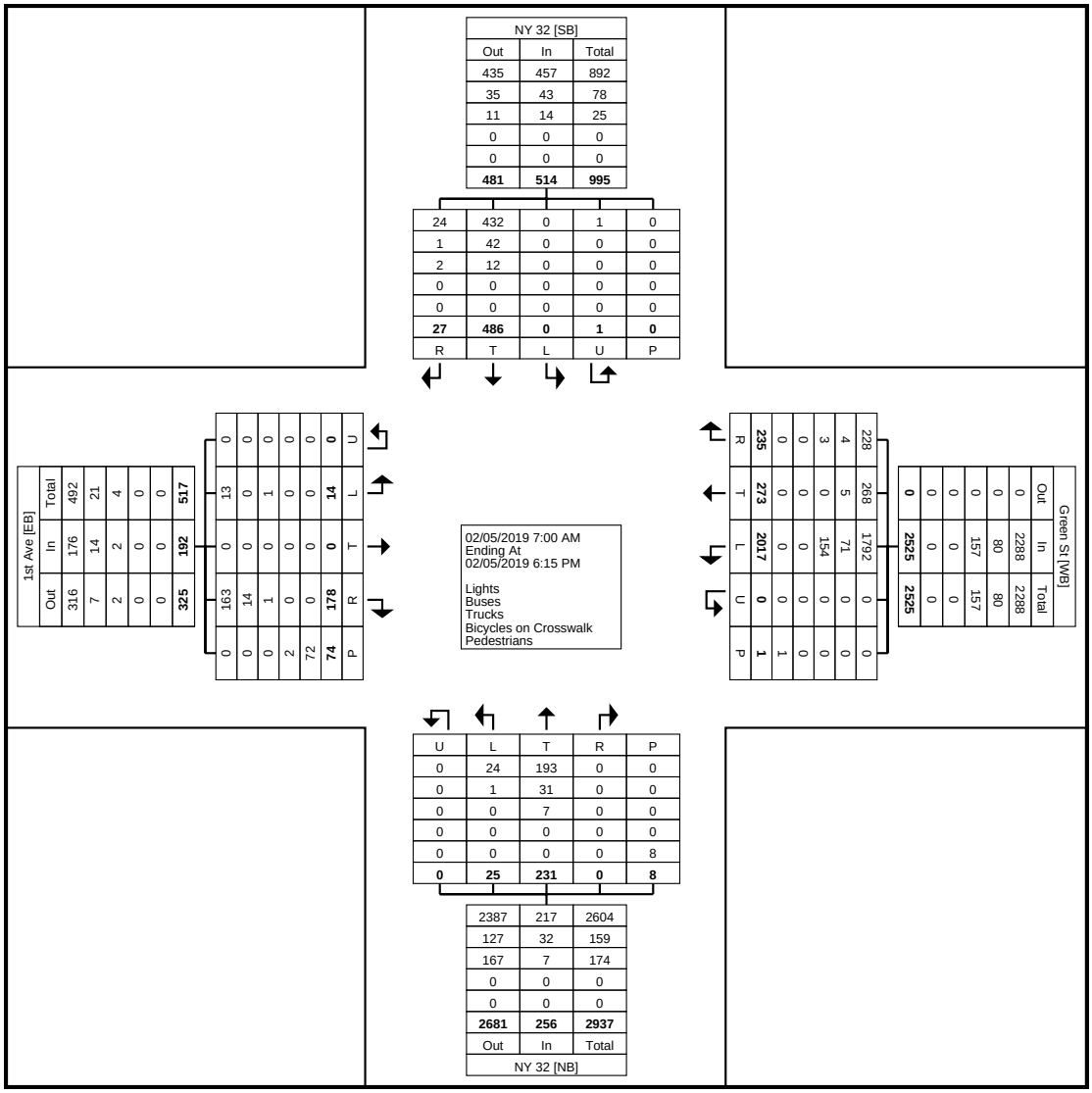
Albany, NY
NY 32/Green St/1st Ave
Tuesday, February 5, 2019
Location: 42.635373, -73.762017

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

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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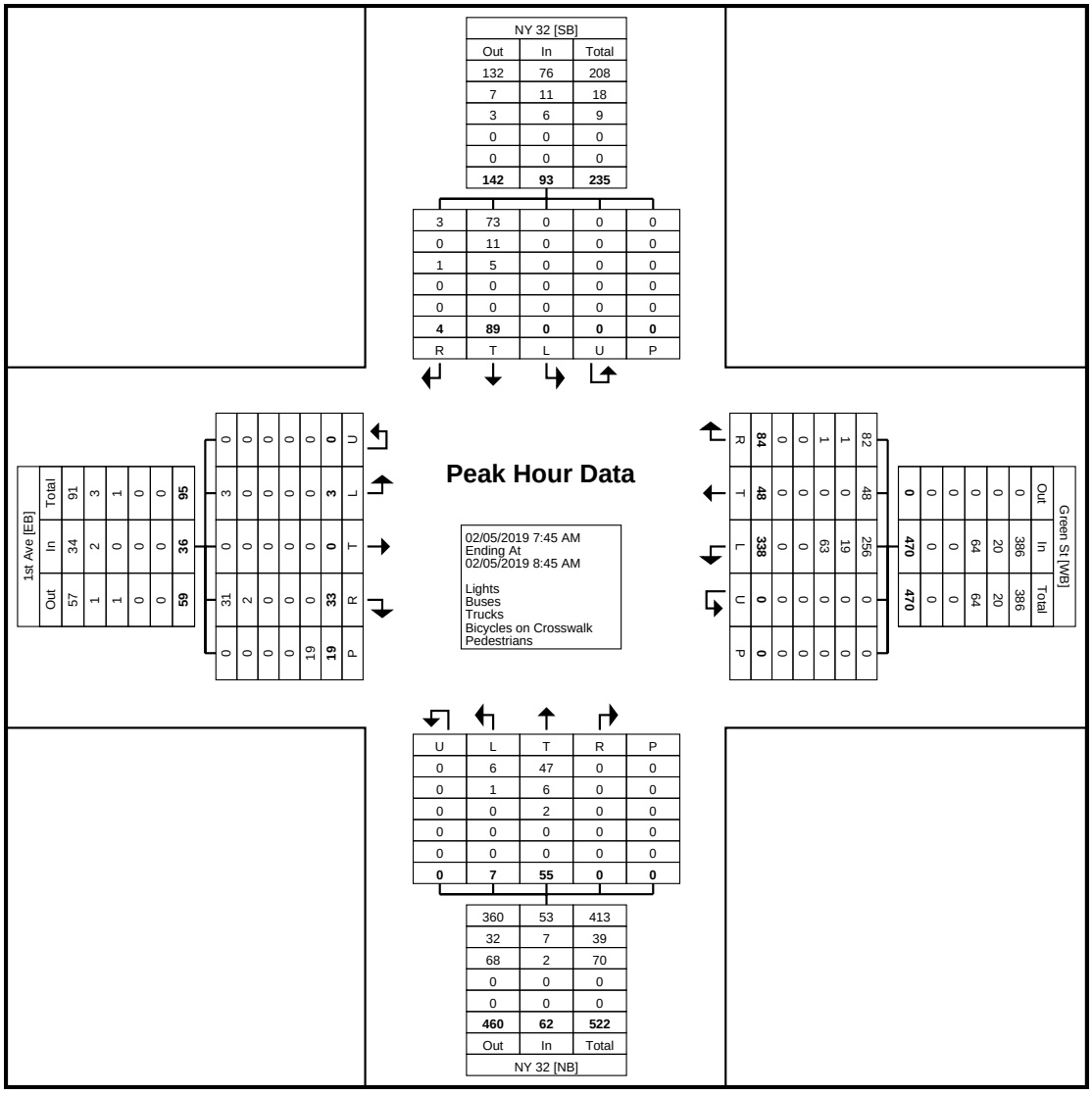
Albany, NY
NY 32/Green St/1st Ave
Tuesday, February 5, 2019
Location: 42.635373, -73.762017

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	-	-	-	-	-	-	-	-	-

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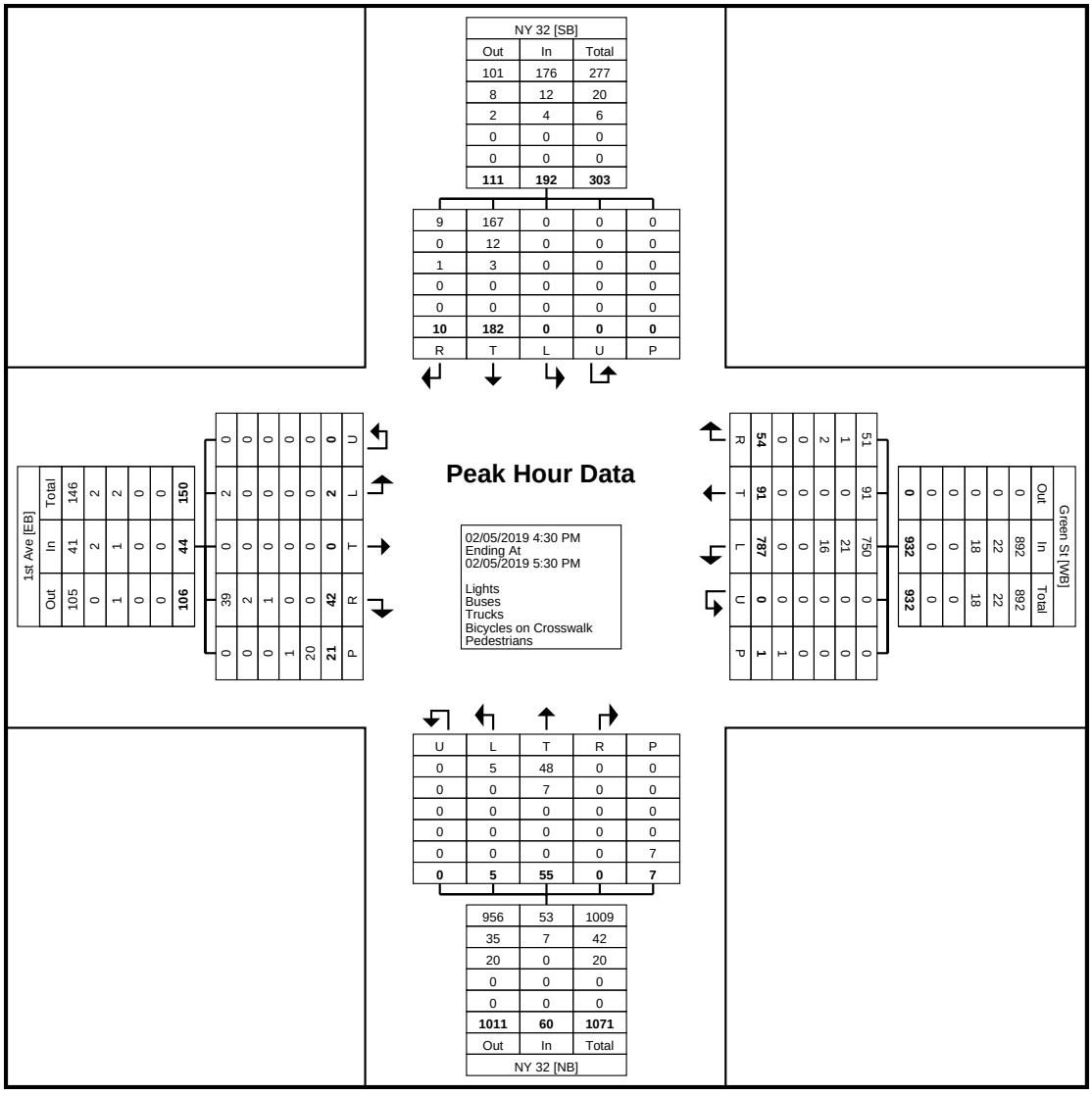

Turning Movement Peak Hour Data Plot (4:30 PM)

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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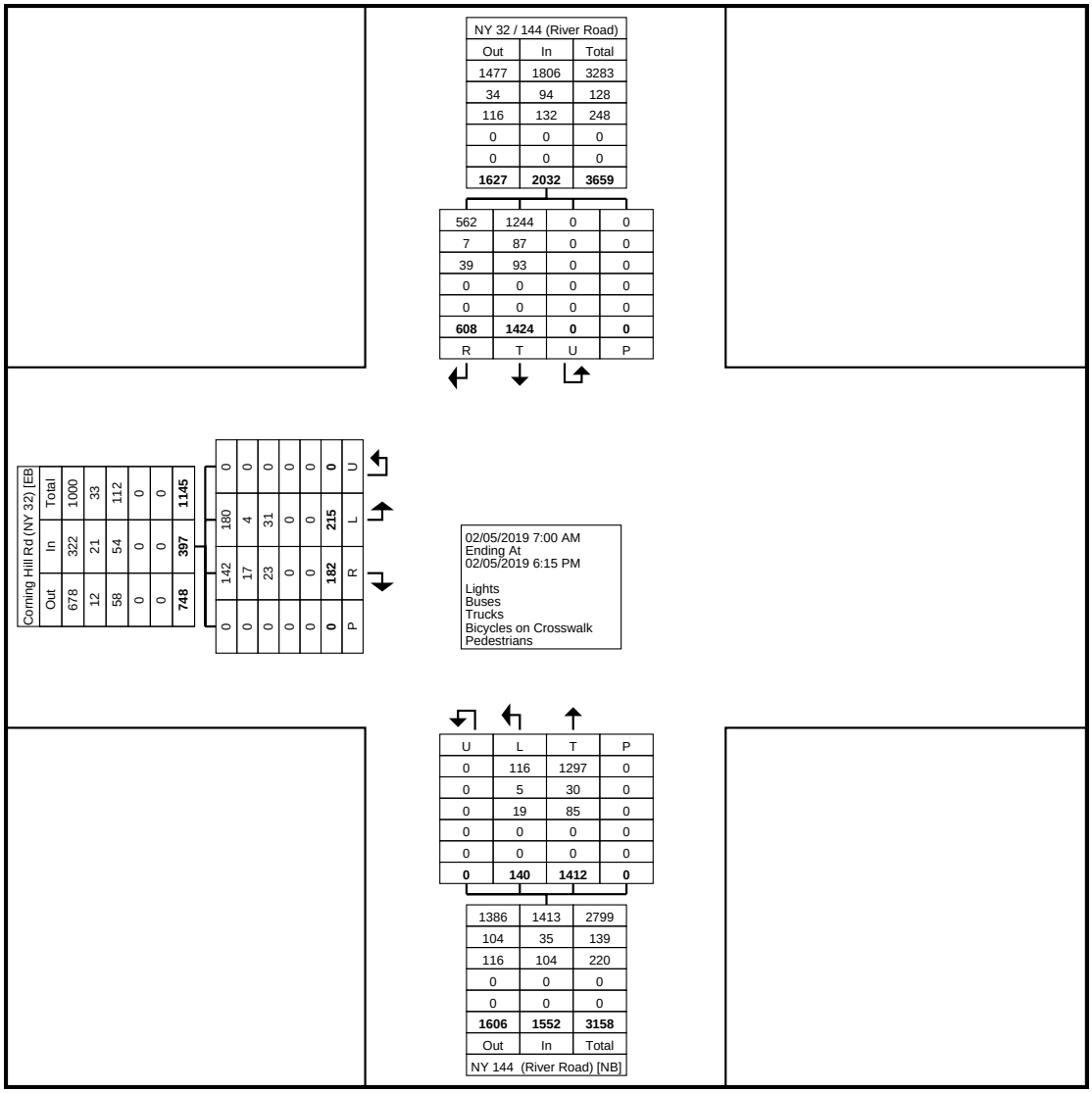
Albany, NY
NY 32/NY 144
Tuesday, February 5, 2019
Location: 42.619459, -73.766358

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



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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

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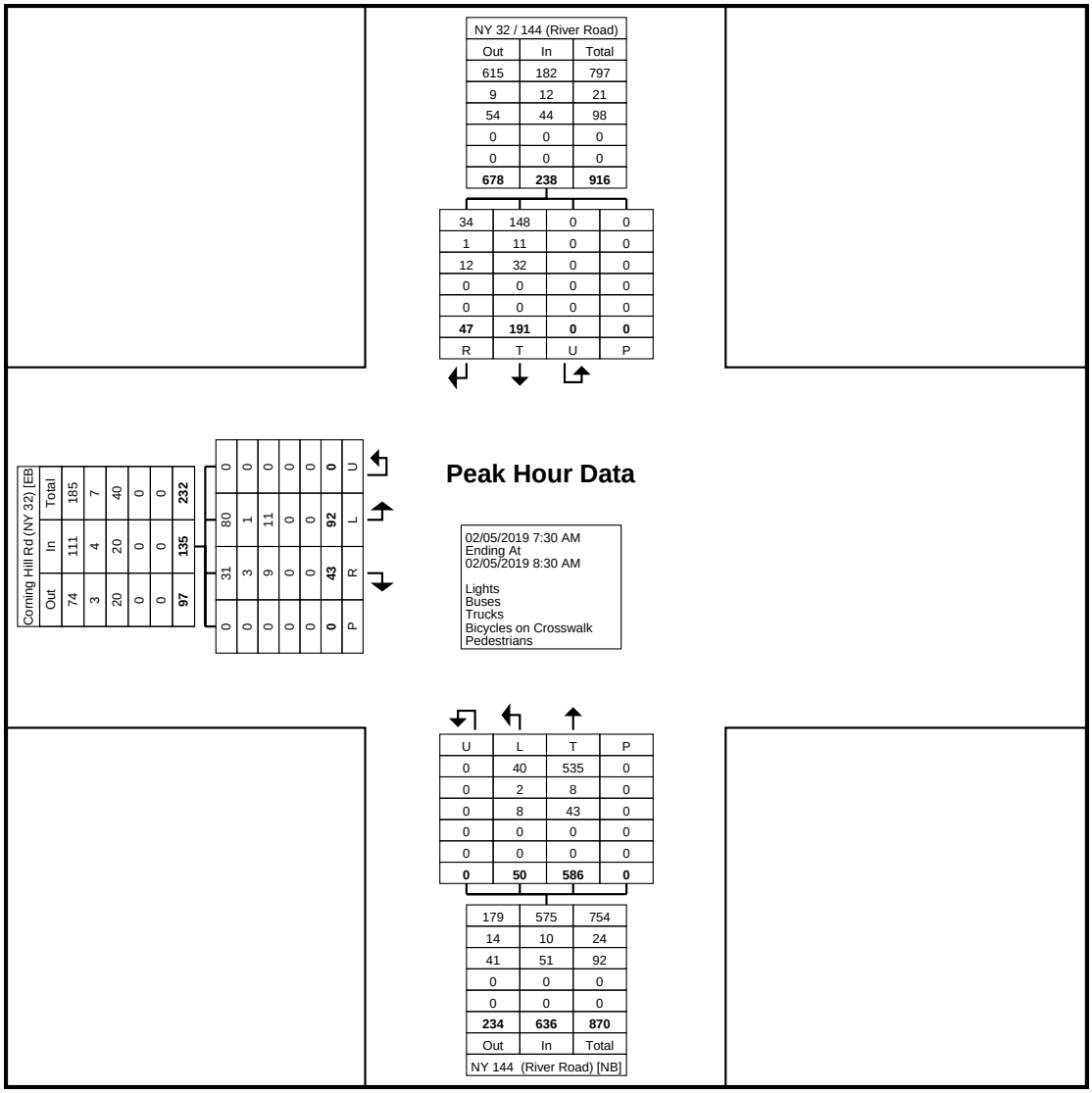

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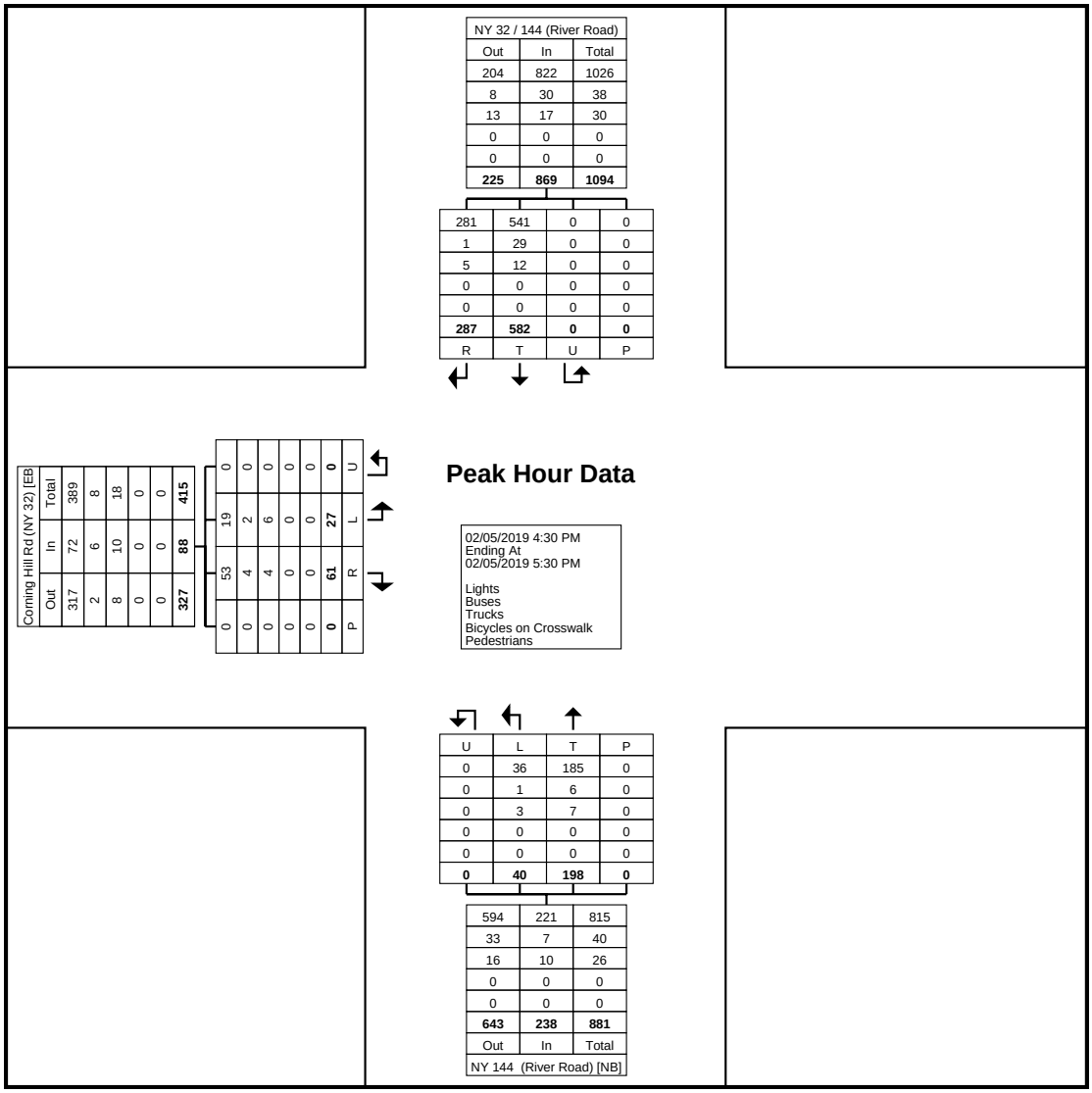
Turning Movement Peak Hour Data (4:30 PM)

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)

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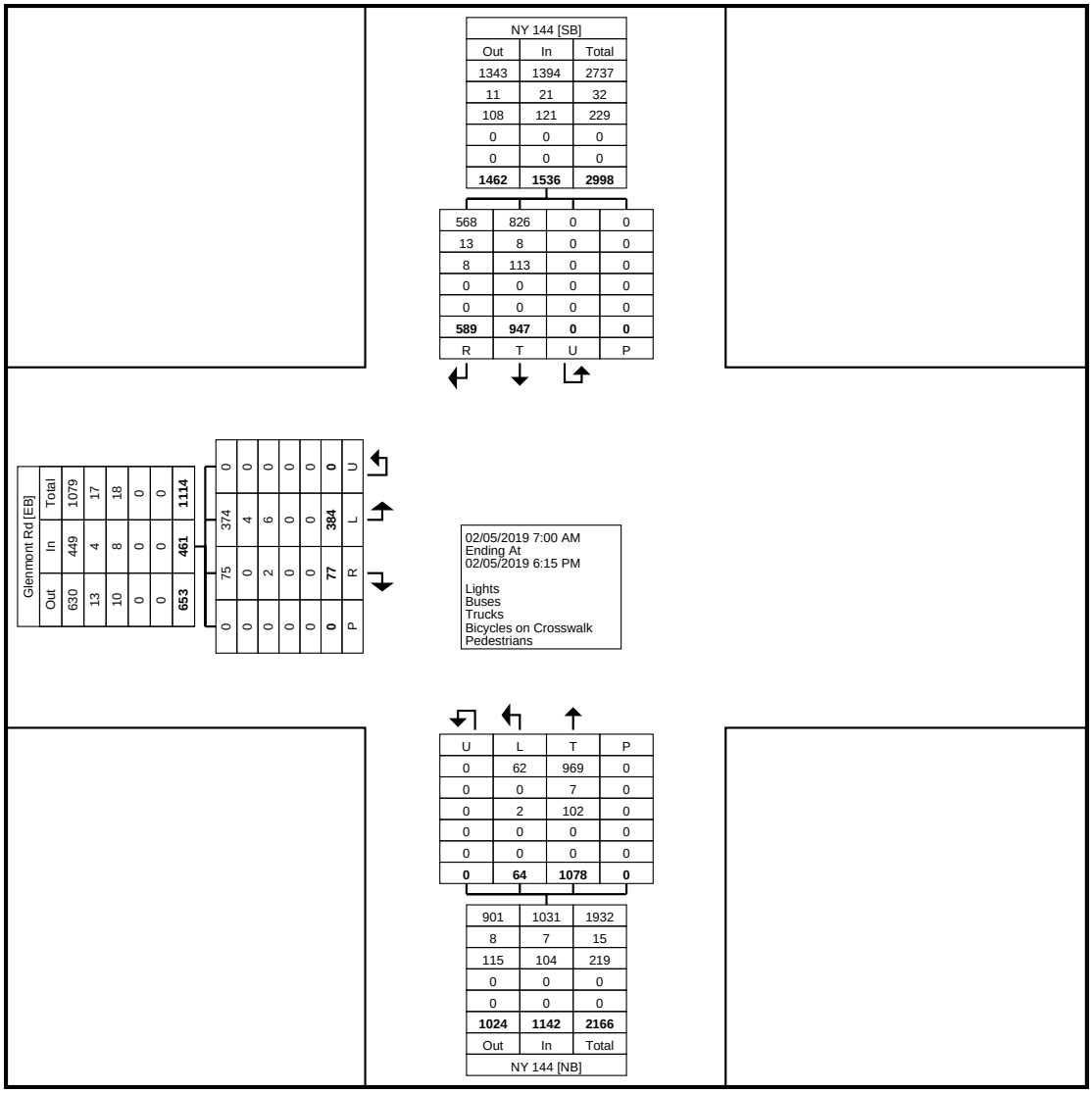
Albany, NY
NY 144 / Glenmont Road
Tuesday, February 5, 2019
Location: 42.604997, -73.769906

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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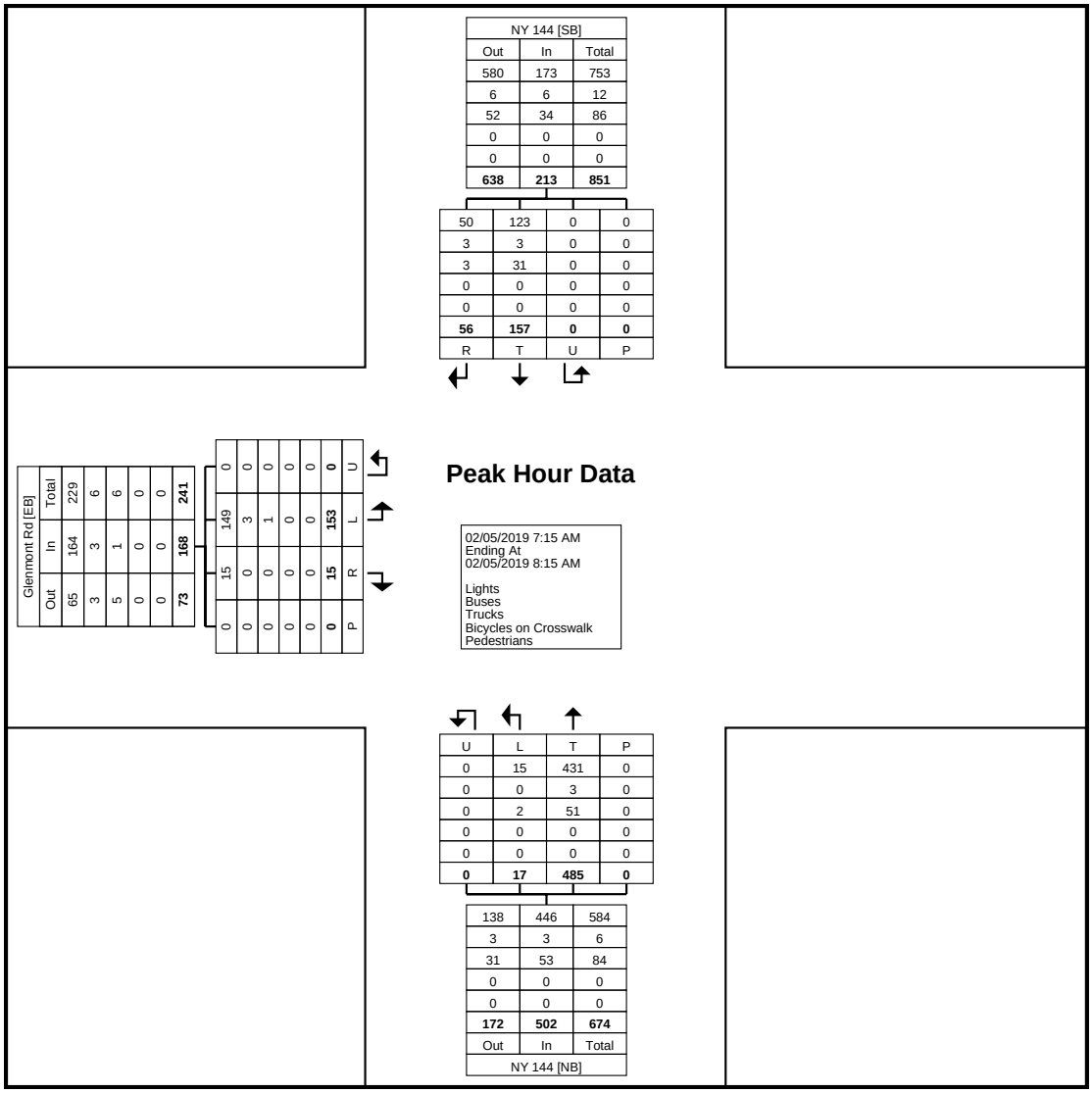
Albany, NY
NY 144 / Glenmont Road
Tuesday, February 5, 2019
Location: 42.604997, -73.769906

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)

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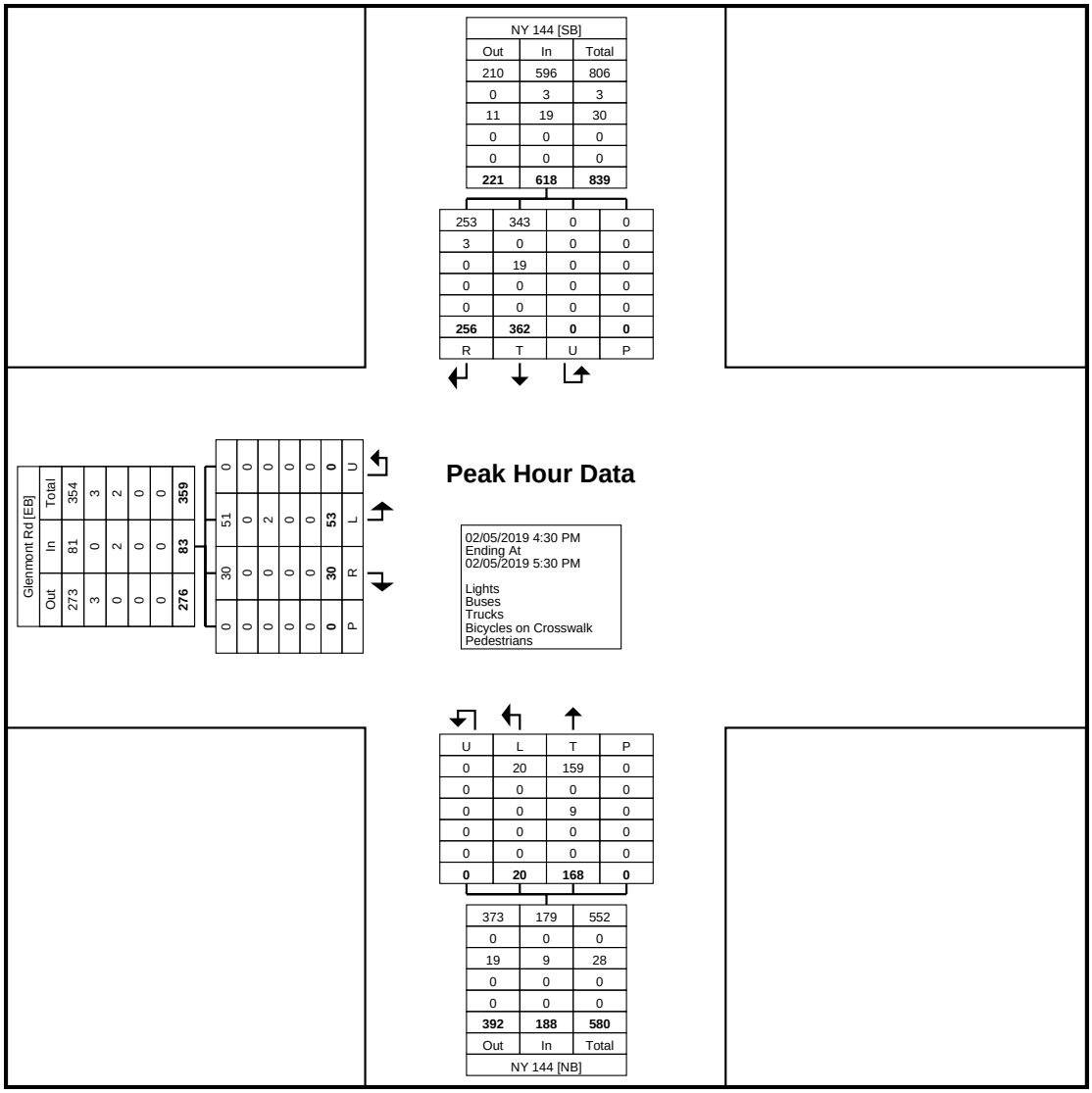
Albany, NY
NY 144 / Glenmont Road
Tuesday, February 5, 2019
Location: 42.604997, -73.769906

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

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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

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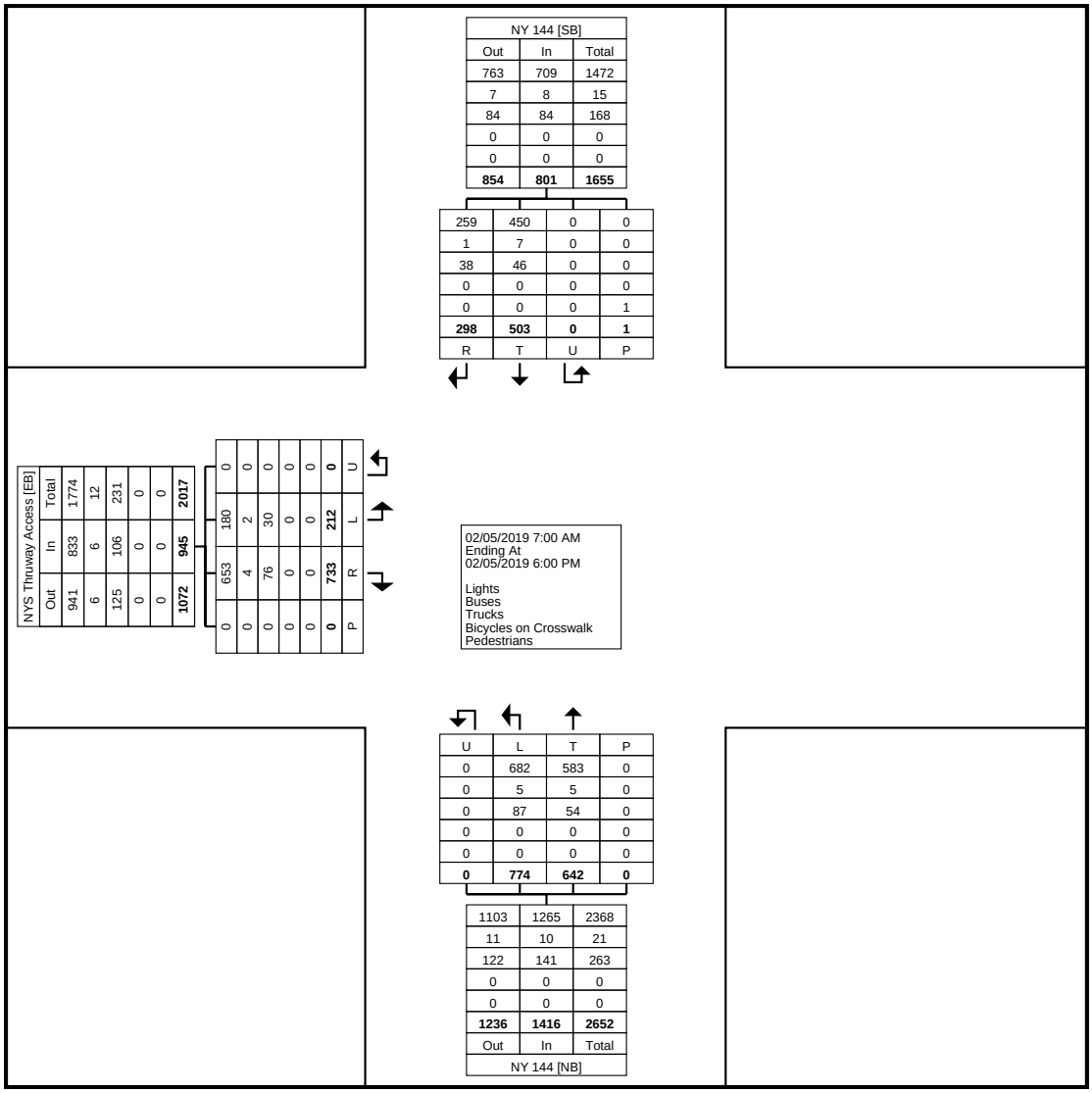

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Albany, NY
NY 144 / NY State Thruway Access
Tuesday, February 5, 2019
Location: 42.534276, -73.778231

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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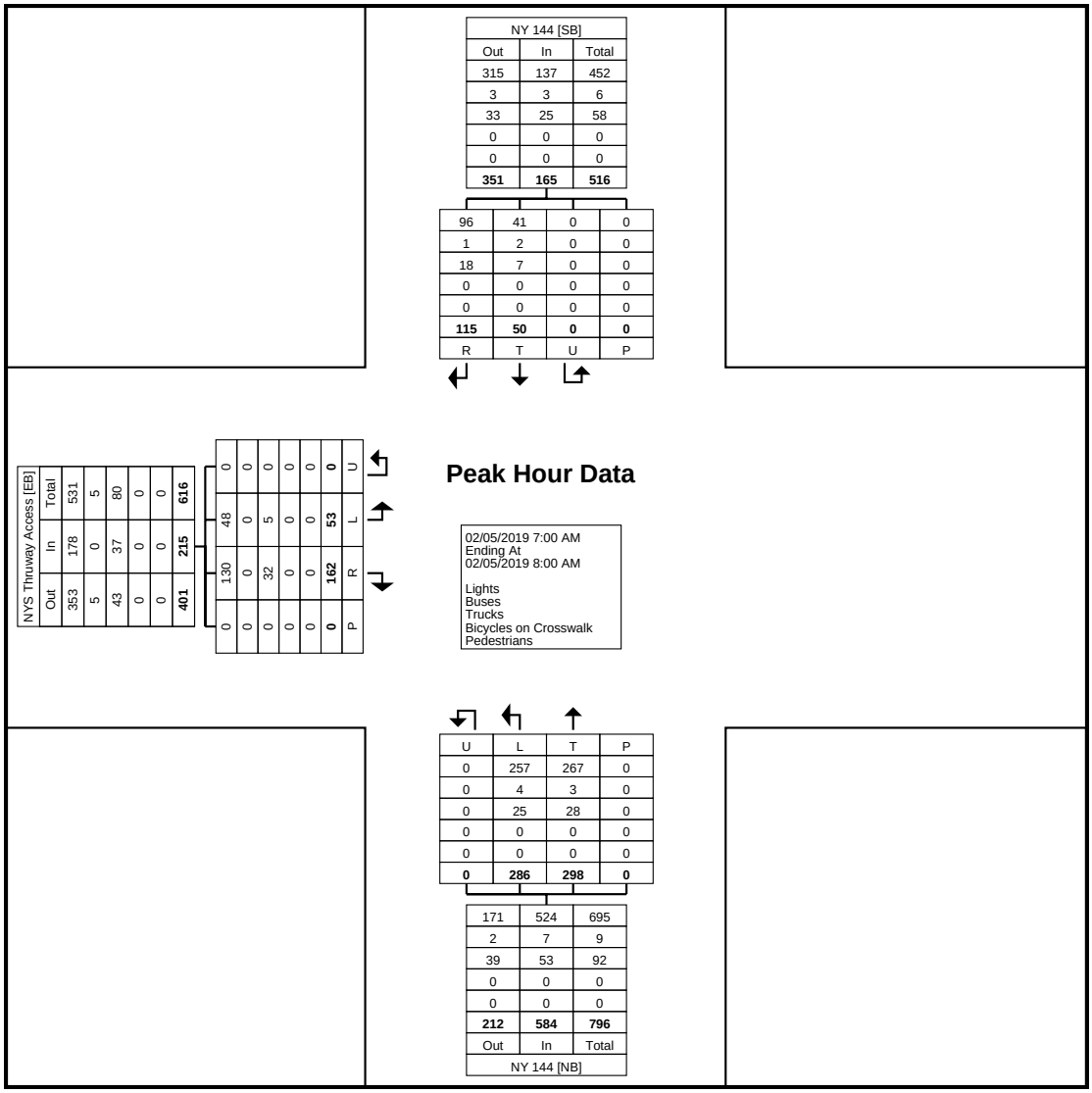

Turning Movement Peak Hour Data Plot (7:00 AM)

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

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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	-	-

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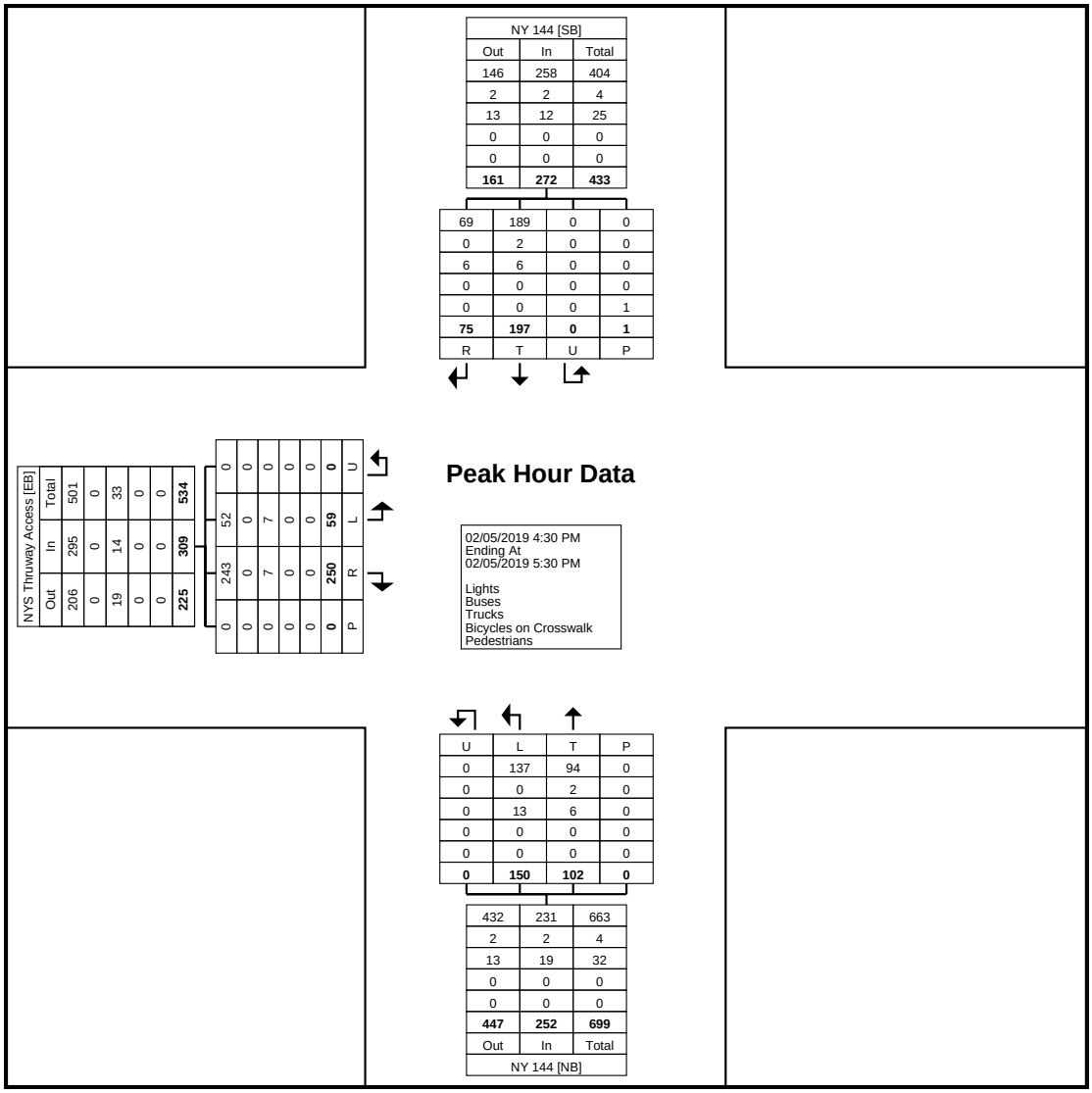

Turning Movement Peak Hour Data Plot (4:30 PM)

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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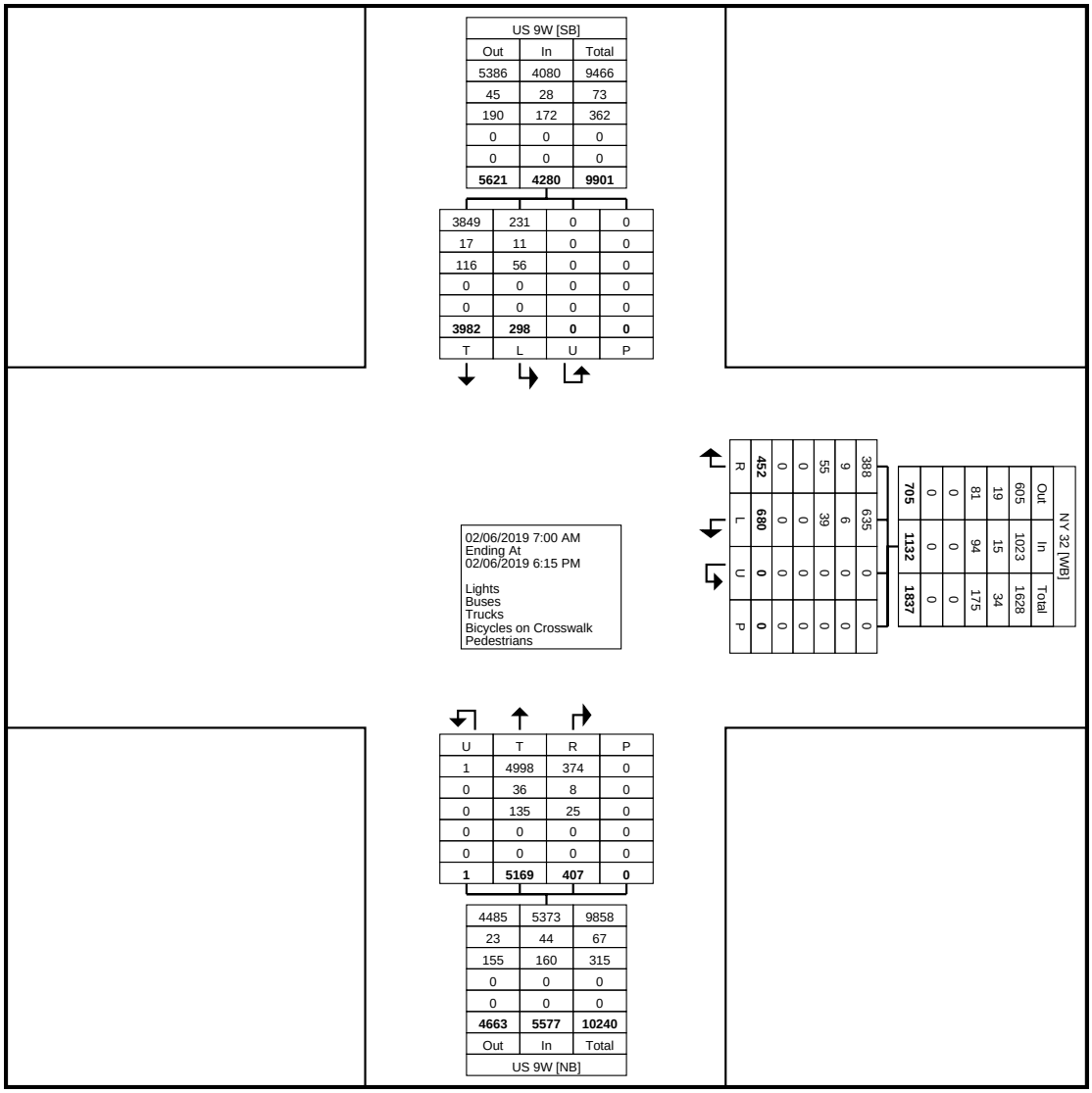
Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

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



Turning Movement Data Plot

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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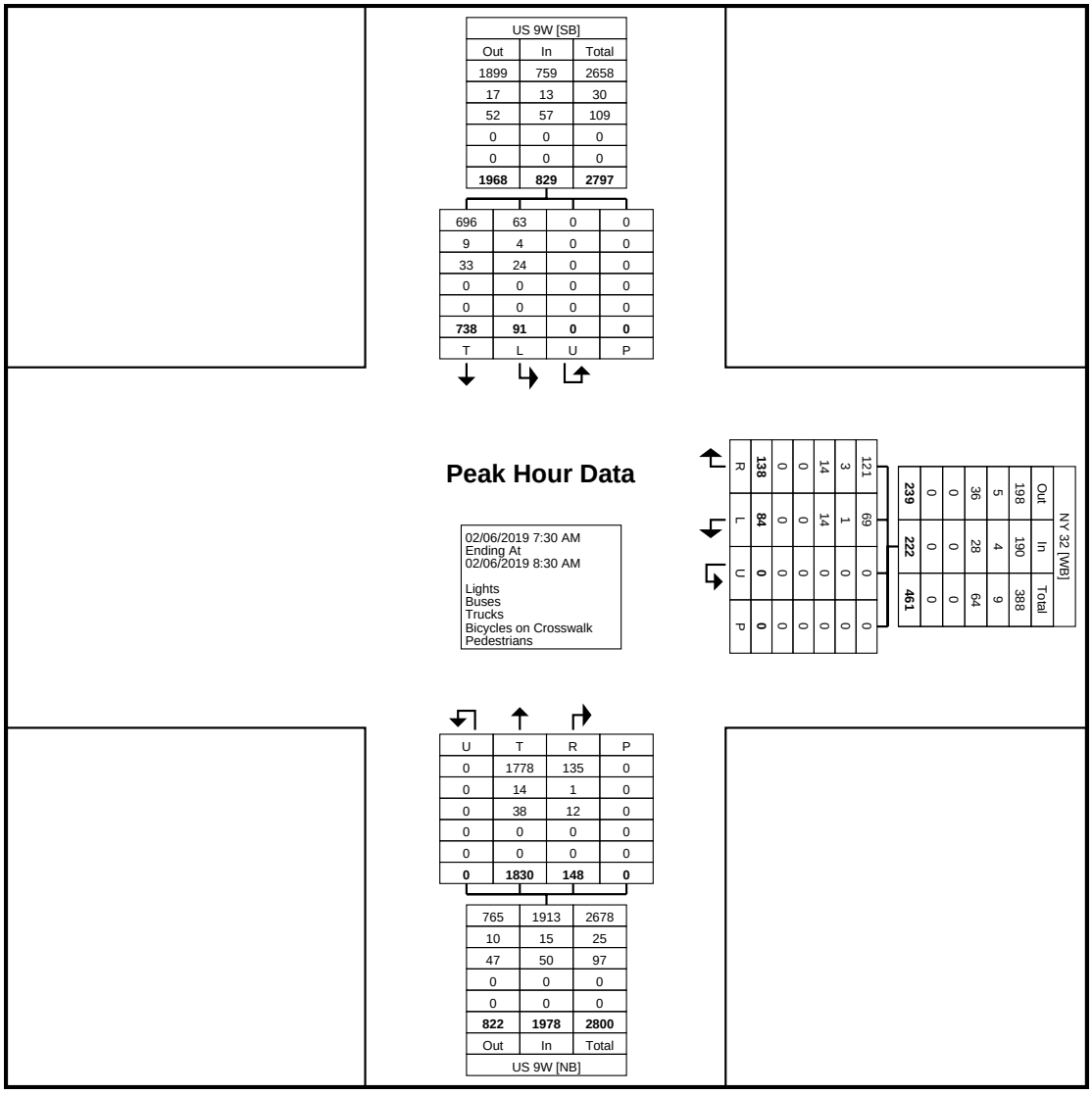
Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

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)

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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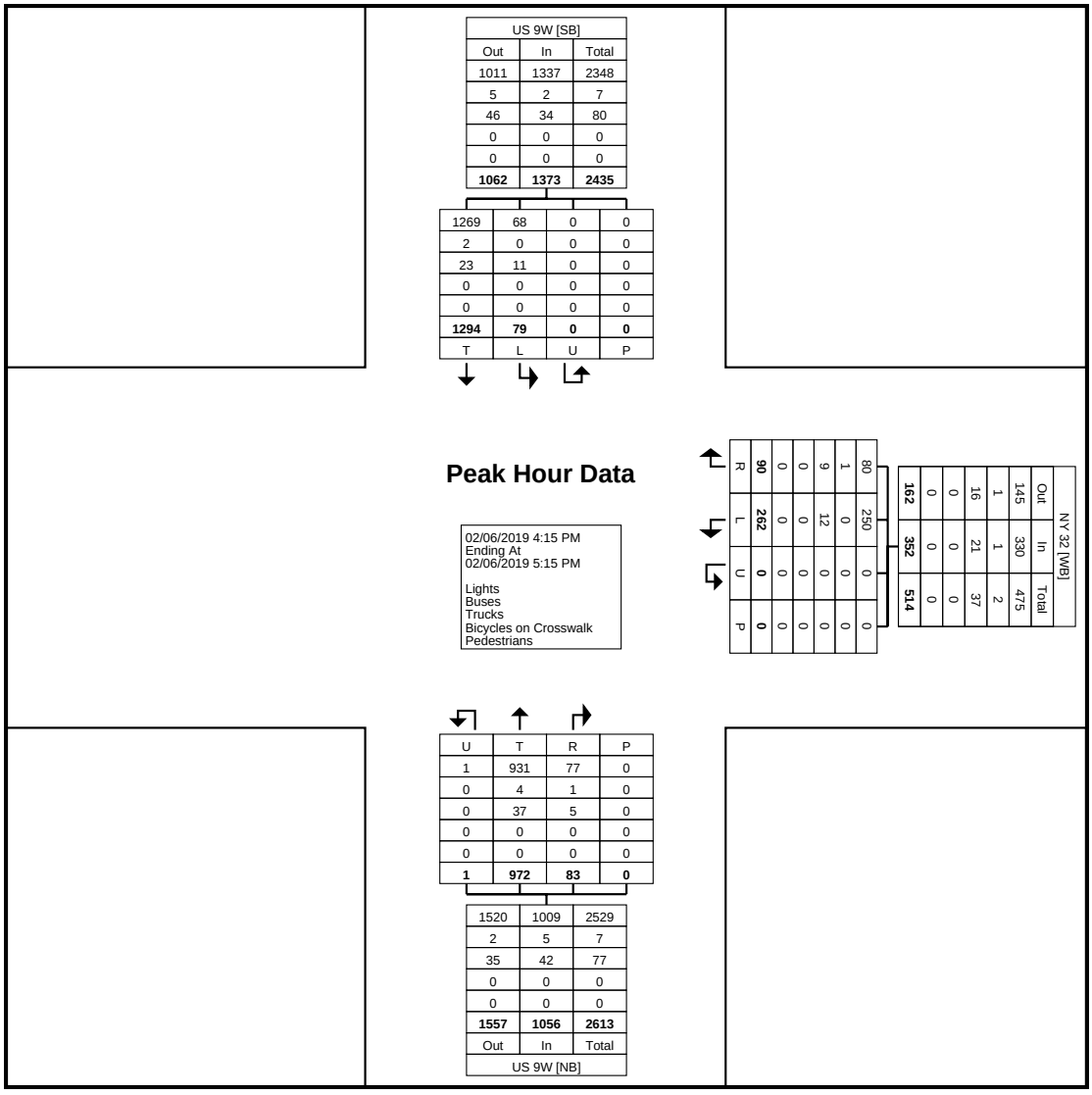
Albany, NY
US 9W/NY 32
Wednesday, February 6. 2019
Location: 42.620891, -73.778155

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)

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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	-	-	-	-	-	-	-

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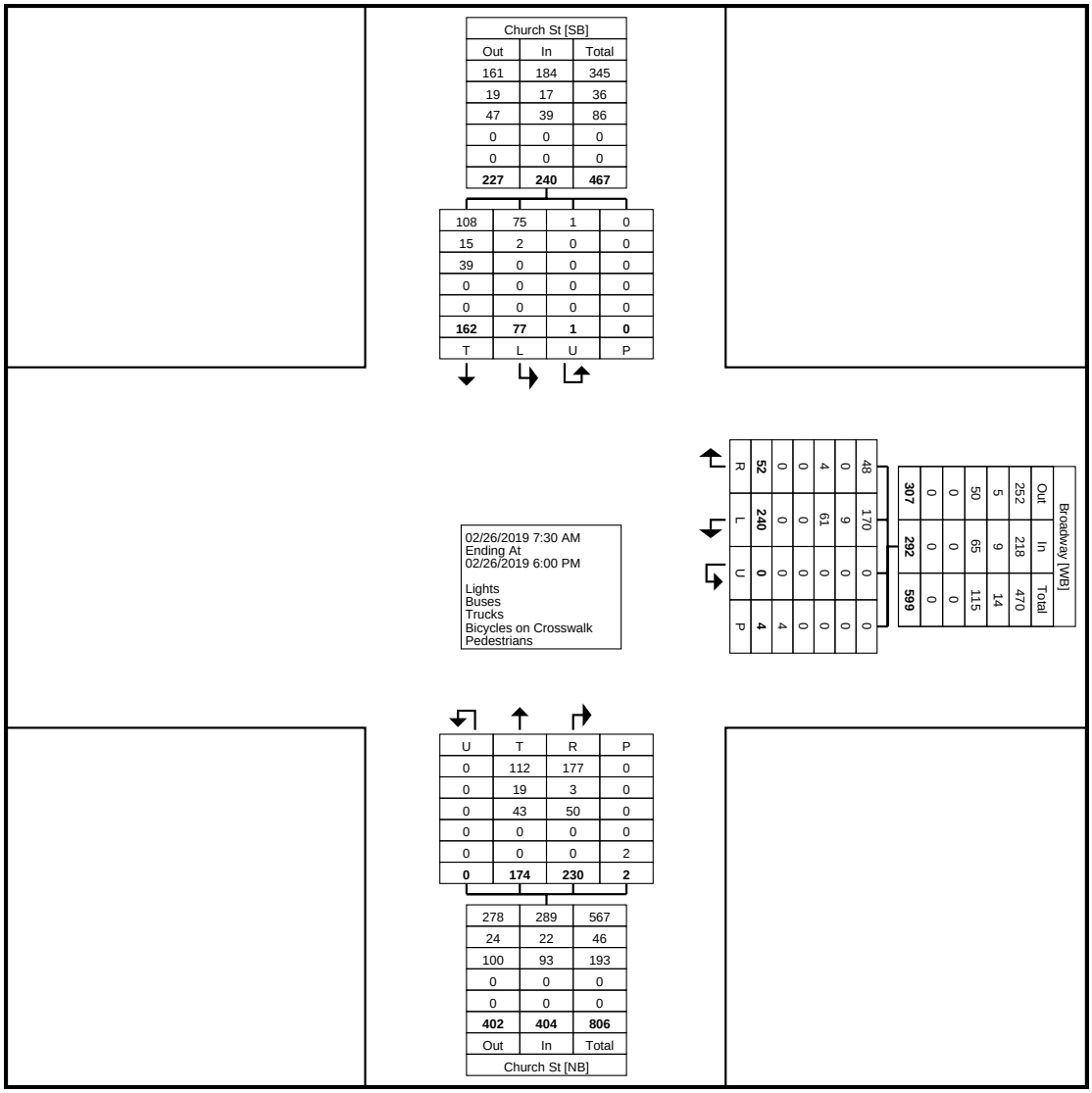
Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

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



Turning Movement Data Plot

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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	-	-	-	-	-	-	-

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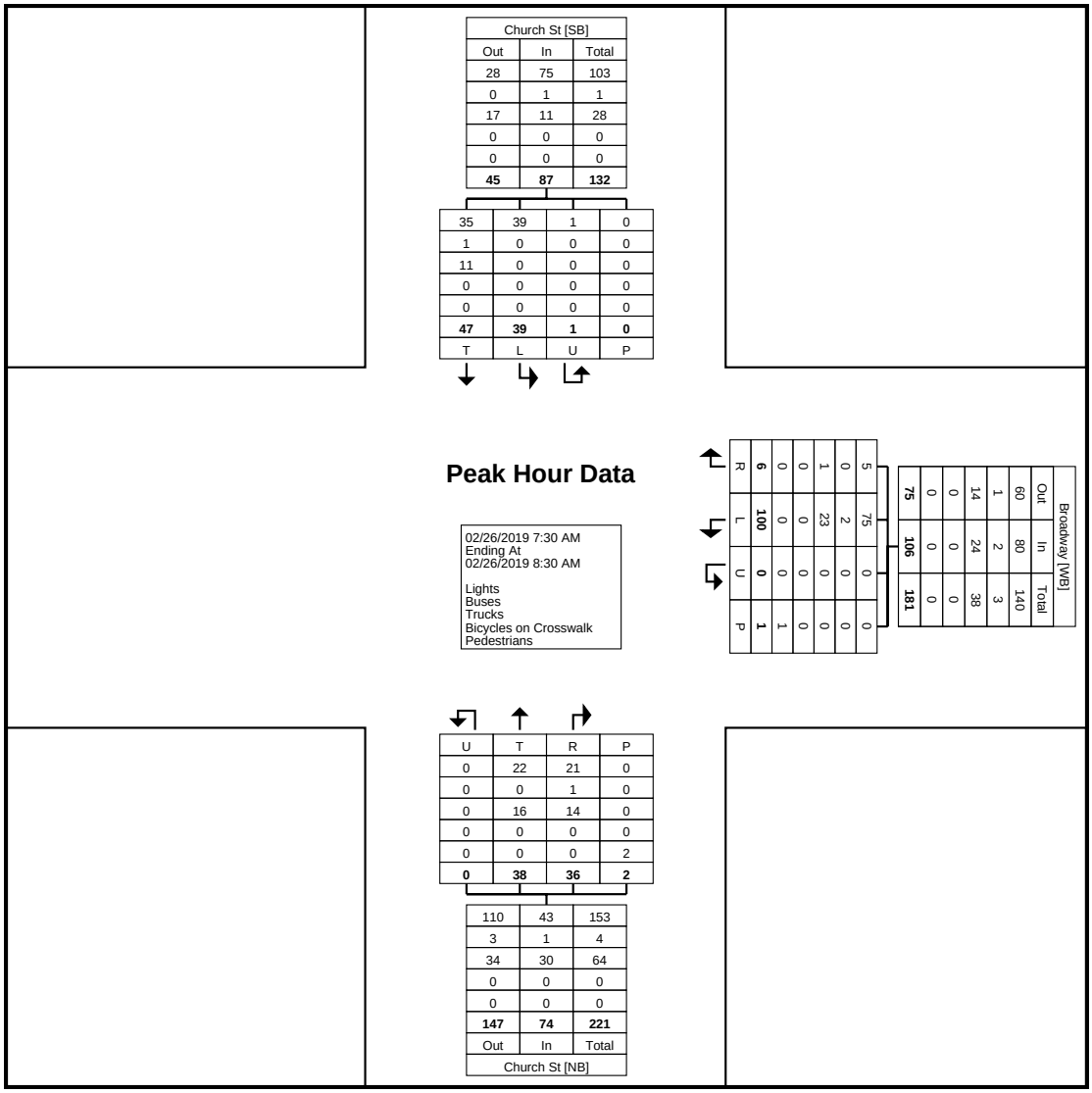
Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

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



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

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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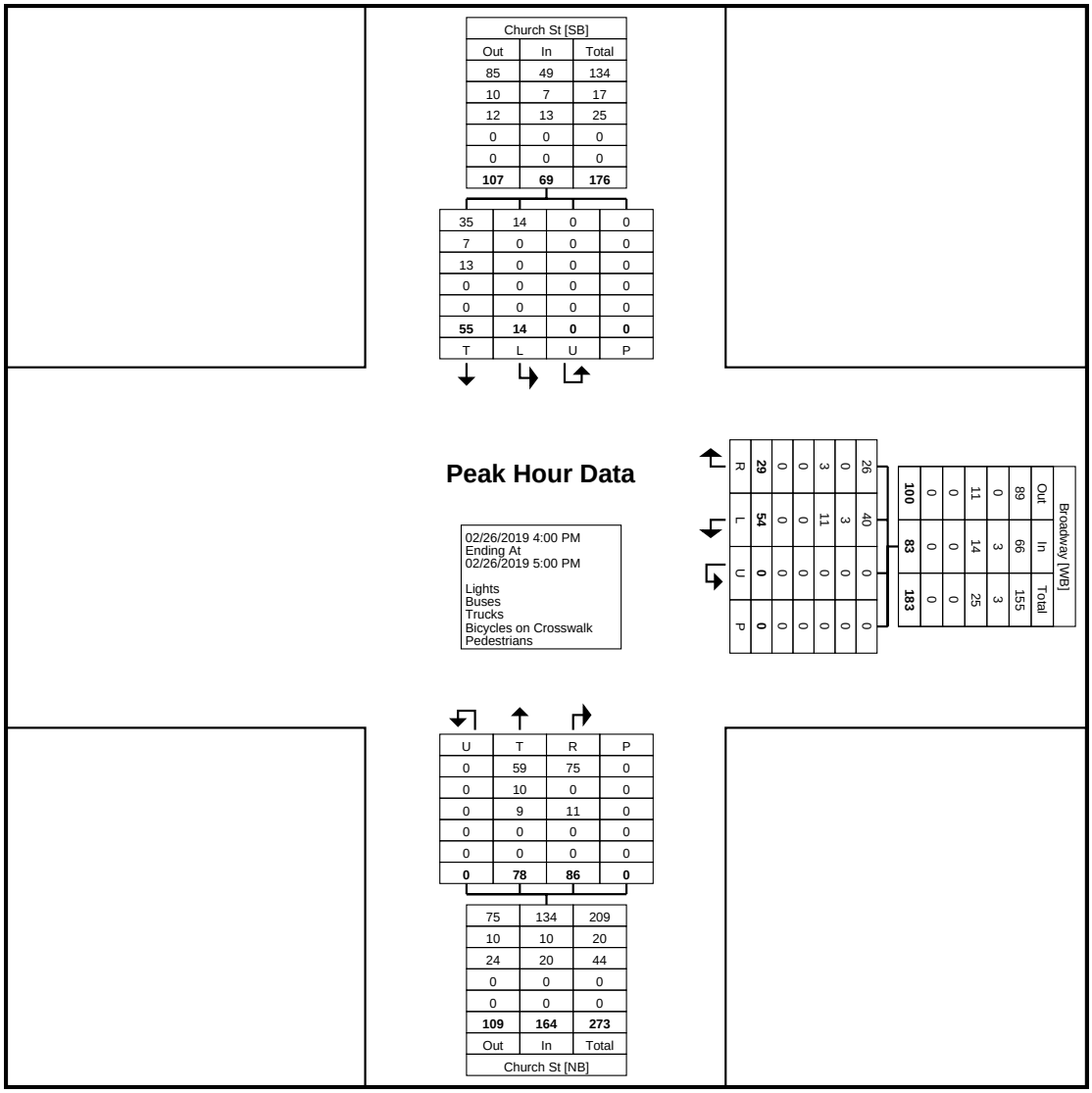
Port of Albany, NY
Broadway/Church St
Tuesday, February 26, 2019
Location: 42.636505, -73.755367

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



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

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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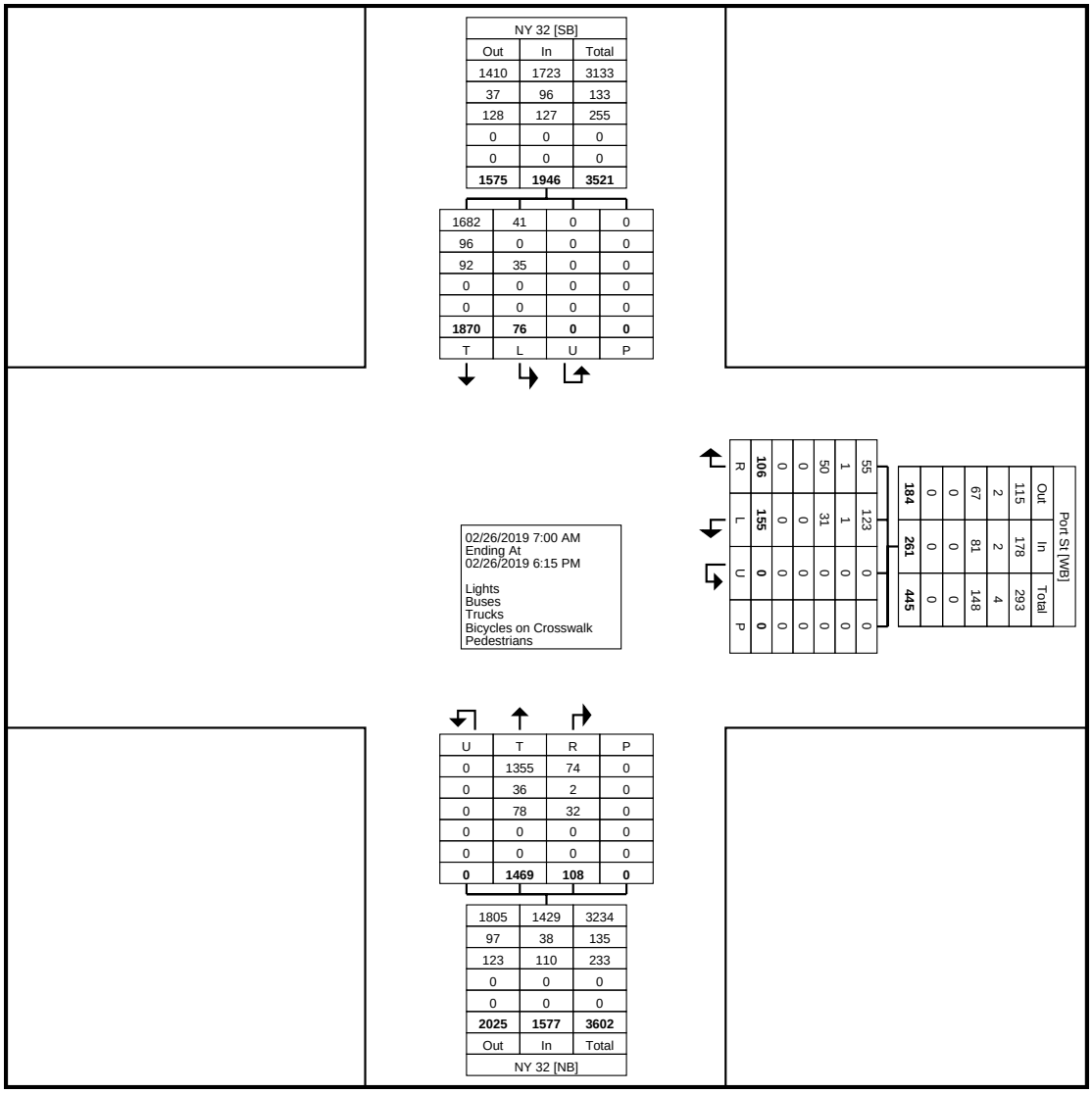
Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

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



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

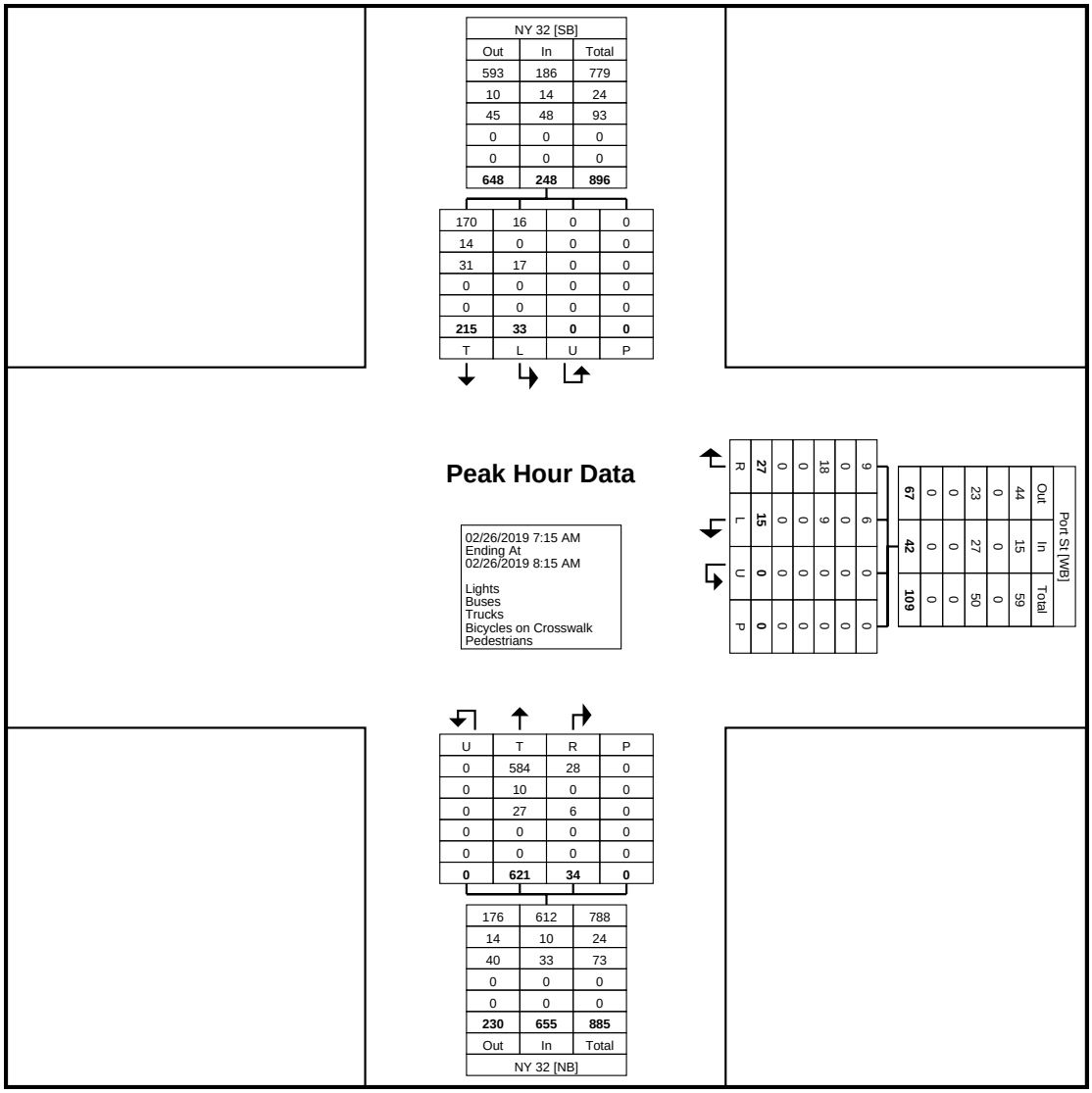
Count Name: NY 32/ Port Street
Site Code: Albany, New York
Start Date: 02/26/2019

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)

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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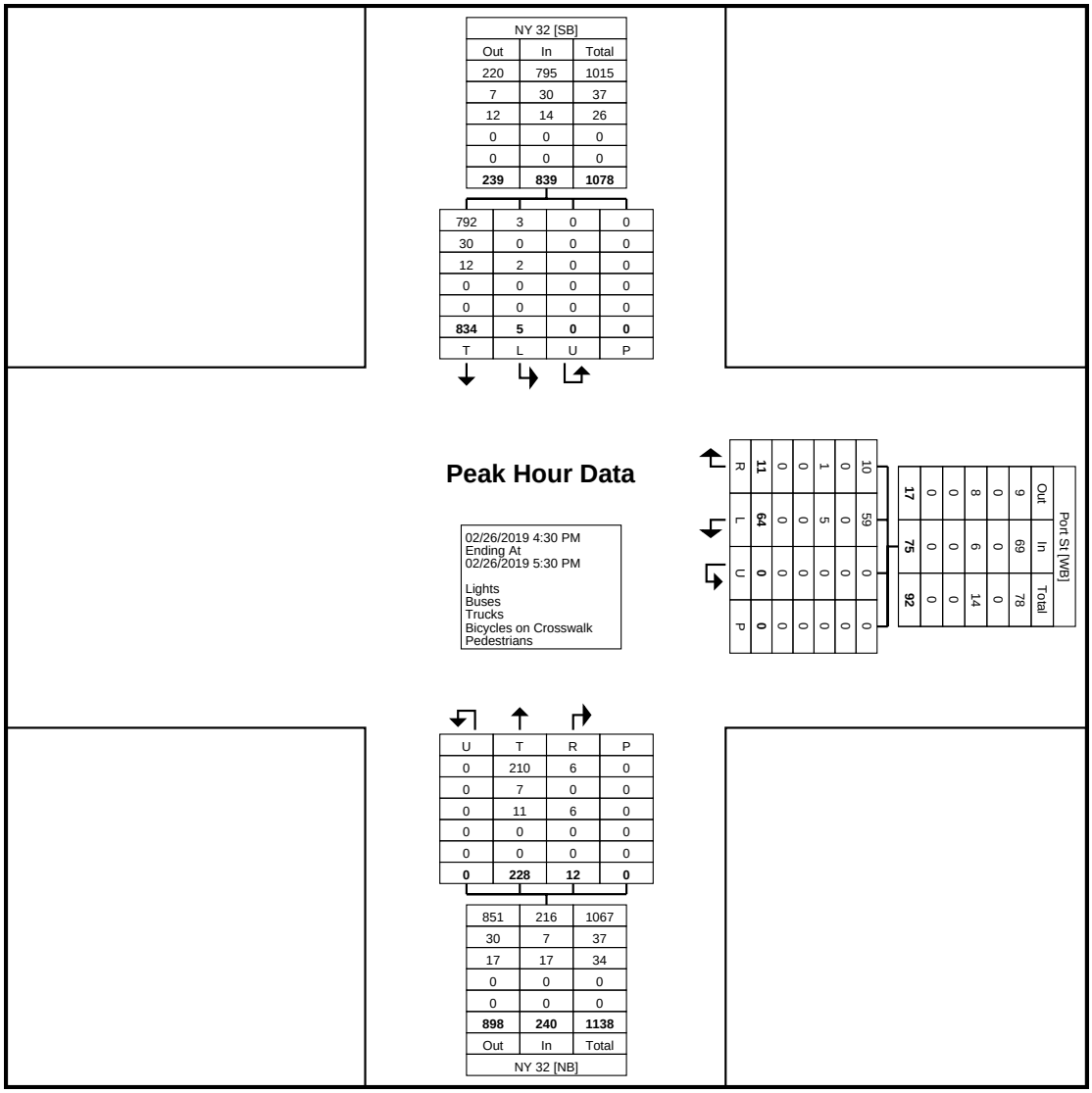
Port of Albany, NY
NY 32/Port Street
Tuesday, February 26, 2019
Location: 42.62119, -73.767051

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)

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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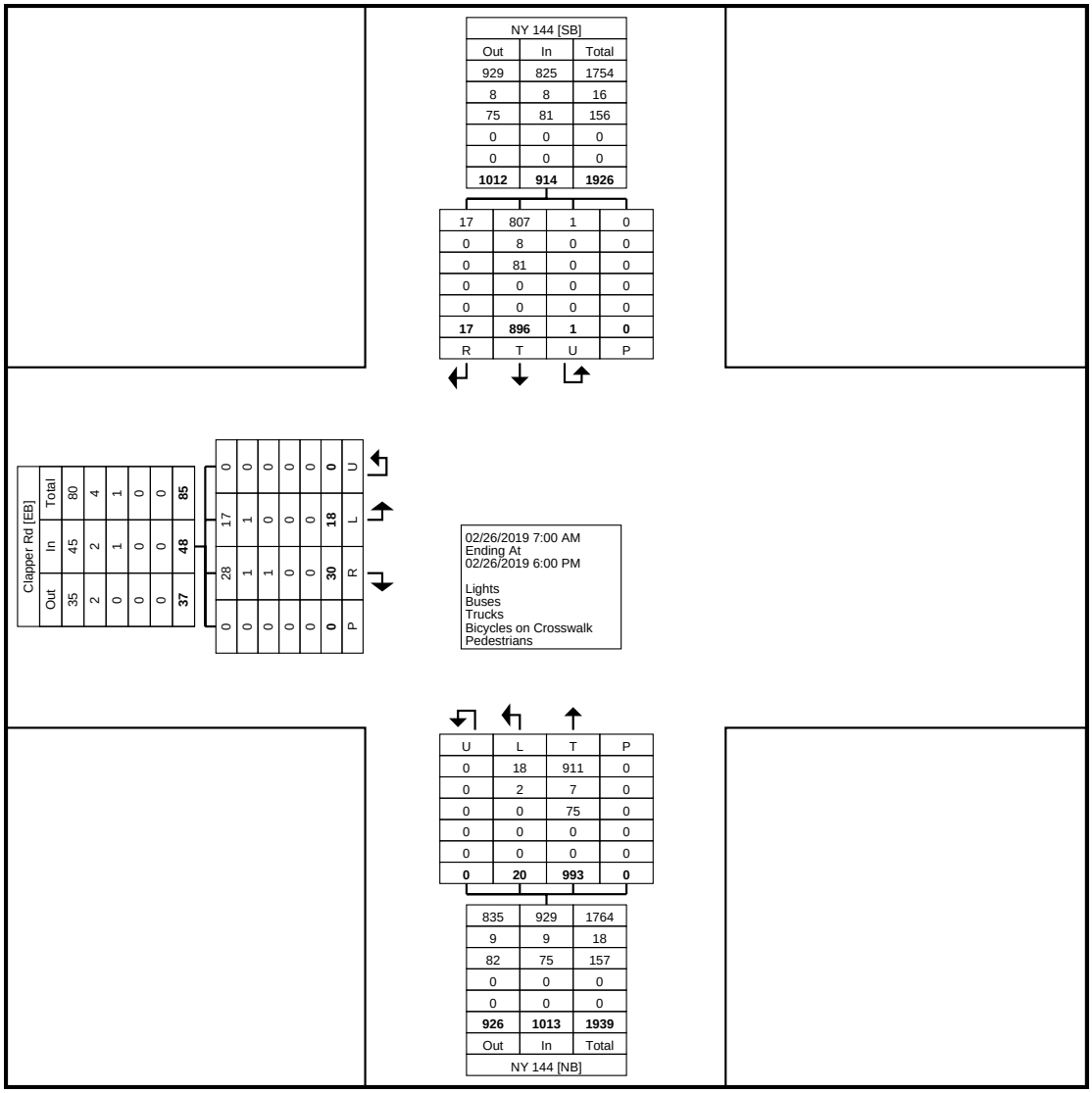
Port of Albany, NY
NY 144/Clapper Road
Tuesday, February 26,2019
Location: 42.552503, -73.769465

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



Turning Movement Data Plot

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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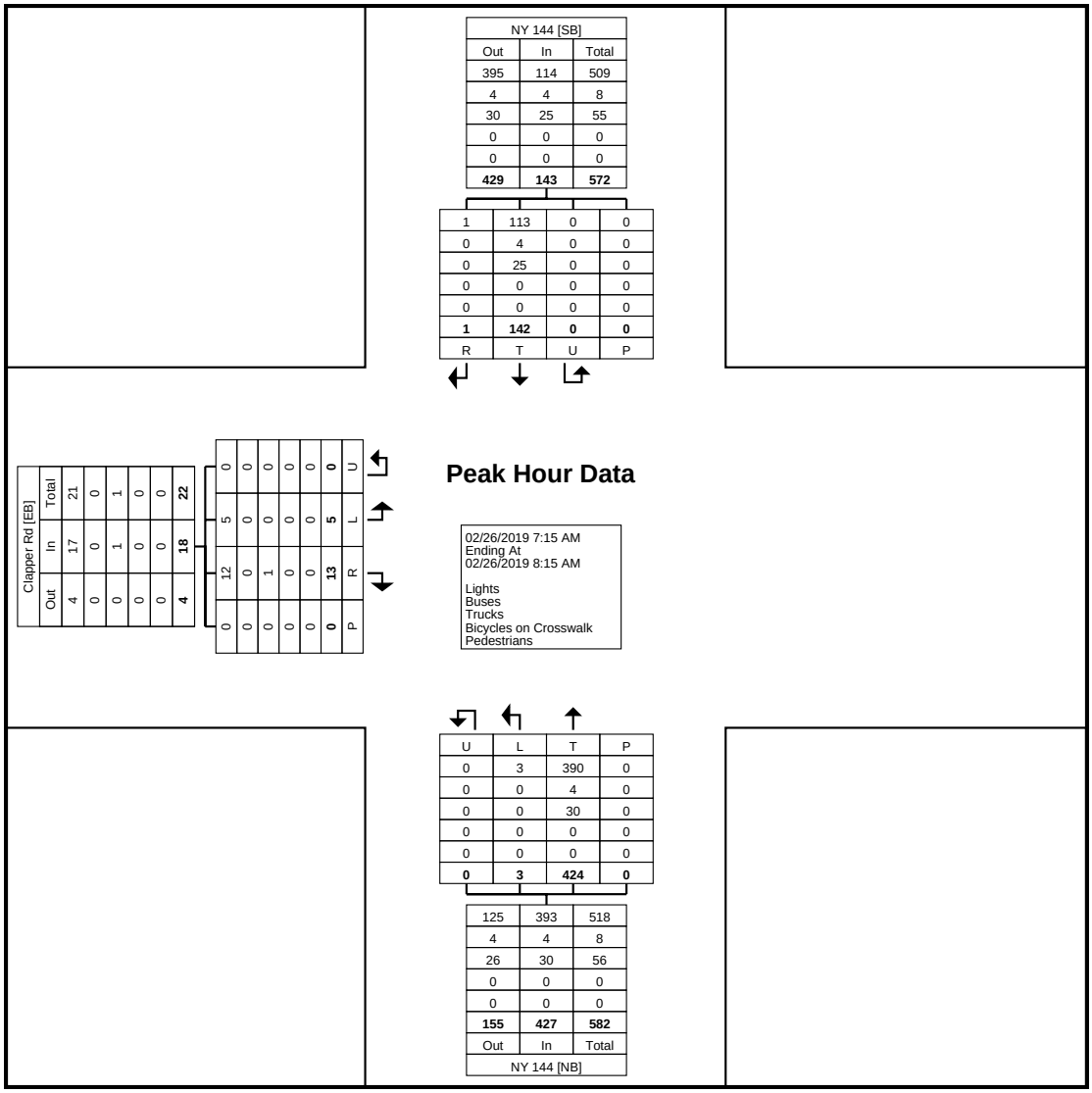

Turning Movement Peak Hour Data Plot (7:15 AM)

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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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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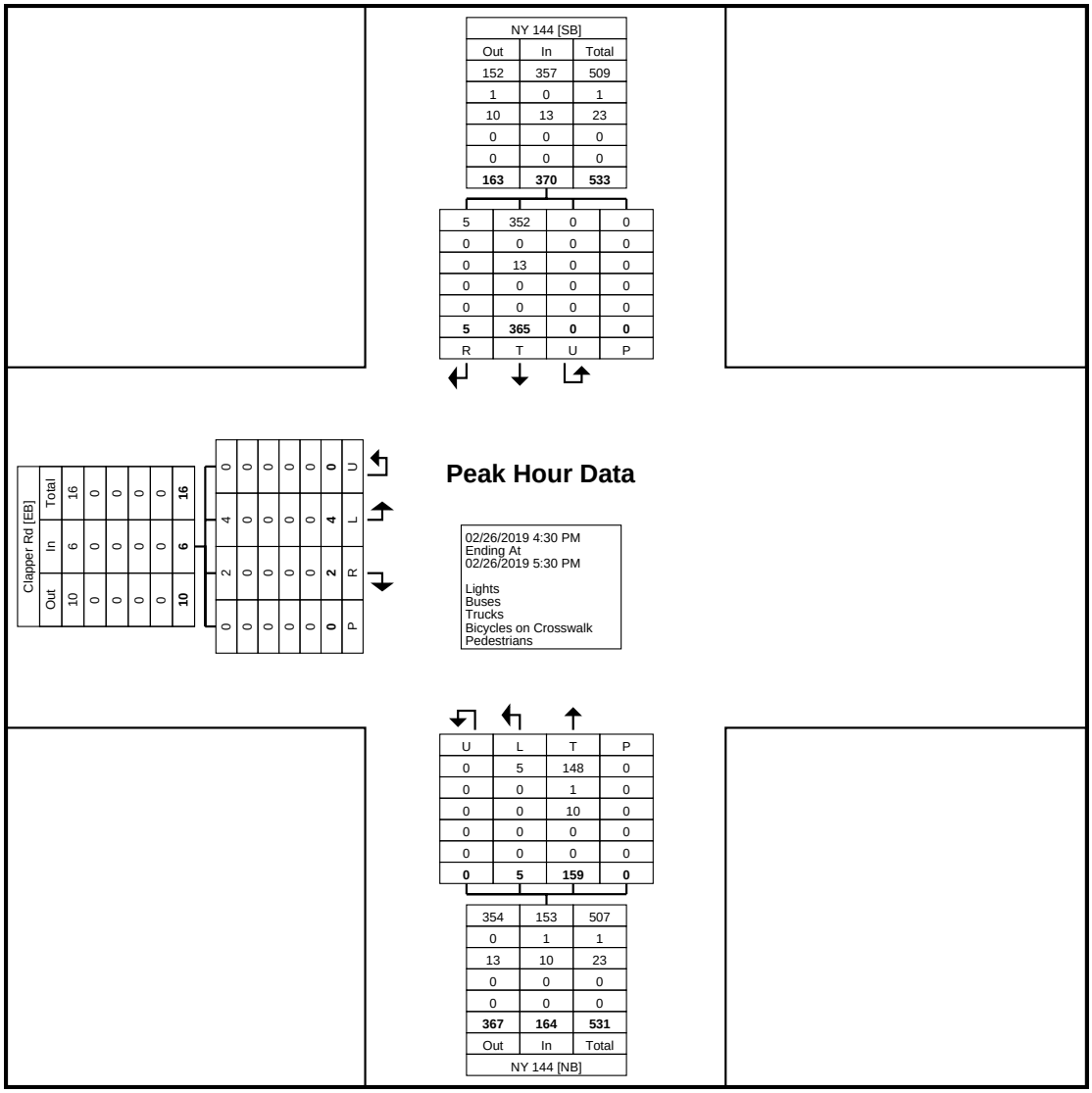

Turning Movement Peak Hour Data Plot (4:30 PM)

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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	-	-

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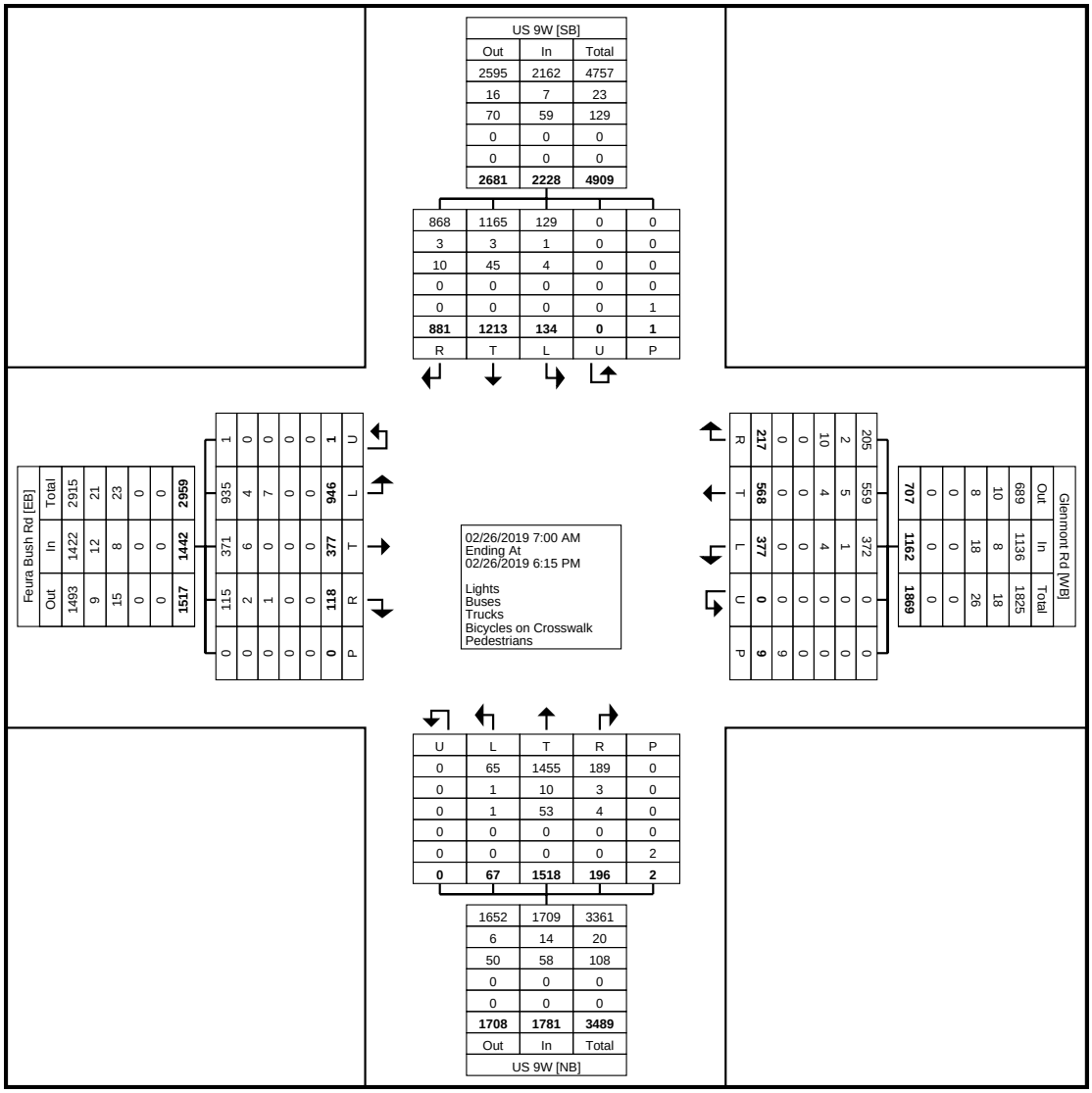
Port of Albany, NY
US 9W/Glenmont Road
Tuesday, February 26, 2019
Location: 42.601883, -73.791855

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



Turning Movement Data Plot

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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	-	-	-	-	-	-	-	-	-

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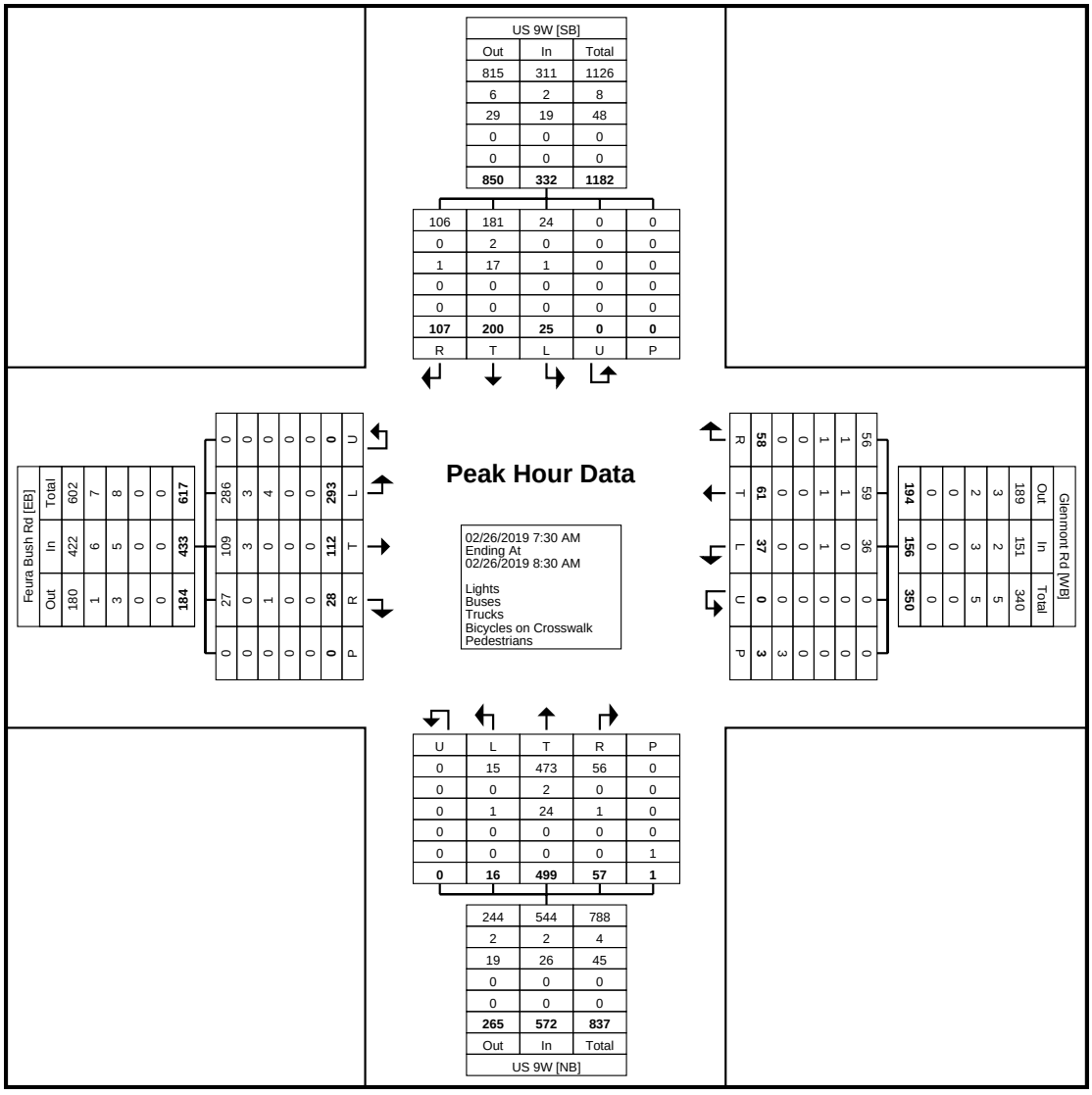


Turning Movement Peak Hour Data Plot (7:30 AM)

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

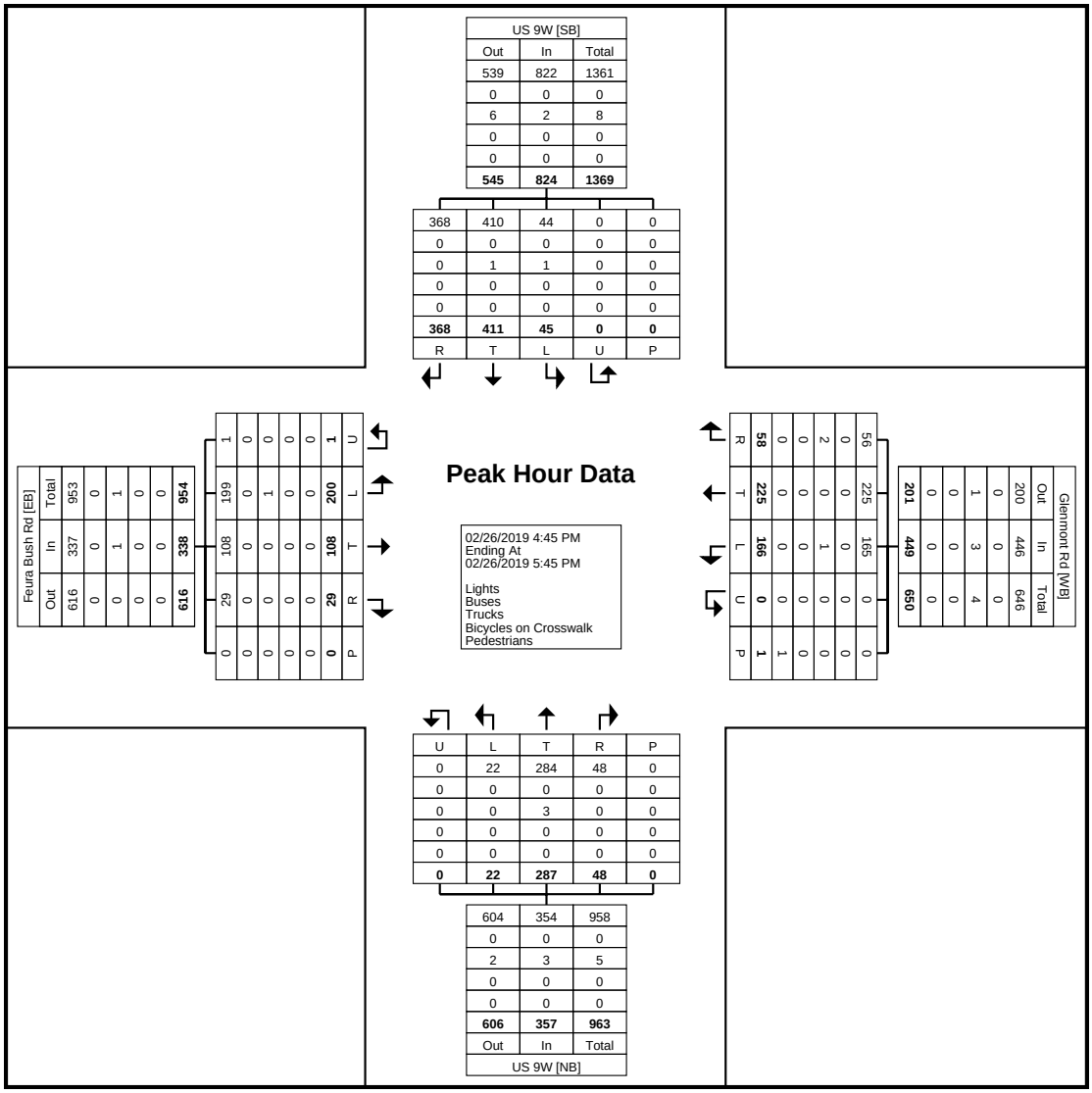
Count Name: US 9W/Glenmont Rd
Site Code: Albany, New York
Start Date: 02/26/2019

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

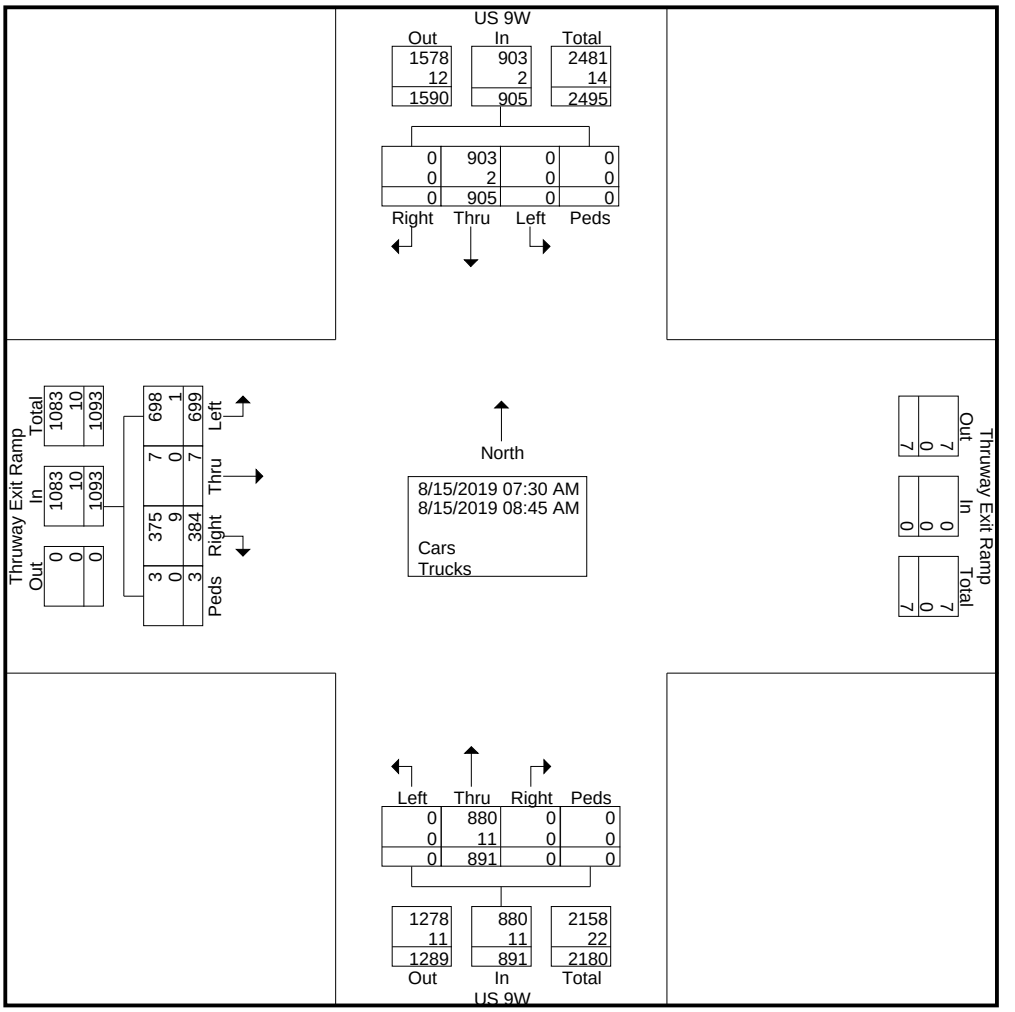
	US 9W From North					US 9W From South					Thruway Exit Ramp From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:30 AM	0	150	0	0	150	0	179	0	0	179	67	0	112	3	182	511
07:45 AM	0	155	0	0	155	0	162	0	0	162	76	0	153	0	229	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

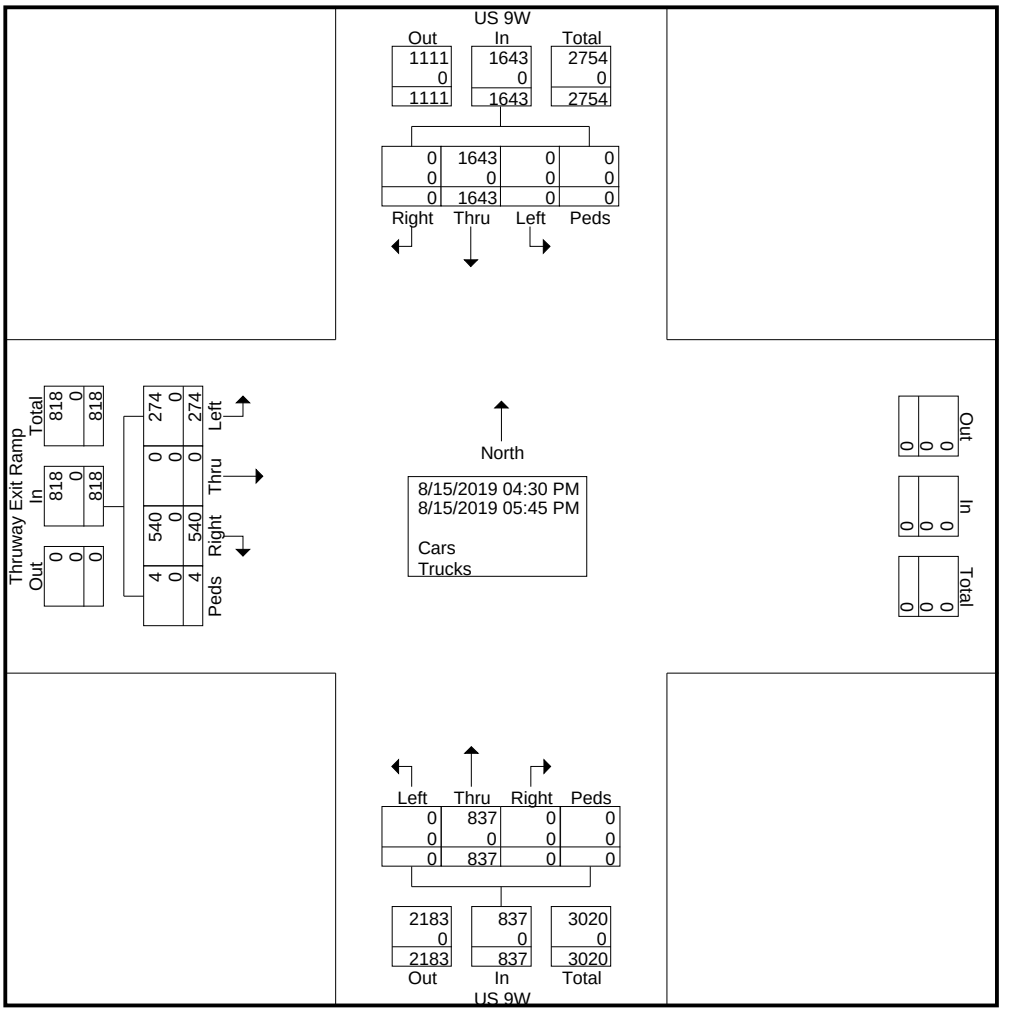
	US 9W From North					US 9W From South					Thruway Exit Ramp From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	0	277	0	0	277	0	173	0	0	173	80	0	42	4	126	576
04:45 PM	0	290	0	0	290	0	166	0	0	166	82	0	46	0	128	584
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

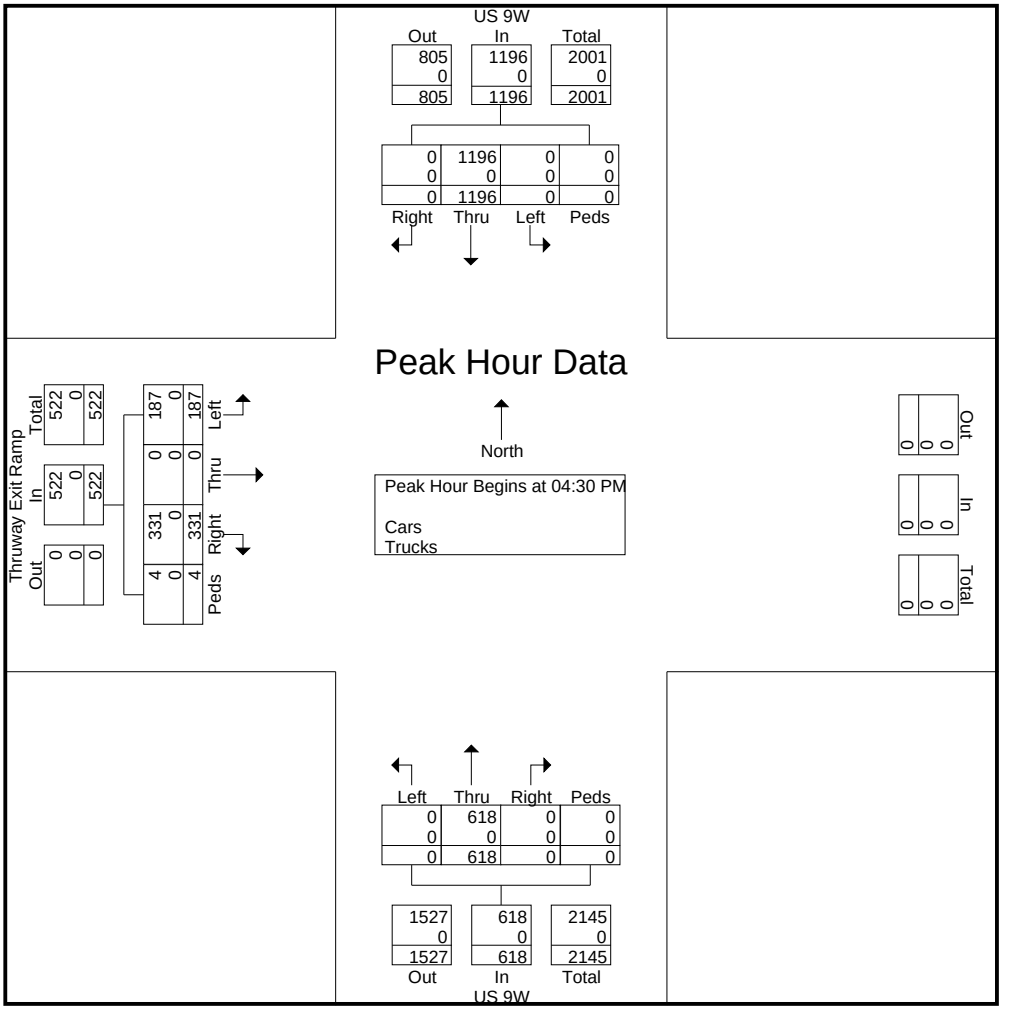


McFarland Johnson Inc.

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.

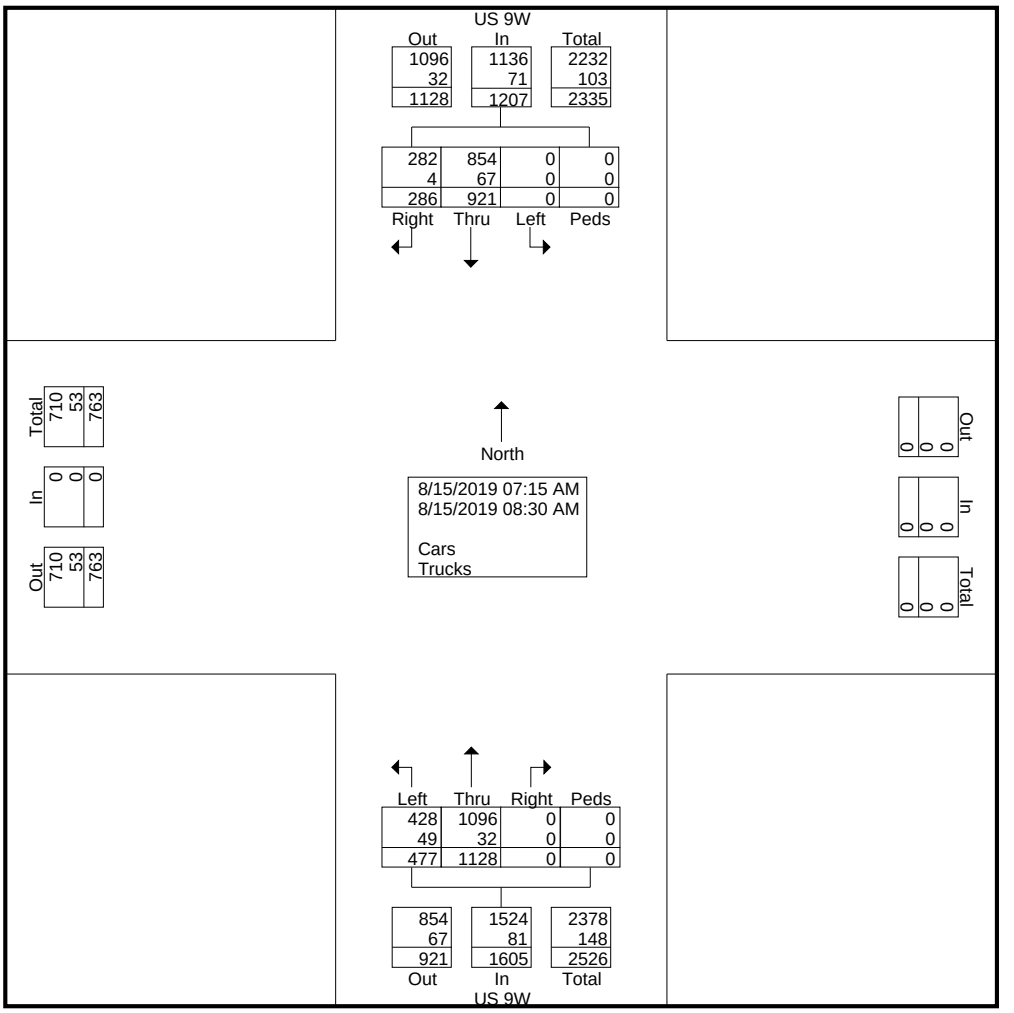
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

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

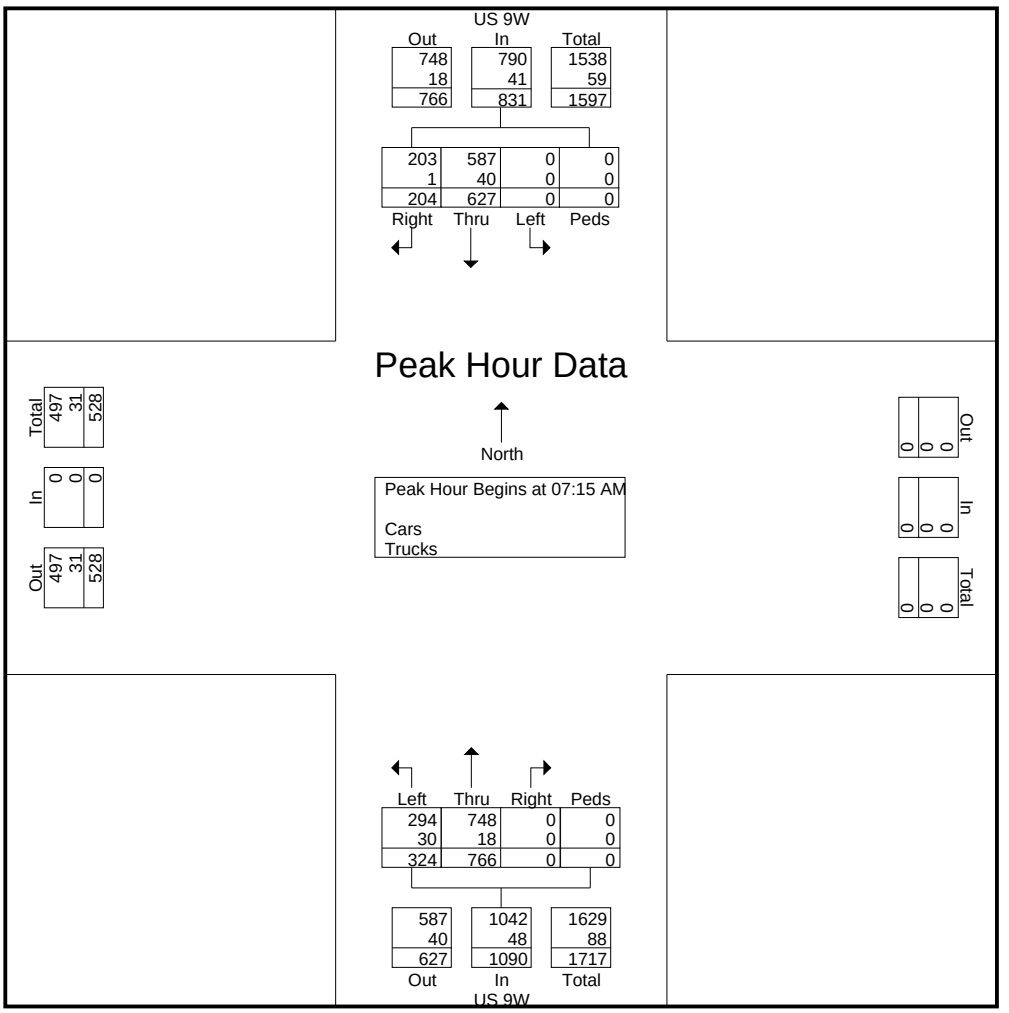


McFarland Johnson Inc.

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.

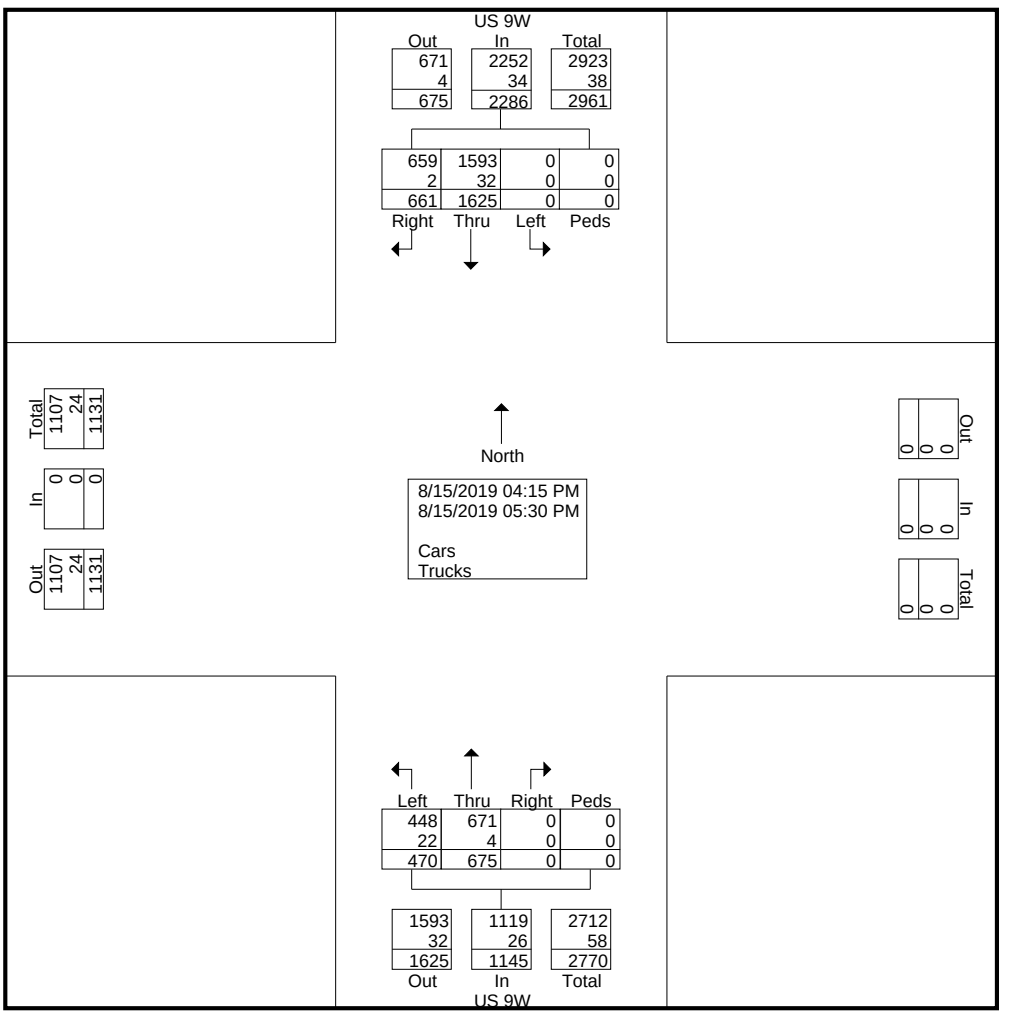
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

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

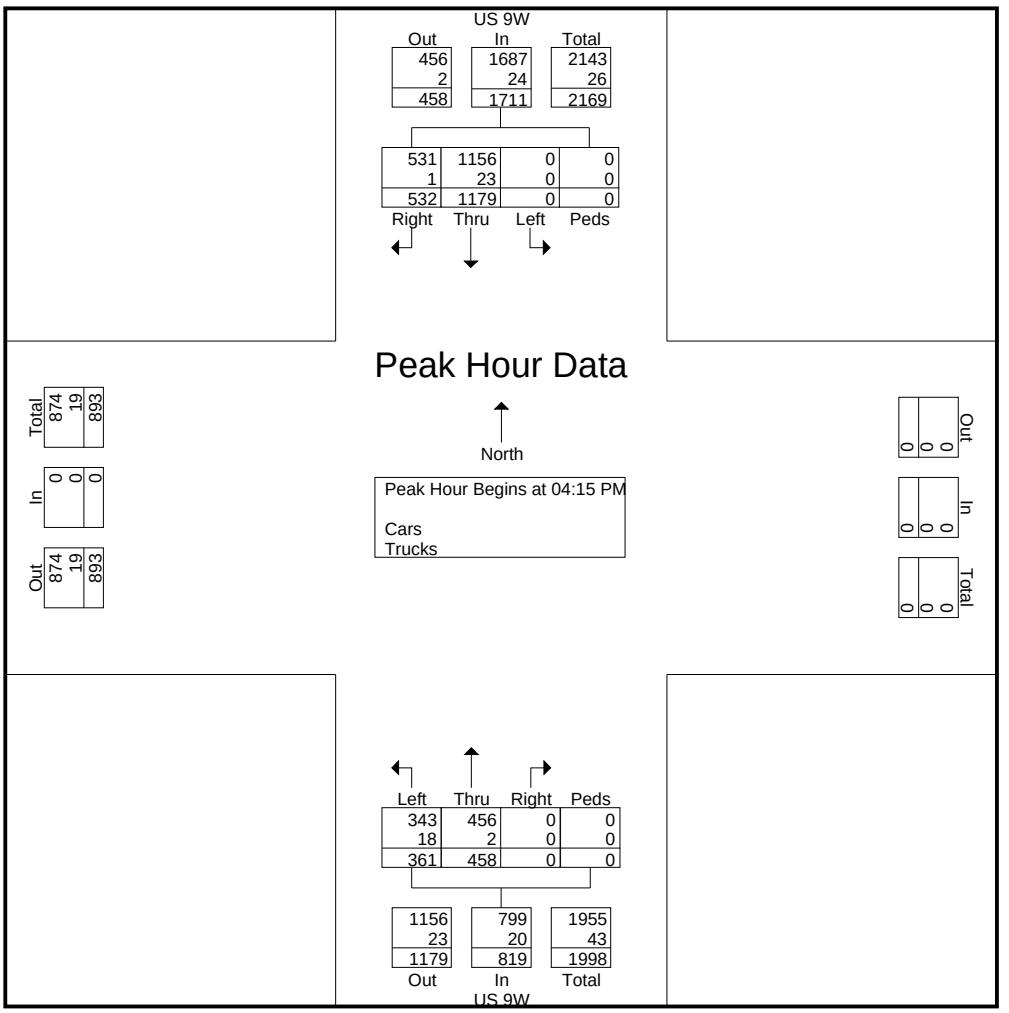


McFarland Johnson Inc.

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

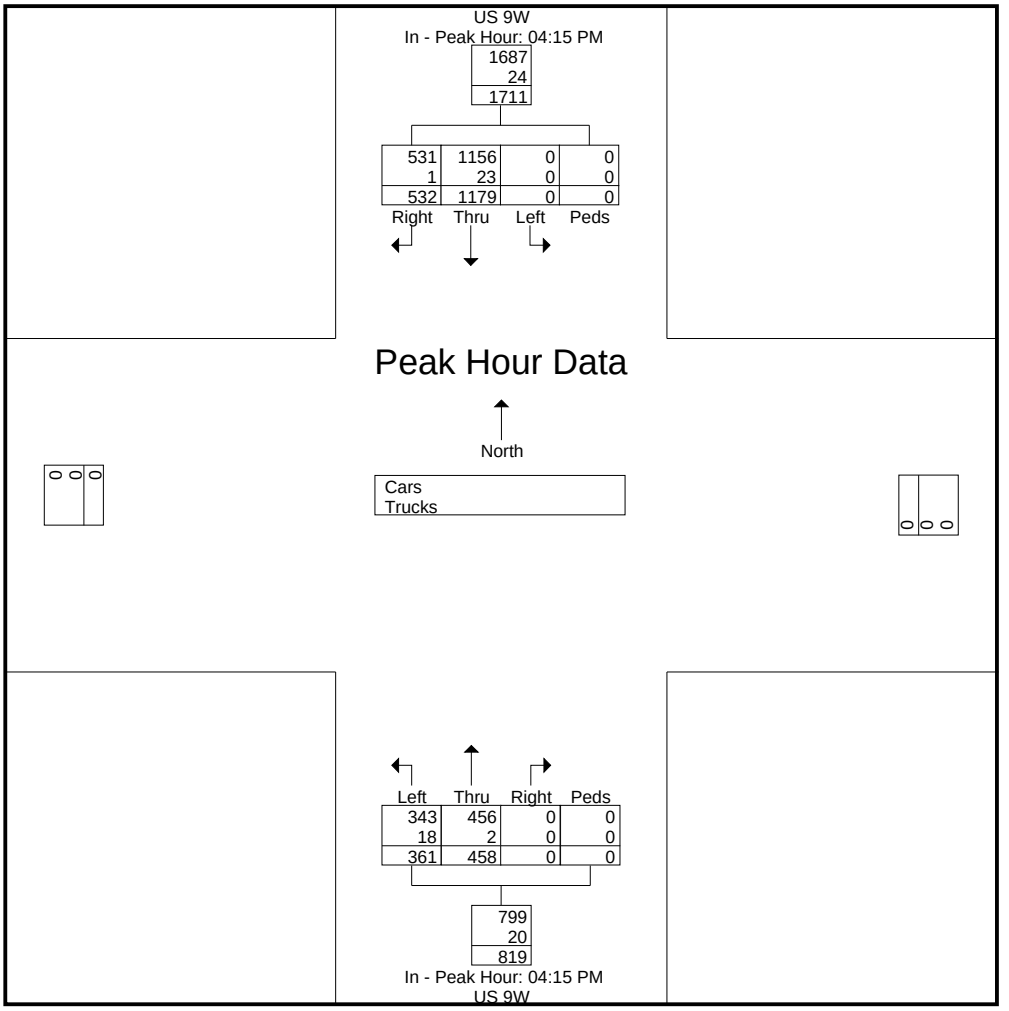


McFarland Johnson Inc.

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.

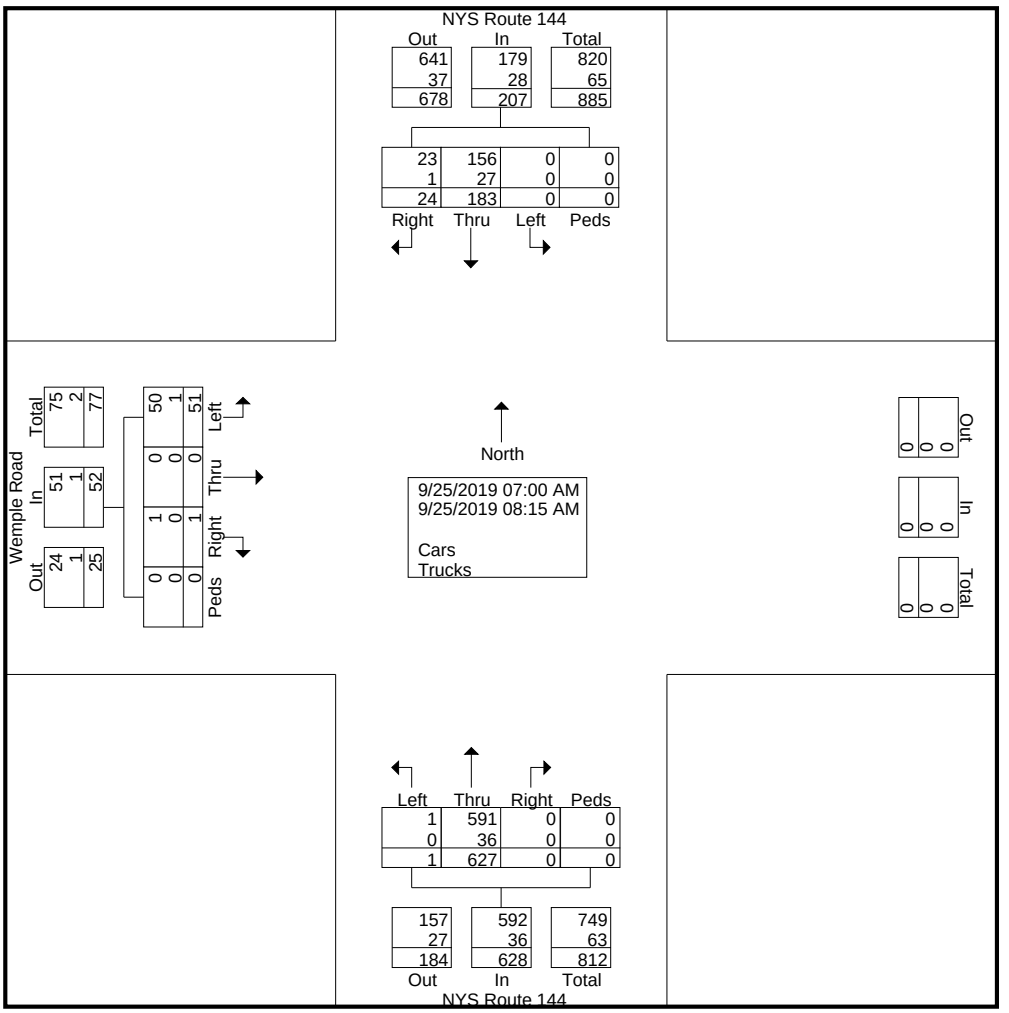
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

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

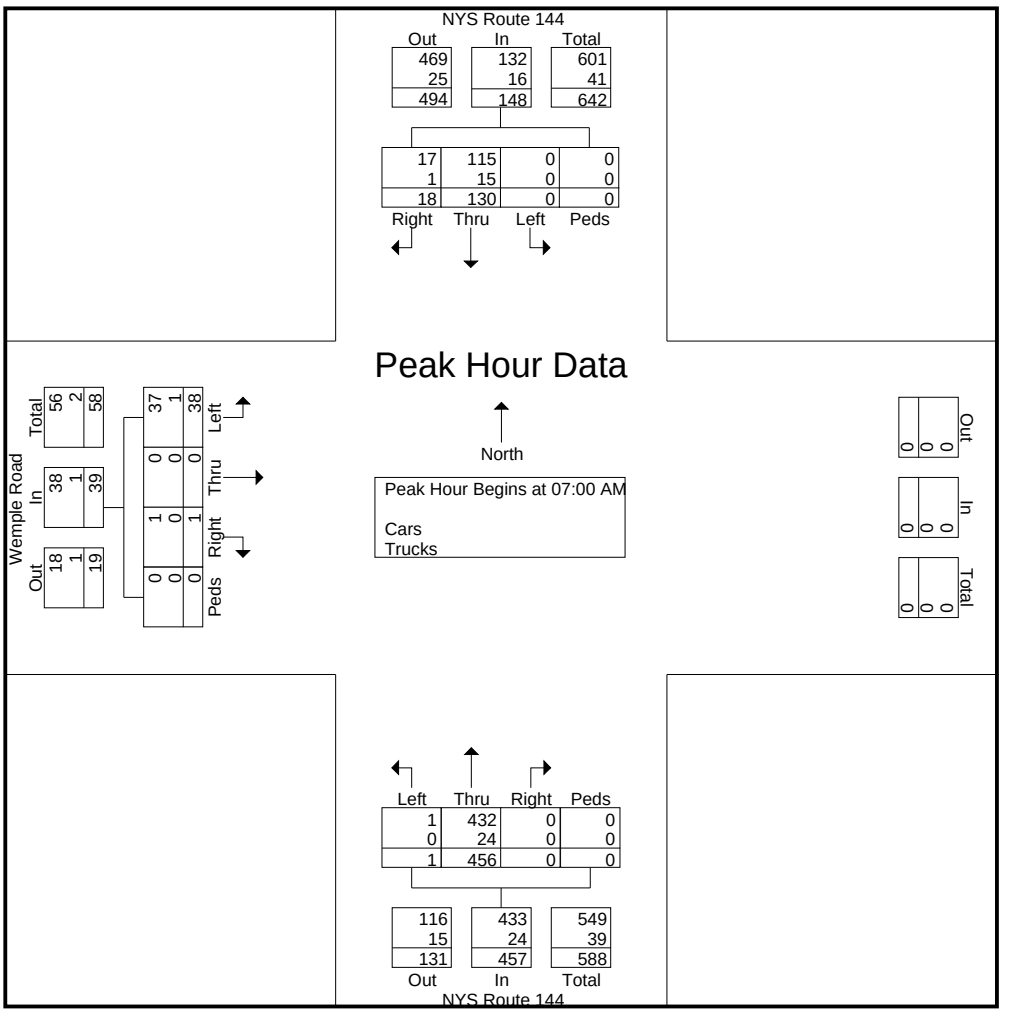


McFarland Johnson Inc.

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.

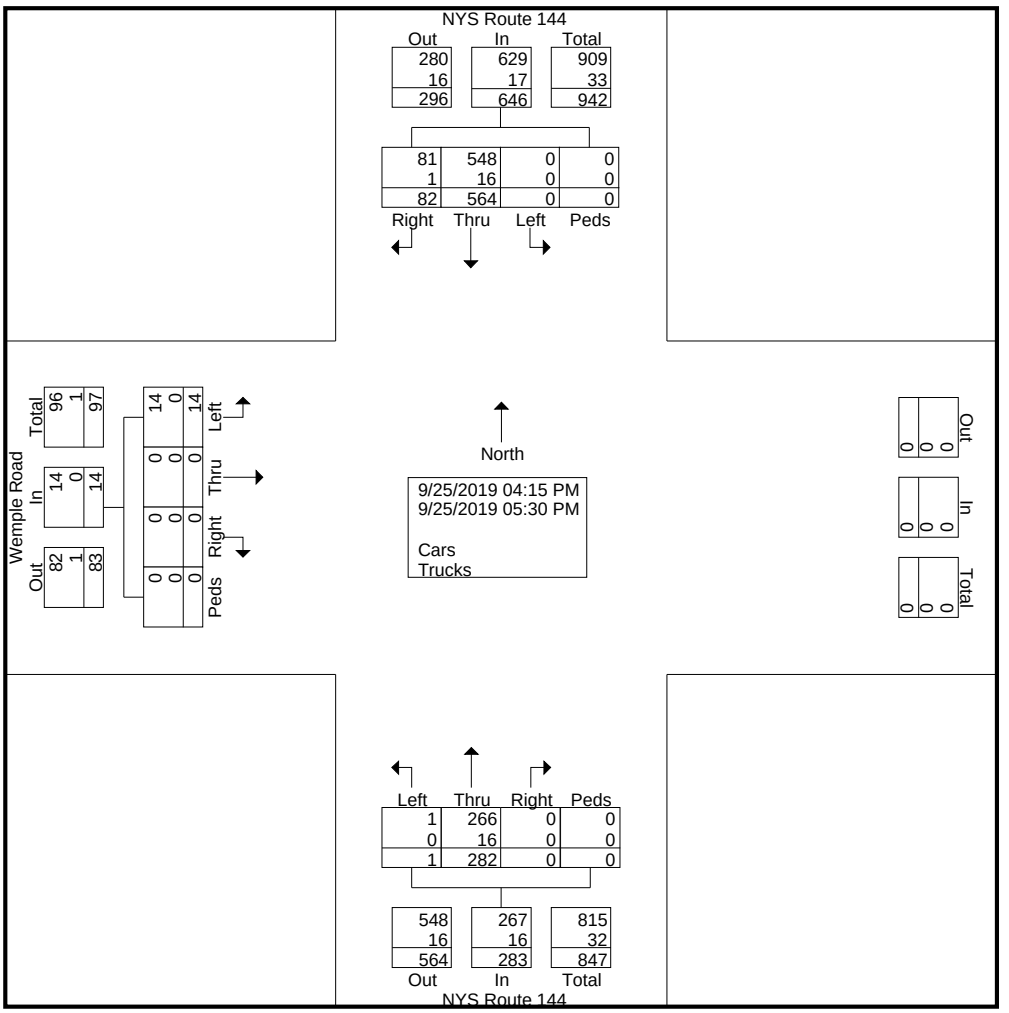
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

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

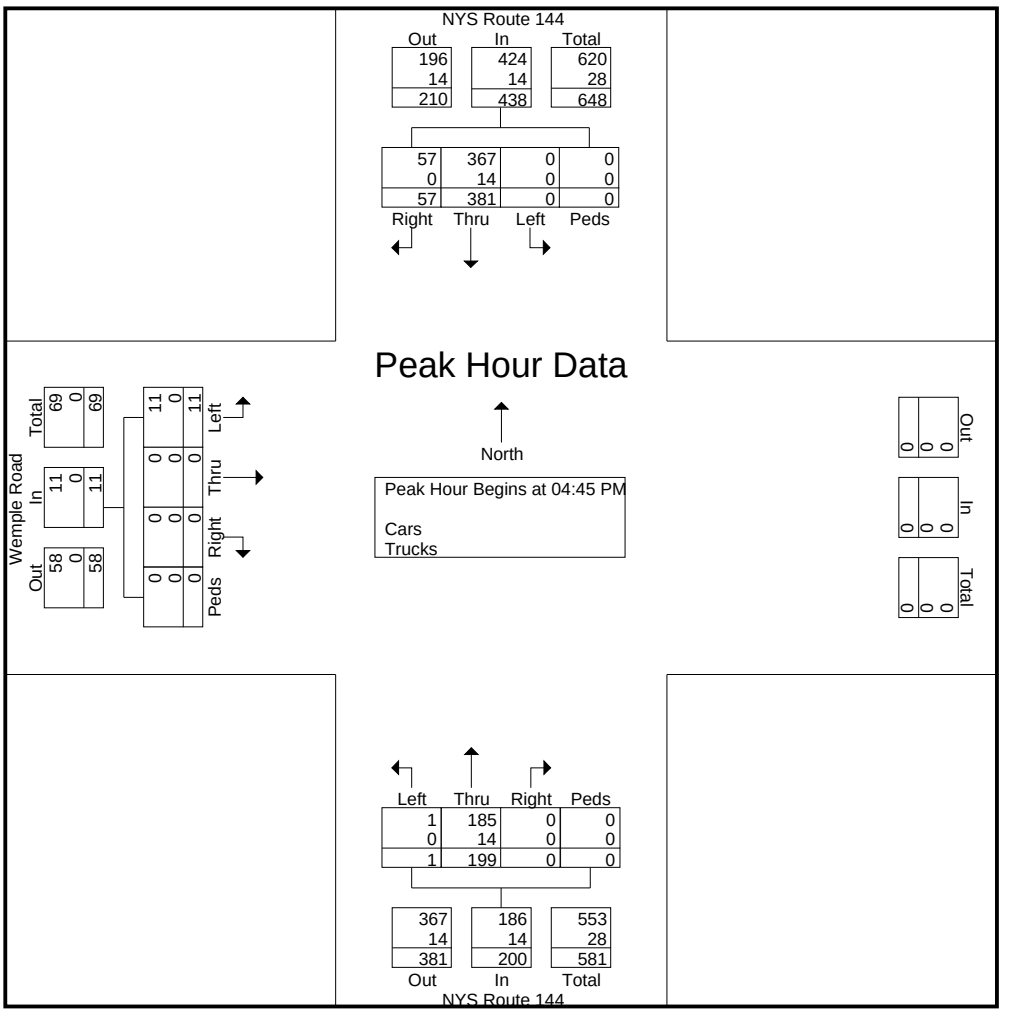


McFarland Johnson Inc.

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.

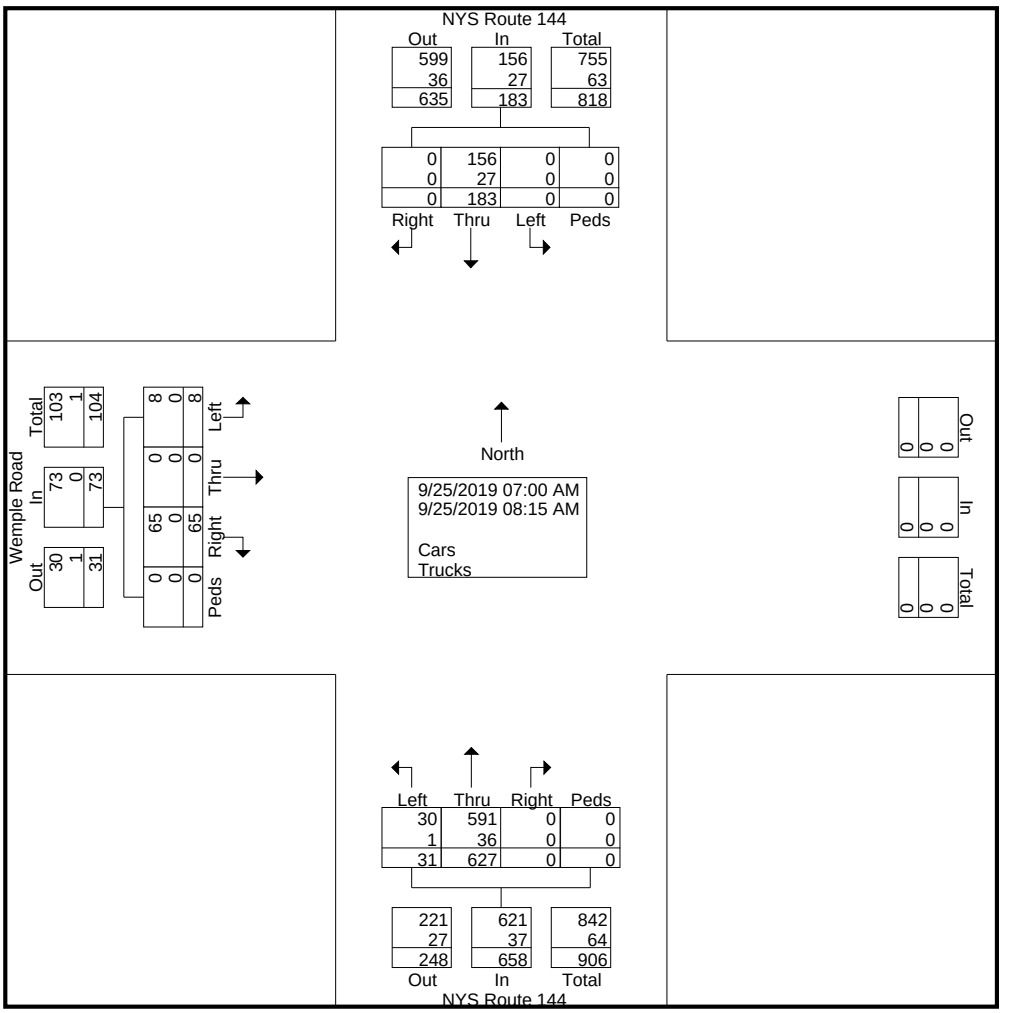
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

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

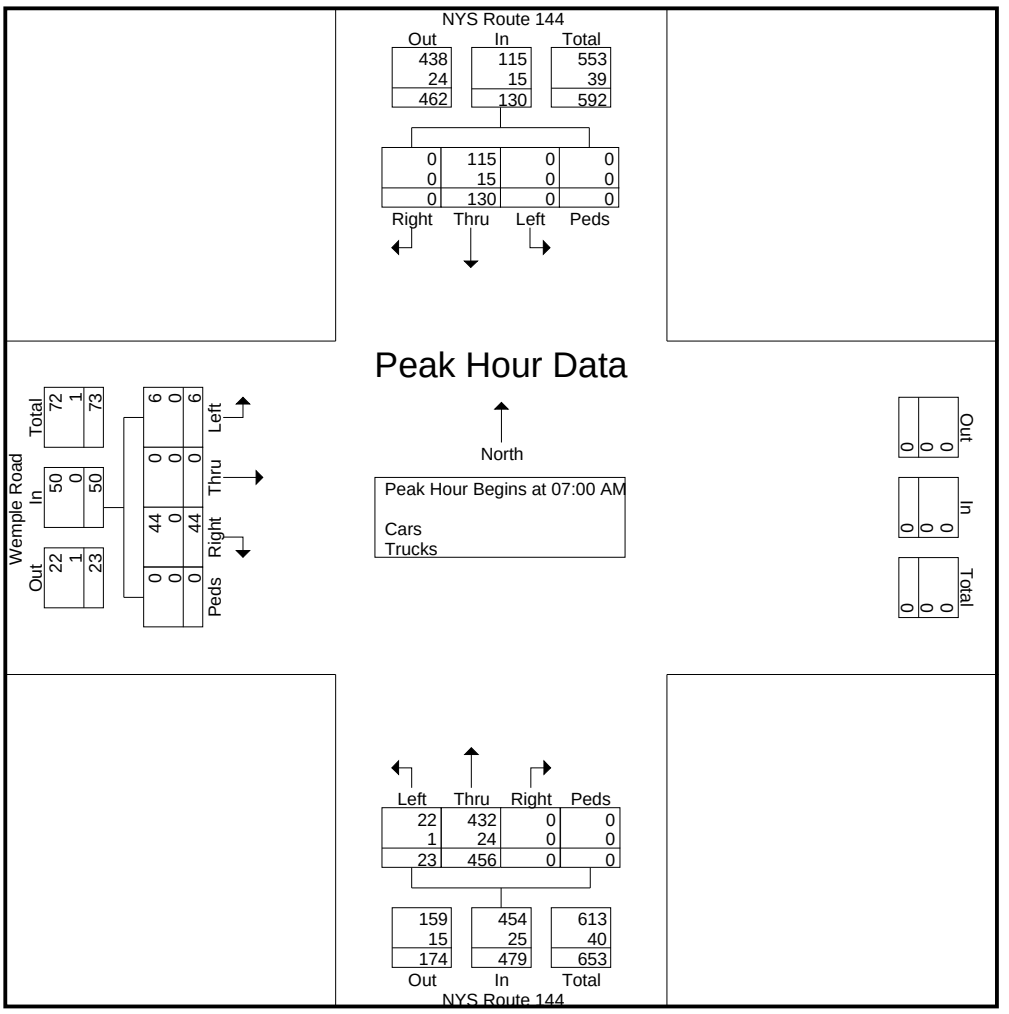


McFarland Johnson Inc.

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.

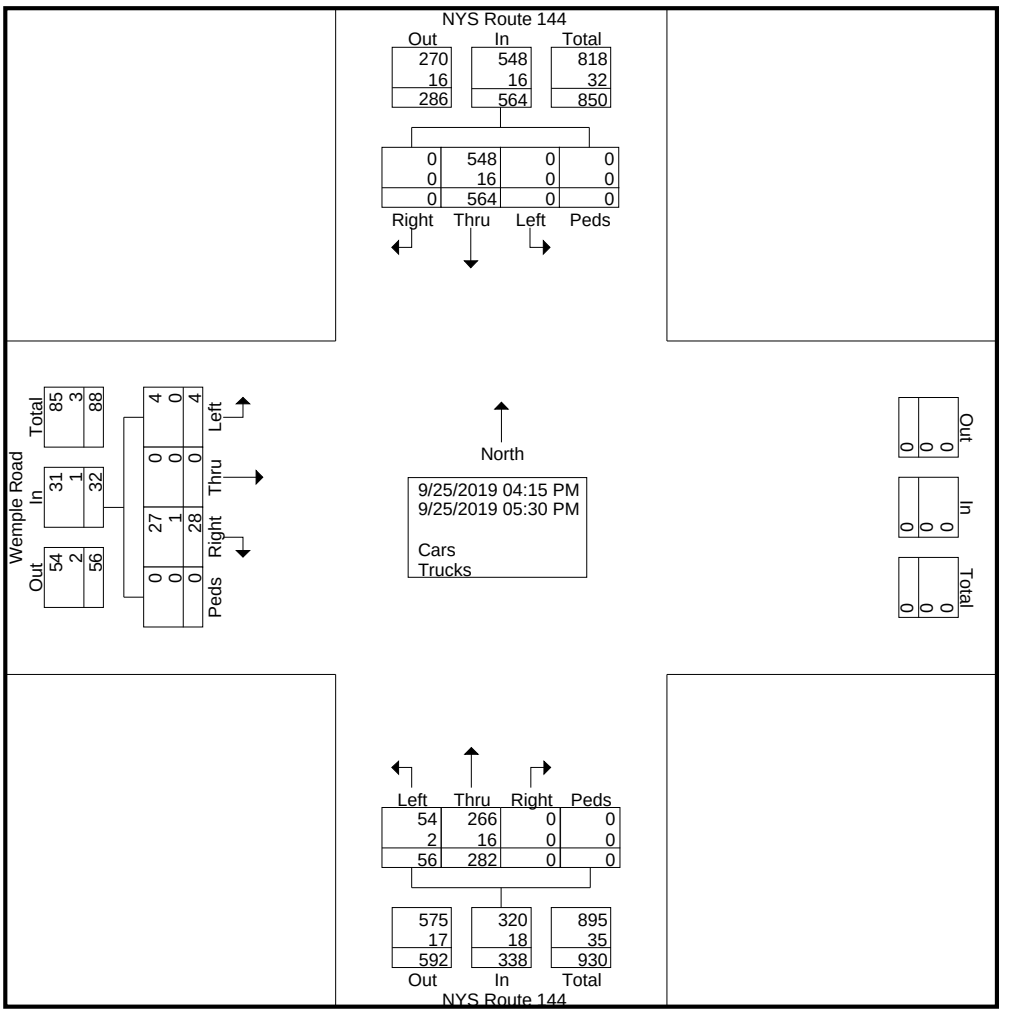
2525 NYS Route 332
Canandaigua, NY 14424
Traffic Count Data

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

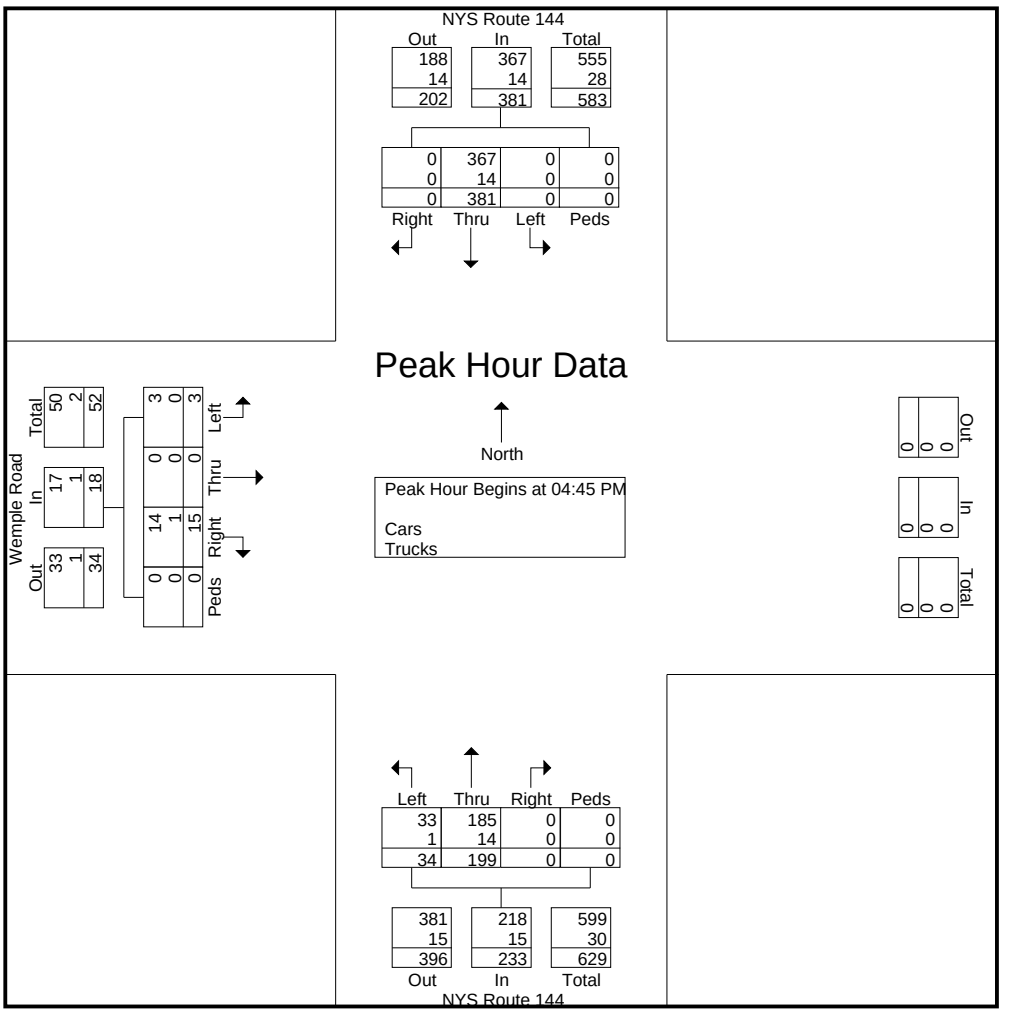


McFarland Johnson Inc.

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
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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																											
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11	T																											
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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

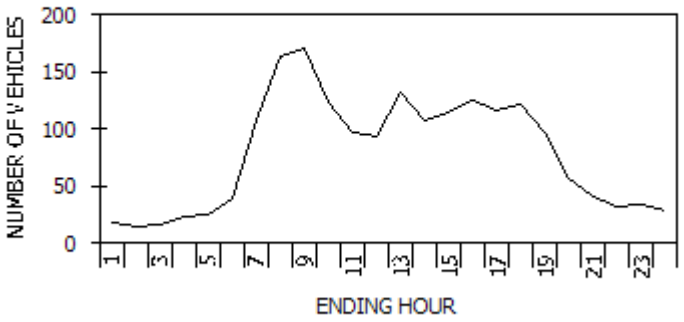
New York State Department of Transportation
Classification Count Average Weekday Data Report

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

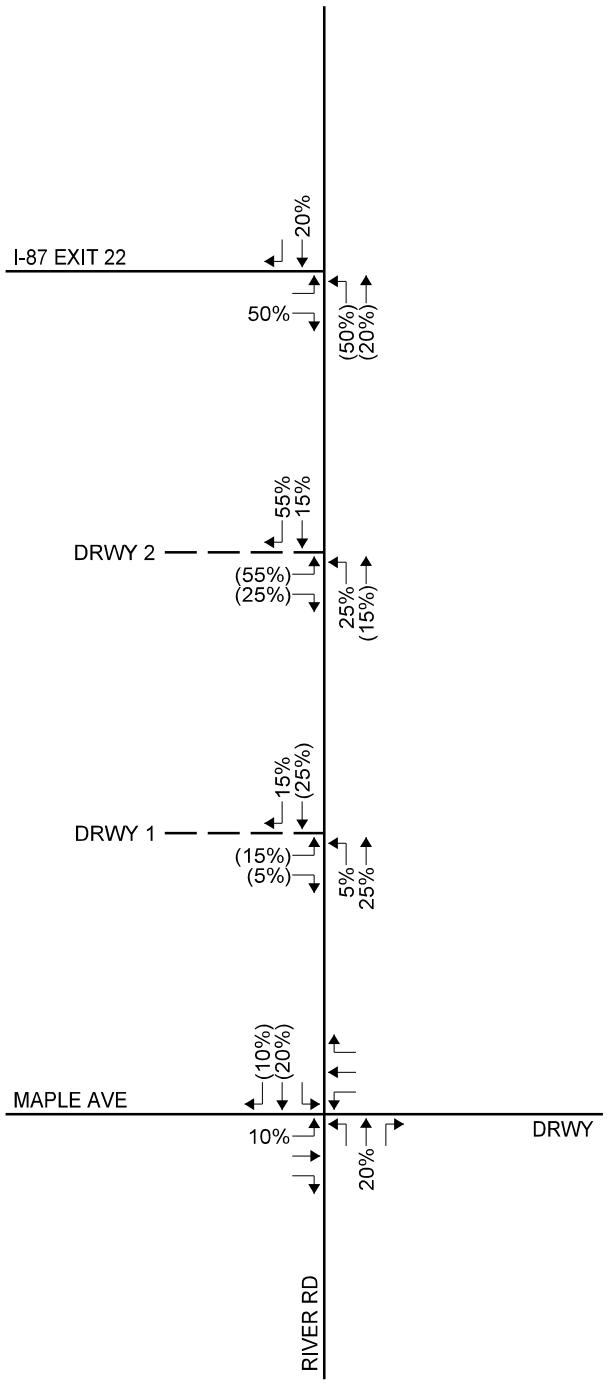
Table 2 shows that the site will generate 110 new vehicle trips during the AM peak hour (97 entering and 13 exiting) and 84 new vehicle trips during the PM peak hour (10 entering and 74 exiting). It is noted that the new trips generated by the site are less than the NYSDOT and ITE threshold of 100 site 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.

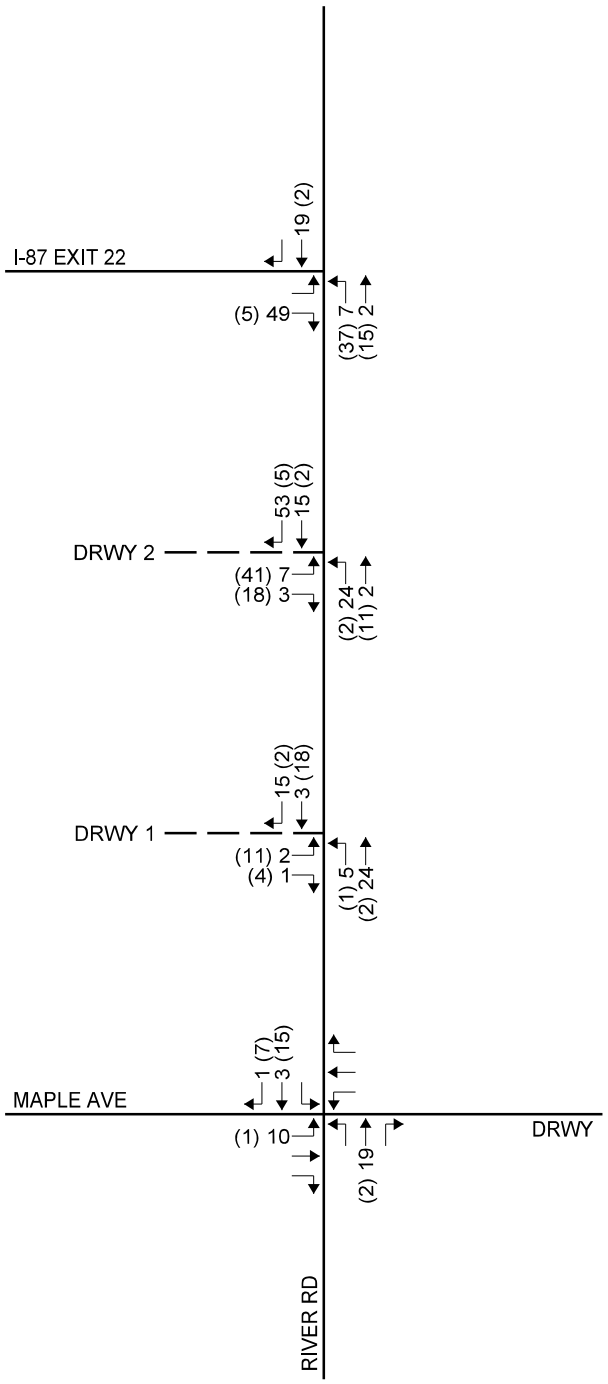
Trips associated with the proposed project were distributed at the study area intersections based on existing and anticipated travel patterns. It is expected that 20% of the site generated traffic will travel to and from the north, 50% will travel to and from the site via I-87 Exit 22, 20% will travel 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)

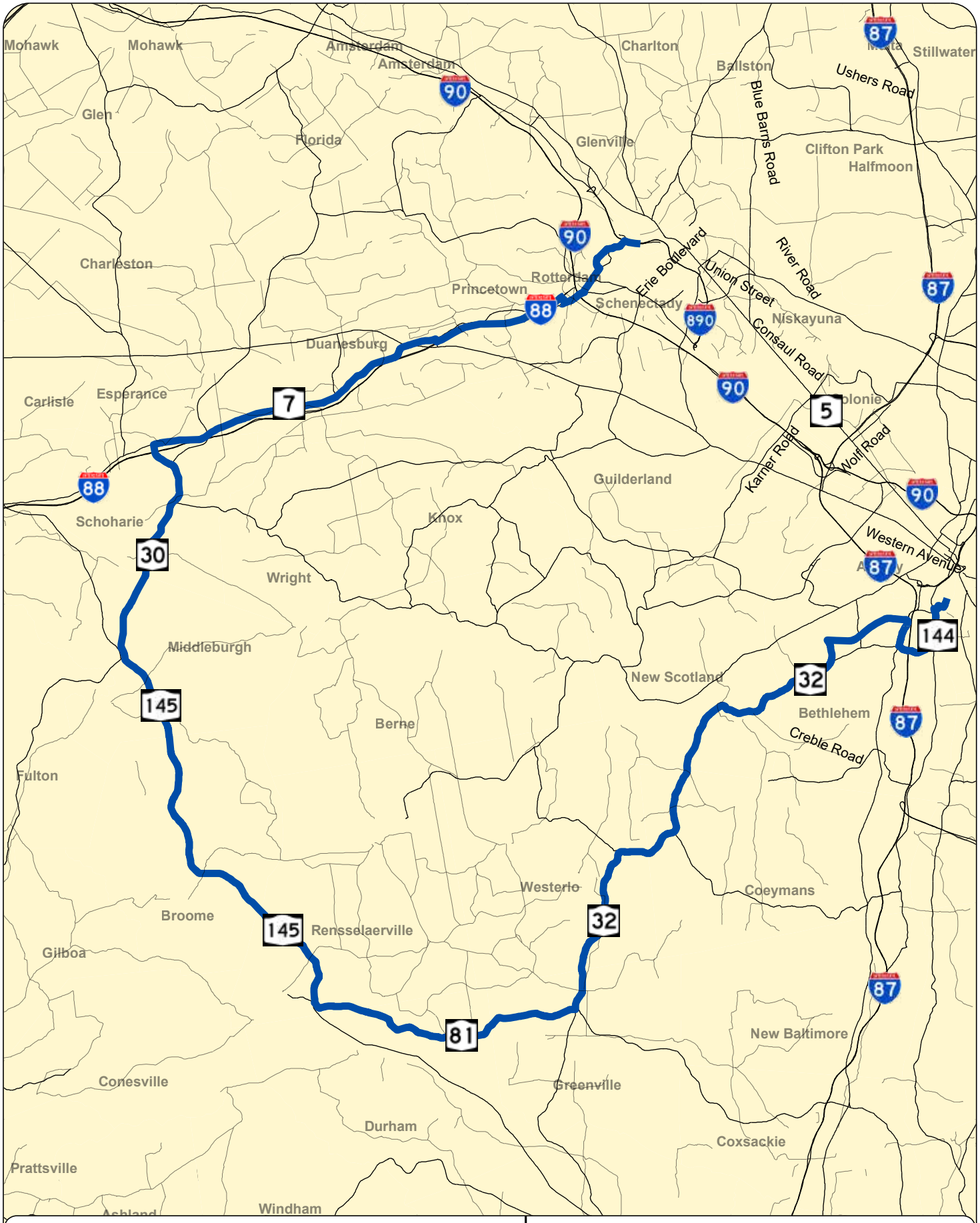
TRIP DISTRIBUTION / ASSIGNMENT

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	Full Build 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	Full Build 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

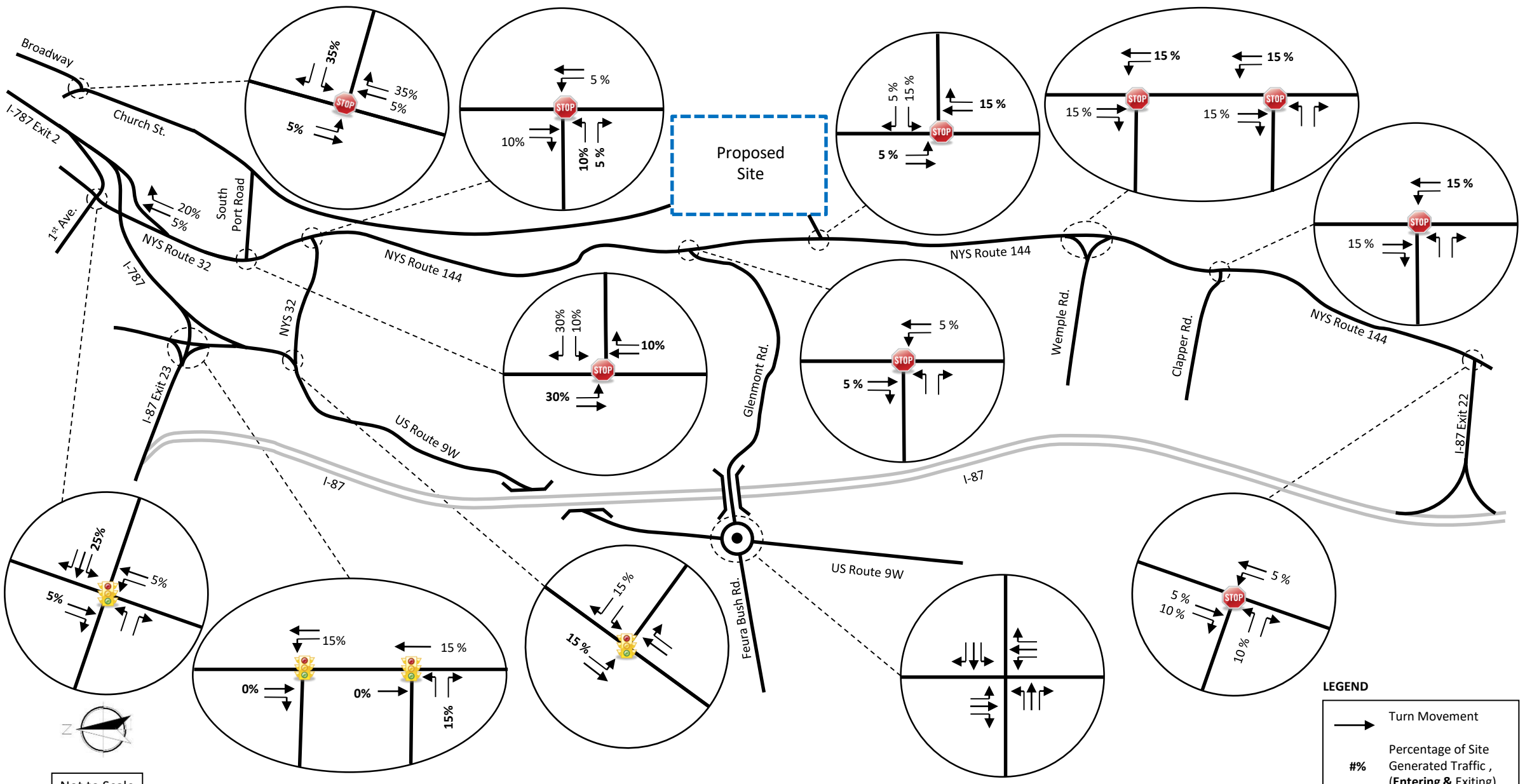
Study Intersection	Approach and Movement		MORNING PEAK HOUR						EVENING PEAK HOUR					
			2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION		2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION	
			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

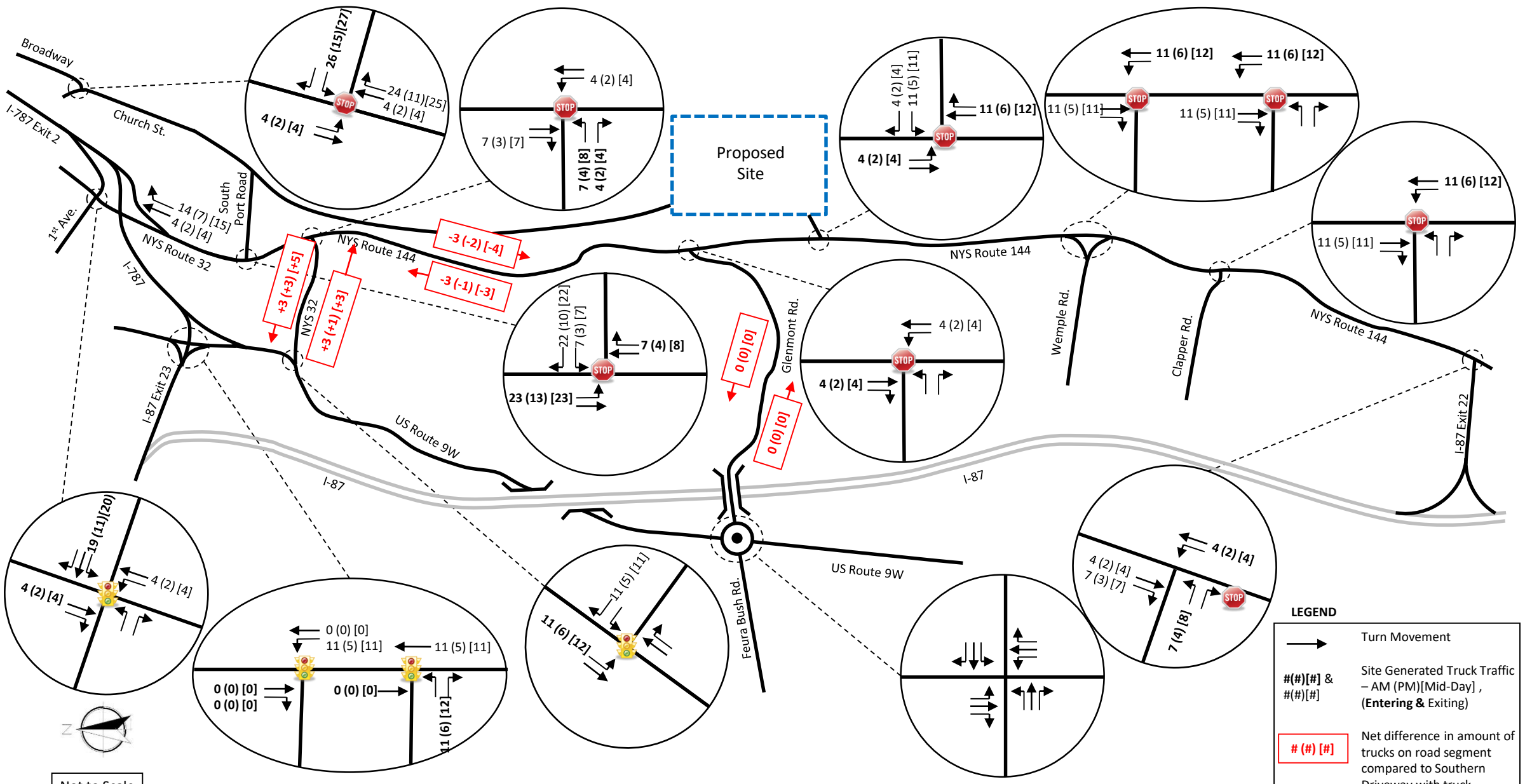
Study Intersection	Approach and Movement		MORNING PEAK HOUR						EVENING PEAK HOUR					
			2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION		2029 BUILD-PHASE III		2029 BUILD- PHASE III - MITIGATION		2029 BUILD- PHASE III - TRUCK SINGLE DESTINATION	
			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

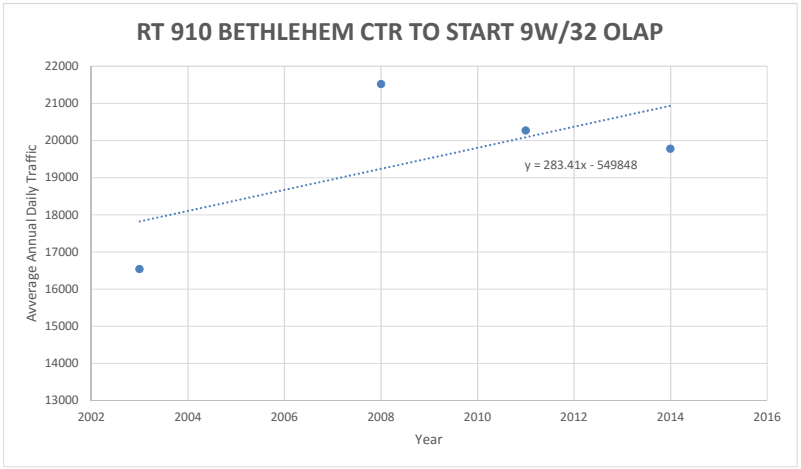
Station	FC	County Order	End Mile Point	Section Length	Road Name	Beginning Description	End Description	2017 Estimate AADT	2017 Estimate % Trucks	<<< Previous Counts YEAR	AADT	YEAR	AADT	YEAR	AADT	YEAR	AADT >>>
14_0490	16	01	0324	0036	NORTHERN DR	END 40/142 OLAP/LEVERSEE RD	OIL MILL HILL RD		4.3								
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

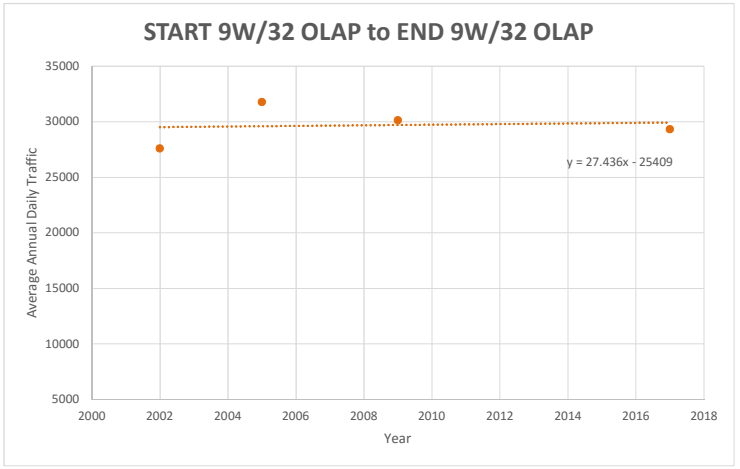
REGRESSION ANALYSIS - US 9W

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

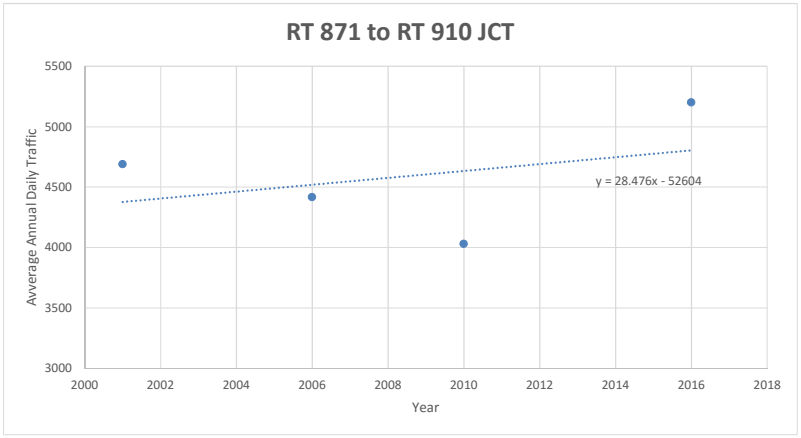


Calculated 2019 AADT = 29,984
NYSDOT 2002 AADT = 27,573
% Growth per Year = 0.49

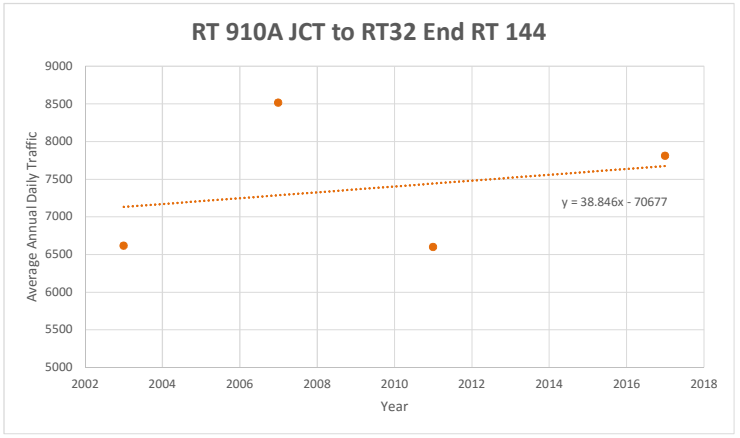
REGRESSION ANALYSIS - NYS 144

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

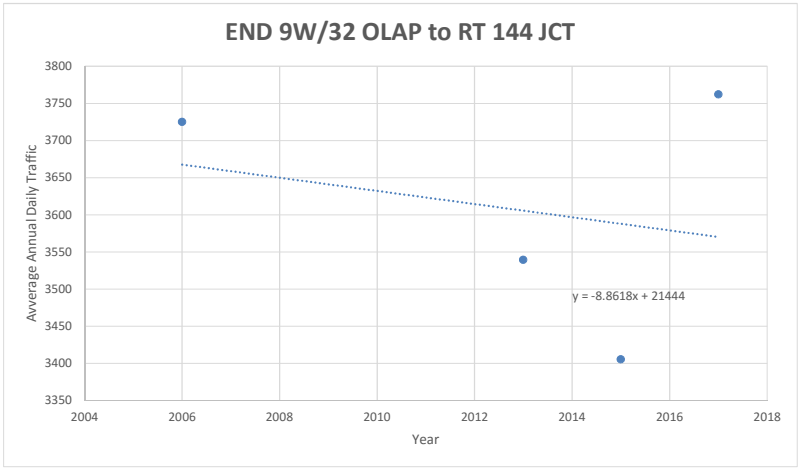


Calculated 2019 AADT = 7,753
NYSDOT 2003 AADT = 6,616
% Growth per Year = 0.99

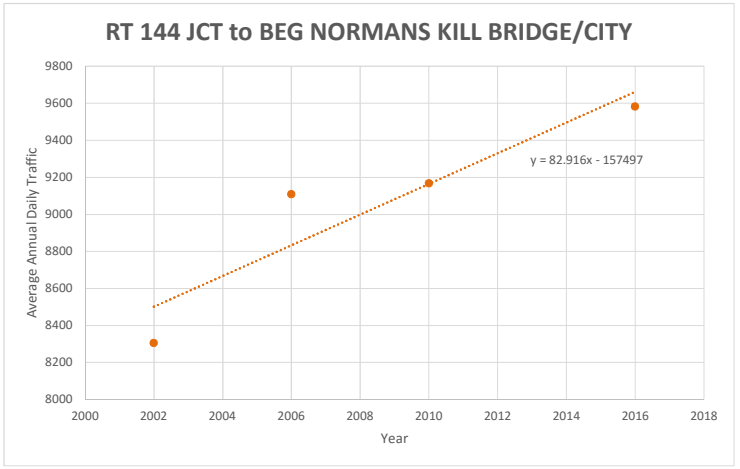
REGRESSION ANALYSIS - NY 32

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

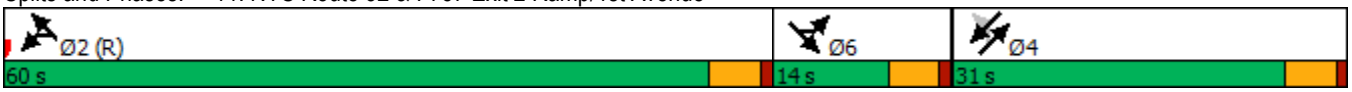
- 2029 Build-Phase III-Truck Sensitivity West
  - AM Peak
  - PM Peak

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



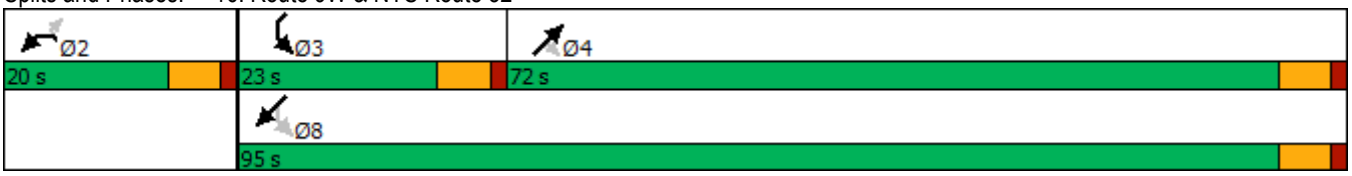
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	89	146	1939	157	96	782
Future Volume (vph)	89	146	1939	157	96	782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

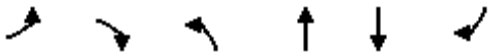
Intersection	
Int Delay, s/veh	0.4

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	-	-

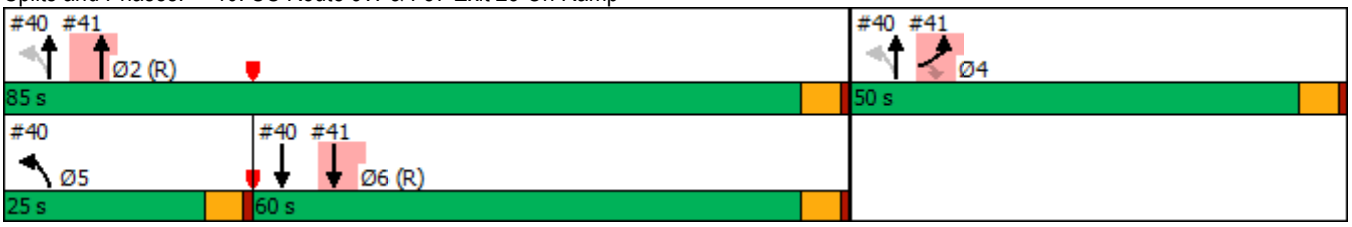


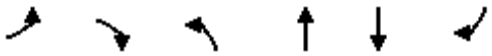
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	324	766	616	204		
Future Volume (vph)	0	0	324	766	616	204		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. 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



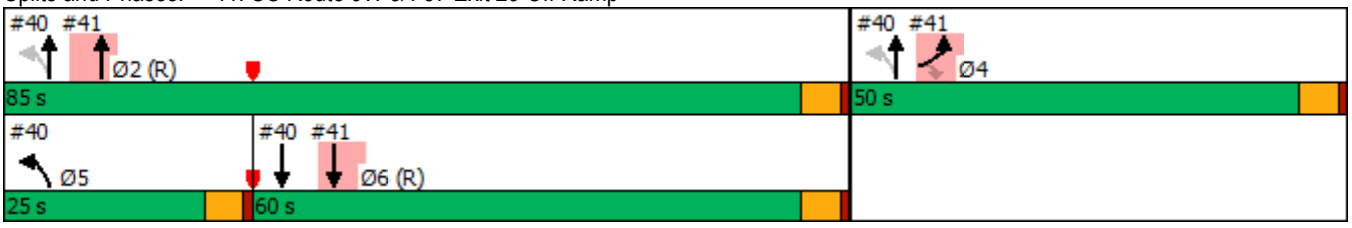


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	476	284	0	614	616	0	
Future Volume (vph)	476	284	0	614	616	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	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.			

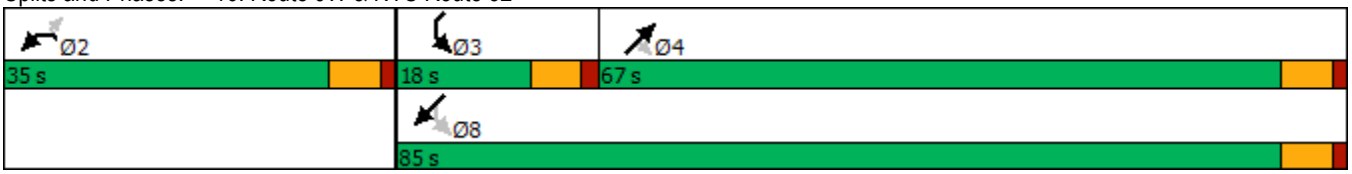
Splits and Phases: 11: NYS Route 32 & I-787 Exit 2 Ramp/1st Avenue

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	-

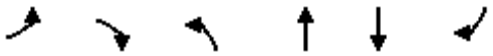
Intersection	
Int Delay, s/veh	0.4

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

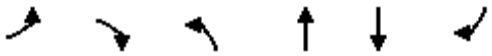
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	688	444	448	0	-	0
Stage 1	444	-	-	-	-	-
Stage 2	244	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	415	618	1123	-	-	-
Stage 1	651	-	-	-	-	-
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			



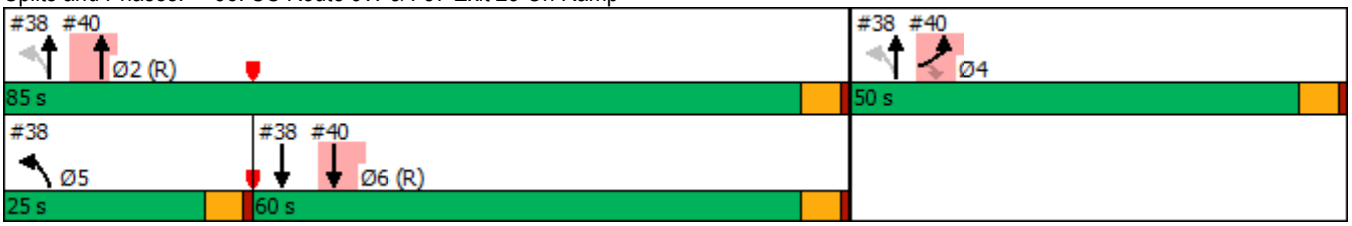
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			54.6	0.0	0.0			
Total Delay			95.3	0.4	100.1			
LOS			F	A	F			
Approach Delay				42.9	100.1			
Approach LOS				D	F			
Queue Length 50th (ft)			276	1	~918			
Queue Length 95th (ft)			#456	3	#1139			
Internal Link Dist (ft)	234			147	226			
Turn Bay 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			

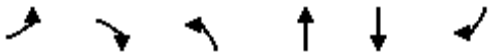
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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		

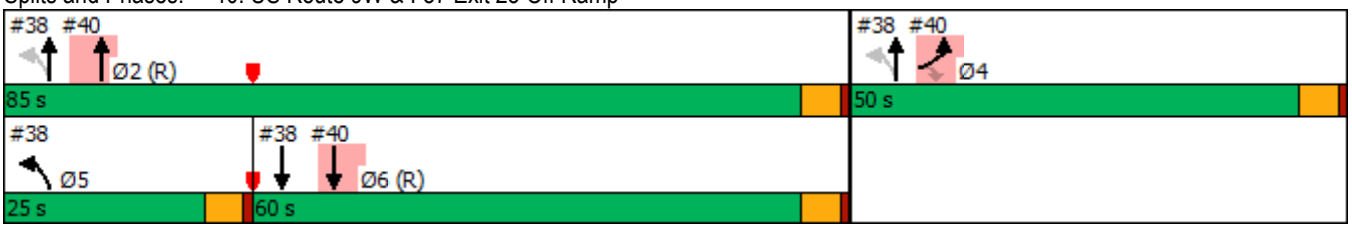


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.6	0.0		0.0	30.6		
Total Delay	57.7	13.0		6.6	38.3		
LOS	E	B		A	D		
Approach Delay	29.1			6.6	38.3		
Approach LOS	C			A	D		
Queue Length 50th (ft)	157	28		90	68		
Queue Length 95th (ft)	216	114		153	m69		
Internal Link Dist (ft)	218			304	147		
Turn 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

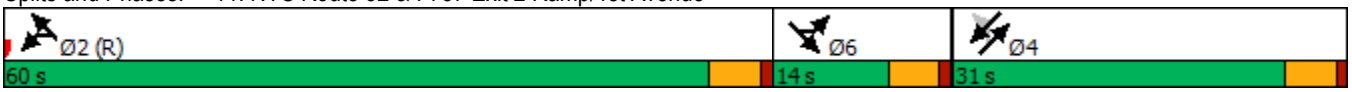
Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1121	-	553	-	-
HCM Lane V/C Ratio	0.035	-	0.043	-	-
HCM Control Delay (s)	8.3	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

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



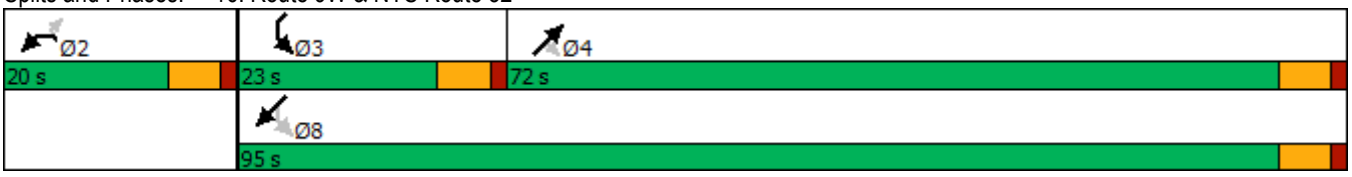
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	93	153	2035	165	101	821
Future Volume (vph)	93	153	2035	165	101	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

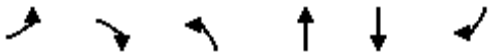
Intersection	
Int Delay, s/veh	0.5

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

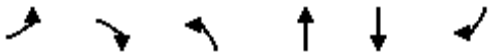
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	858	192	194	0	-	0
Stage 1	192	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	330	834	1391	-	-	-
Stage 1	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	-	-



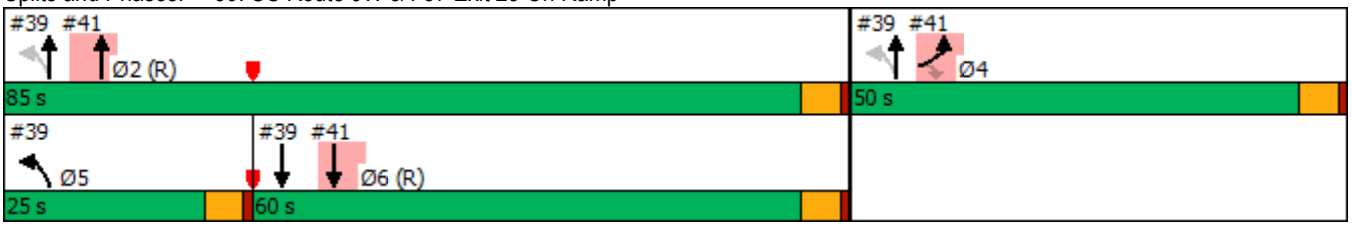
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	340	804	647	214		
Future Volume (vph)	0	0	340	804	647	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. 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			

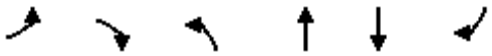


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			14.8	1.3	25.5			
Queue Delay			0.3	0.0	0.0			
Total Delay			15.1	1.3	25.5			
LOS			B	A	C			
Approach Delay				5.4	25.5			
Approach LOS				A	C			
Queue Length 50th (ft)			54	42	266			
Queue Length 95th (ft)			m65	m21	395			
Internal Link Dist (ft)	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



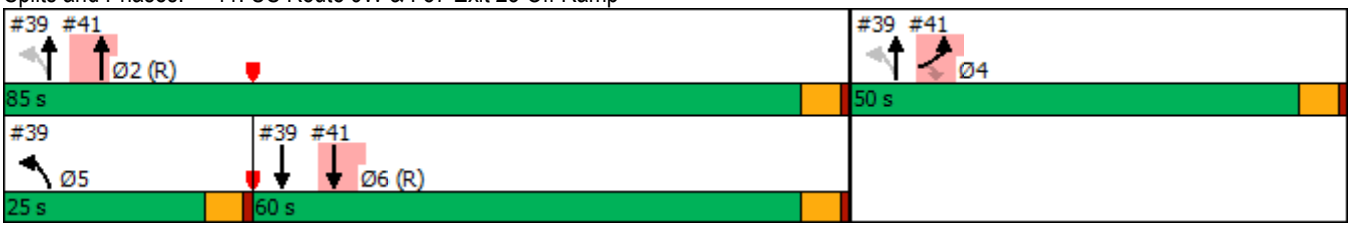


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	298	0	644	647	0	
Future Volume (vph)	500	298	0	644	647	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	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		

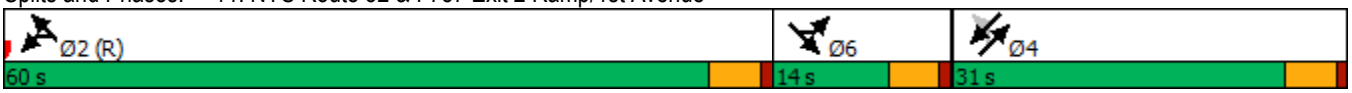
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1384	-	371	-	-
HCM Lane V/C Ratio	0.001	-	0.17	-	-
HCM Control Delay (s)	7.6	0	16.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

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

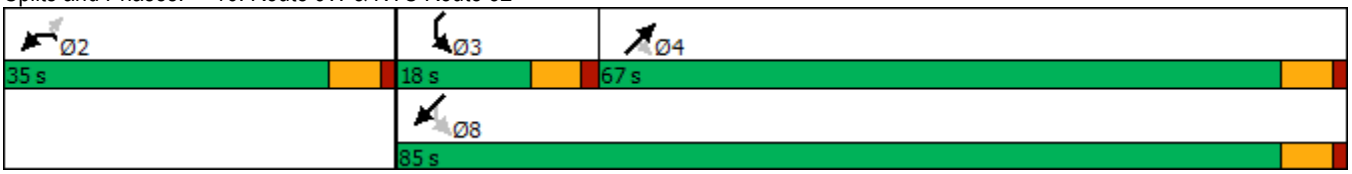


Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	291	100	1081	92	88	1439
Future Volume (vph)	291	100	1081	92	88	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

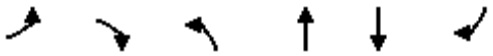
Intersection	
Int Delay, s/veh	0.4

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

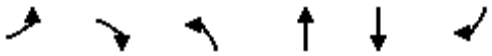
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	743	469	474	0	-	0
Stage 1	469	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	386	598	1099	-	-	-
Stage 1	634	-	-	-	-	-
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			



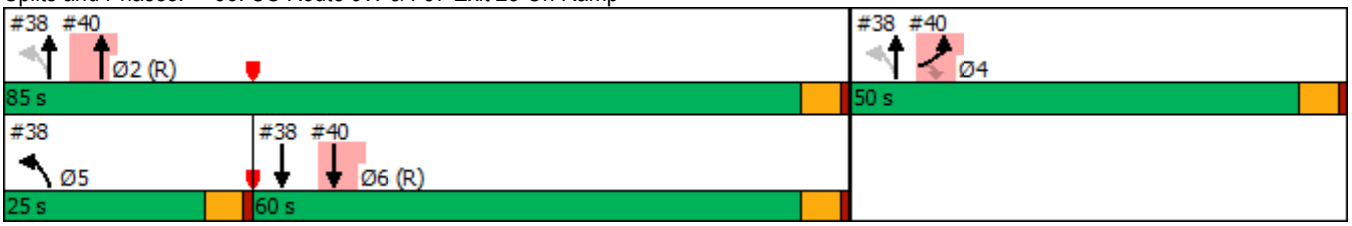
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			28.6	0.0	0.1			
Total Delay			66.2	0.4	166.8			
LOS			E	A	F			
Approach Delay				30.0	166.8			
Approach LOS				C	F			
Queue Length 50th (ft)			287	1	~1055			
Queue Length 95th (ft)			#511	3	#1224			
Internal Link Dist (ft)	234			147	226			
Turn Bay 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			

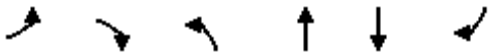
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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		

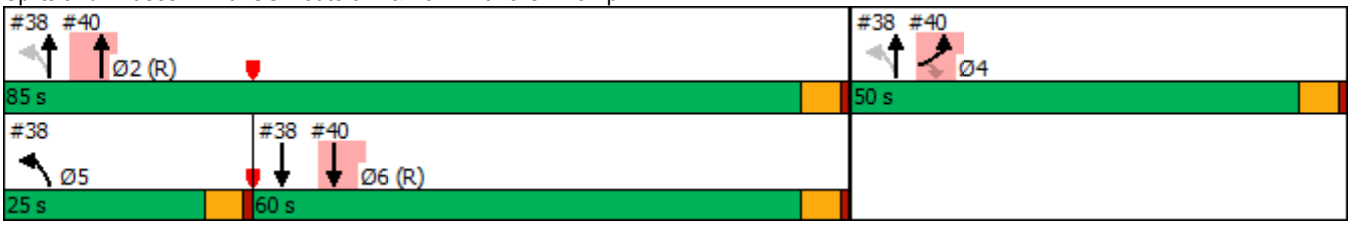


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.7	0.0		0.0	47.3		
Total Delay	56.6	14.6		7.1	57.7		
LOS	E	B		A	E		
Approach Delay	29.7			7.1	57.7		
Approach LOS	C			A	E		
Queue Length 50th (ft)	164	43		98	77		
Queue Length 95th (ft)	222	133		168	m64		
Internal Link Dist (ft)	218			304	147		
Turn 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		

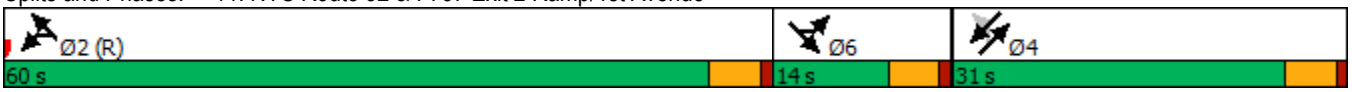
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1025	-	482	-	-
HCM Lane V/C Ratio	0.04	-	0.045	-	-
HCM Control Delay (s)	8.7	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

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



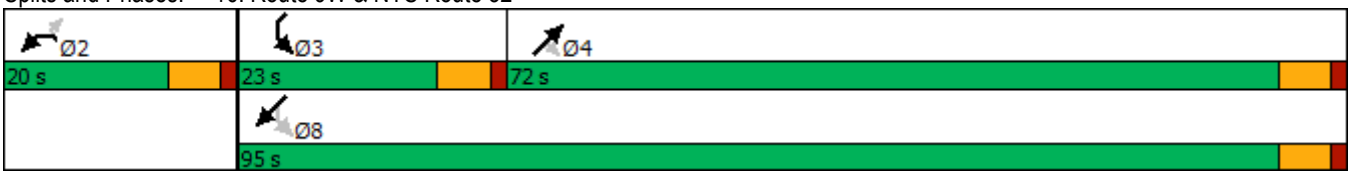
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	95	153	2035	168	114	821
Future Volume (vph)	95	153	2035	168	114	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

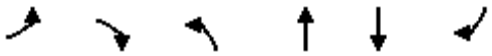
Intersection	
Int Delay, s/veh	0.5

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	-	-

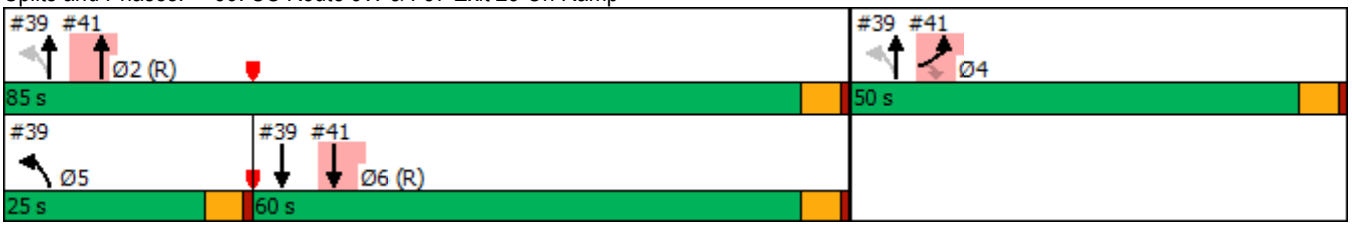


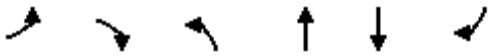
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	346	805	650	214		
Future Volume (vph)	0	0	346	805	650	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. 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



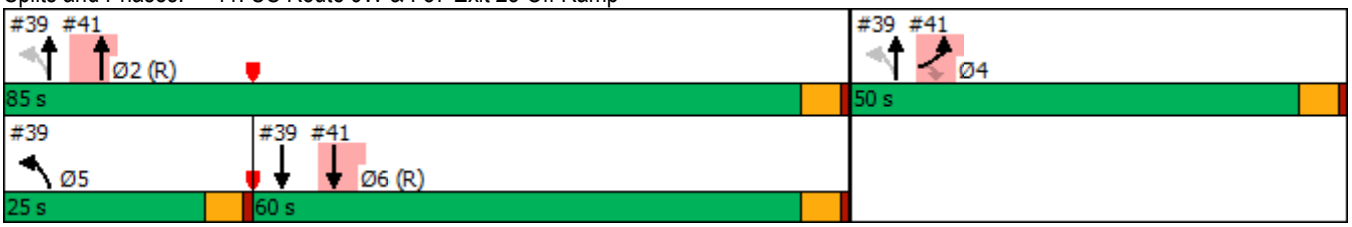


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	307	0	651	650	0	
Future Volume (vph)	500	307	0	651	650	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	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		

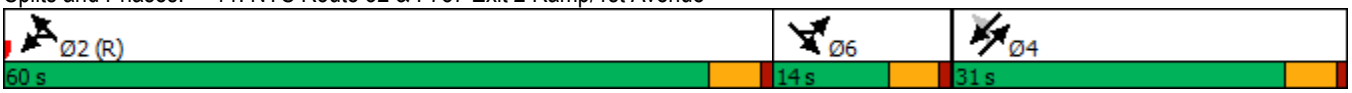
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	1036	-
HCM Lane V/C Ratio	-	-	0.03	0.007	-
HCM Control Delay (s)	-	-	13.9	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

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



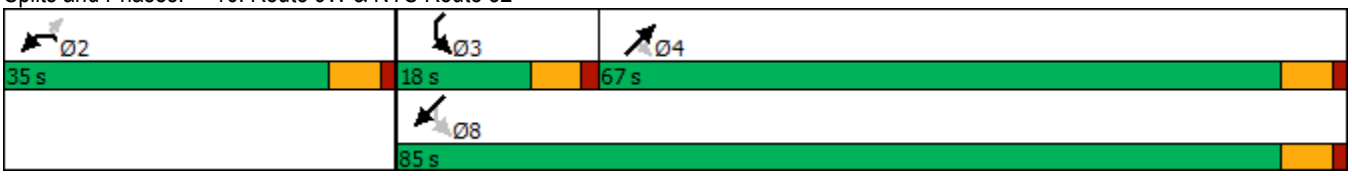
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	295	115	1081	94	95	1439
Future Volume (vph)	295	115	1081	94	95	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

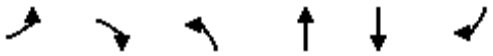
Intersection	
Int Delay, s/veh	0.5

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			

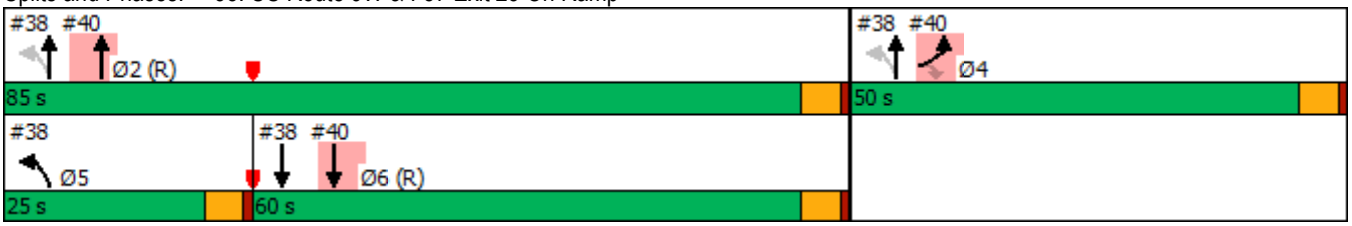
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			31.2	0.0	0.1			
Total Delay			68.6	0.4	175.0			
LOS			E	A	F			
Approach Delay				31.3	175.0			
Approach LOS				C	F			
Queue Length 50th (ft)			293	1	~1077			
Queue Length 95th (ft)			#530	2	#1225			
Internal Link Dist (ft)	234			147	226			
Turn Bay 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			

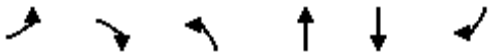
Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 127.2		Intersection LOS: 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





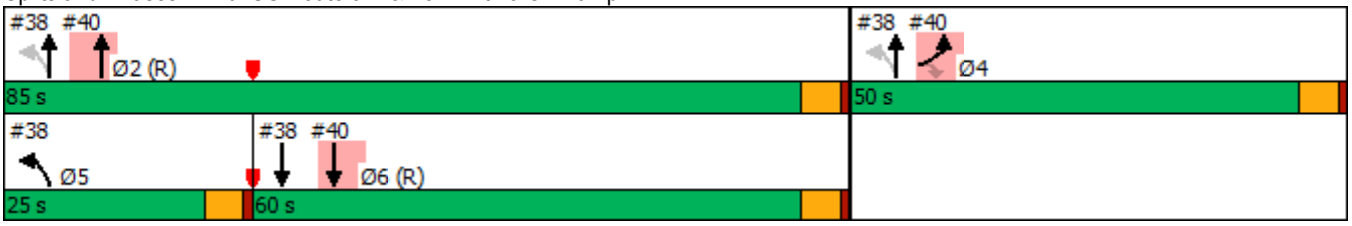
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	353	0	664	1239	0	
Future Volume (vph)	196	353	0	664	1239	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (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		

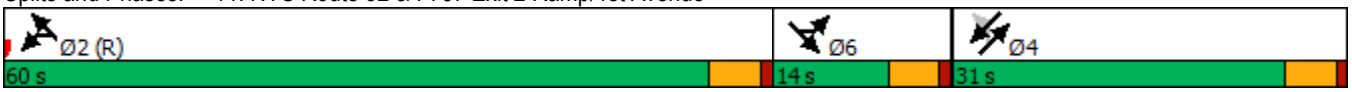
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	506	1331	-
HCM Lane V/C Ratio	-	-	0.047	0.003	-
HCM Control Delay (s)	-	-	12.5	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

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



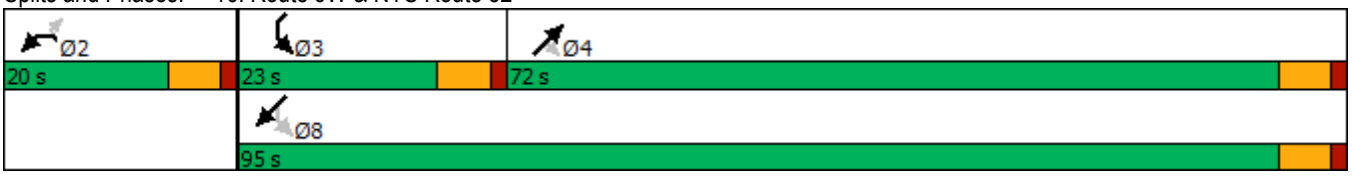
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	97	168	2035	171	126	821
Future Volume (vph)	97	168	2035	171	126	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

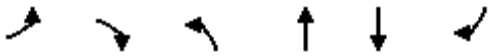
Intersection	
Int Delay, s/veh	0.6

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

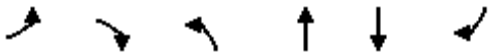
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	893	206	212	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	315	820	1370	-	-	-
Stage 1	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	-	-



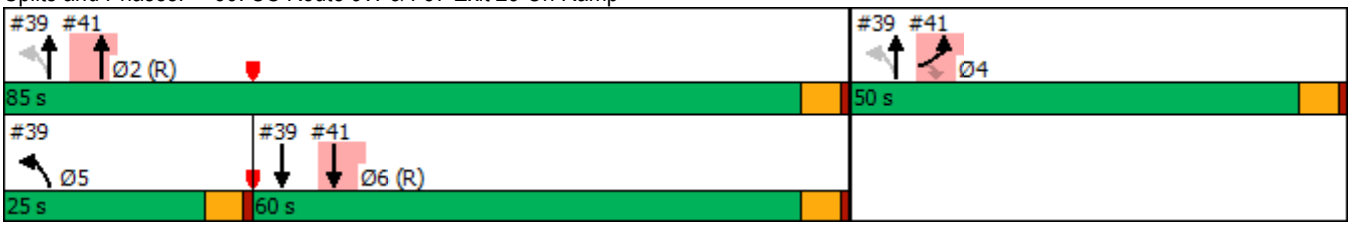
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	351	808	653	214		
Future Volume (vph)	0	0	351	808	653	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. 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			

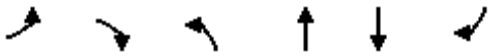


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			16.2	1.3	26.3			
Queue Delay			0.4	0.0	0.0			
Total Delay			16.7	1.3	26.3			
LOS			B	A	C			
Approach Delay				6.0	26.3			
Approach LOS				A	C			
Queue Length 50th (ft)			57	42	271			
Queue Length 95th (ft)			m73	m21	408			
Internal Link Dist (ft)	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



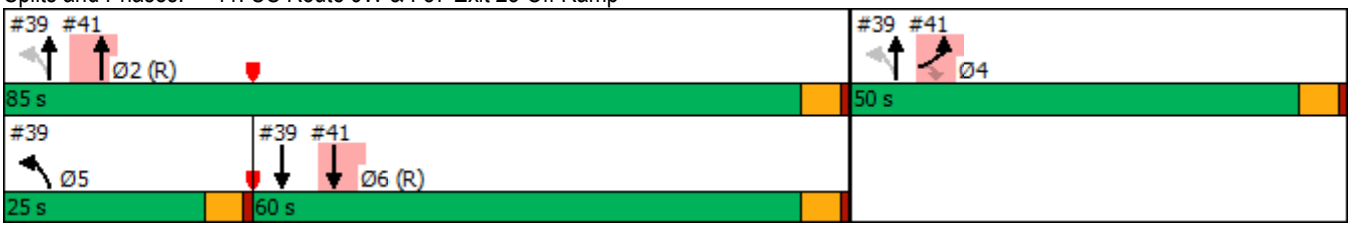


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	316	0	659	653	0	
Future Volume (vph)	500	316	0	659	653	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	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		

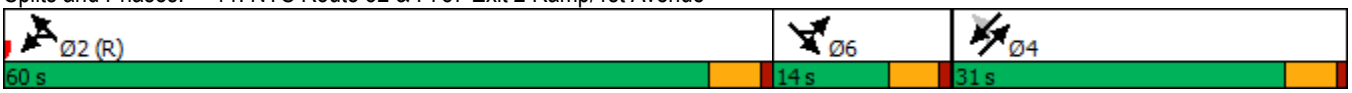
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	1028	-
HCM Lane V/C Ratio	-	-	0.056	0.014	-
HCM Control Delay (s)	-	-	14.5	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

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



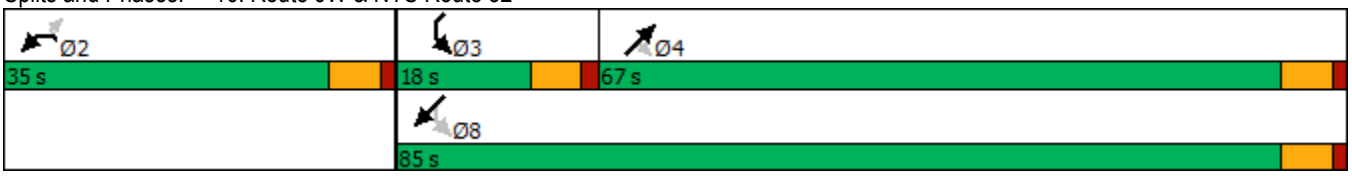
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	299	130	1081	96	103	1439
Future Volume (vph)	299	130	1081	96	103	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

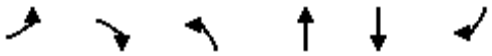
Intersection	
Int Delay, s/veh	0.5

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			

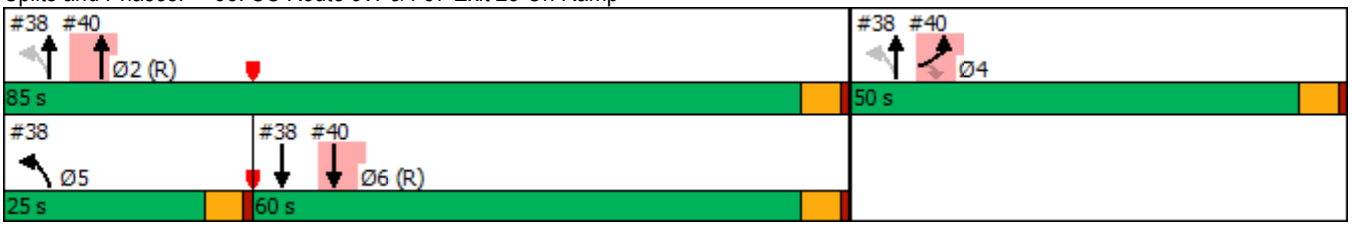
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			34.3	0.0	0.1			
Total Delay			72.8	0.4	179.7			
LOS			E	A	F			
Approach Delay				33.6	179.7			
Approach LOS				C	F			
Queue Length 50th (ft)			305	0	~1088			
Queue Length 95th (ft)			#556	1	#1228			
Internal Link Dist (ft)	234			147	226			
Turn Bay 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			

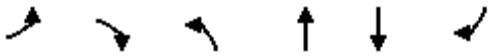
Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay: 130.6		Intersection LOS: 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





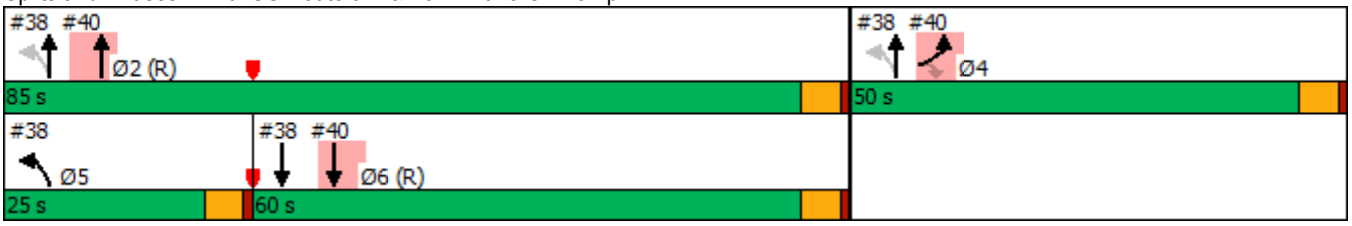
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	358	0	679	1242	0	
Future Volume (vph)	196	358	0	679	1242	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (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		

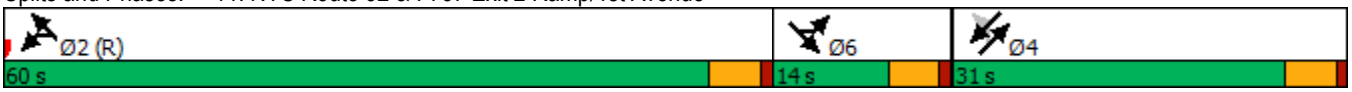
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	491	1324	-
HCM Lane V/C Ratio	-	-	0.097	0.006	-
HCM Control Delay (s)	-	-	13.1	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

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



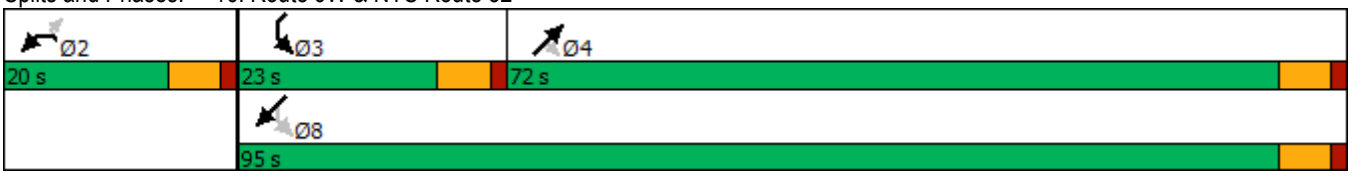
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	100	181	2035	176	148	821
Future Volume (vph)	100	181	2035	176	148	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

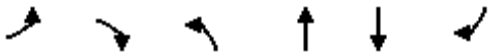
Intersection	
Int Delay, s/veh	0.7

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

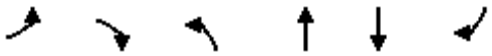
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	926	219	229	0	-	0
Stage 1	219	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	301	806	1351	-	-	-
Stage 1	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	-	-



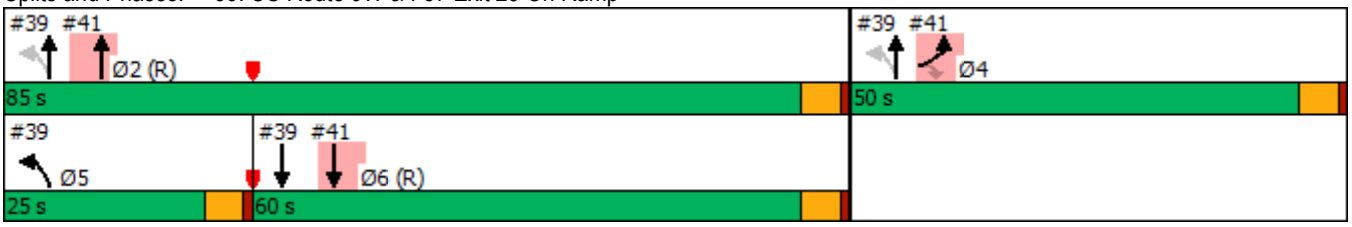
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	361	811	659	214		
Future Volume (vph)	0	0	361	811	659	214		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Frt					0.963			
Flt Protected			0.950					
Satd. 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			

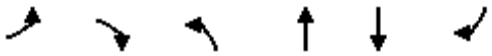


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Control Delay			17.6	1.4	27.1			
Queue Delay			0.5	0.0	0.0			
Total Delay			18.1	1.4	27.1			
LOS			B	A	C			
Approach Delay				6.5	27.1			
Approach LOS				A	C			
Queue Length 50th (ft)			52	42	281			
Queue Length 95th (ft)			m78	m19	415			
Internal Link Dist (ft)	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



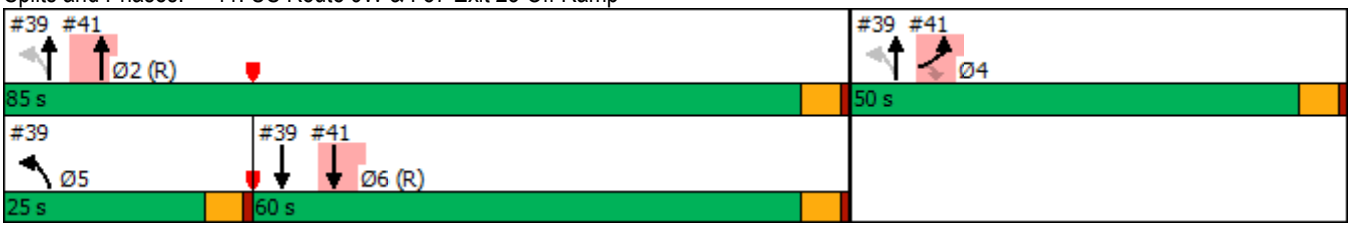


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	500	333	0	672	659	0	
Future Volume (vph)	500	333	0	672	659	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	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		

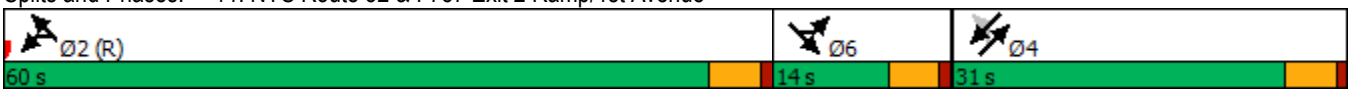
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	387	1012	-
HCM Lane V/C Ratio	-	-	0.113	0.027	-
HCM Control Delay (s)	-	-	15.5	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

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



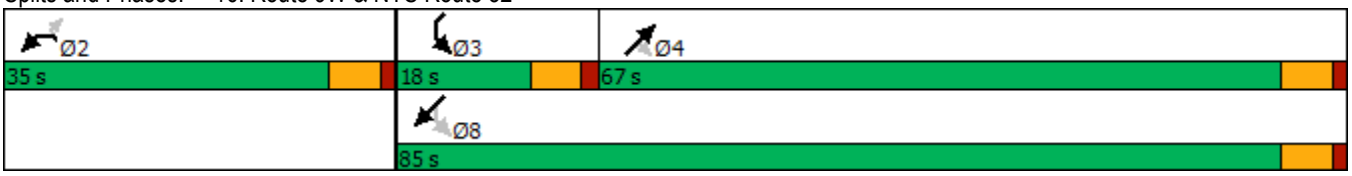
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	306	157	1081	99	116	1439
Future Volume (vph)	306	157	1081	99	116	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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	-

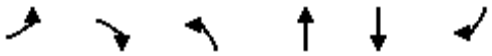
Intersection	
Int Delay, s/veh	0.5

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			

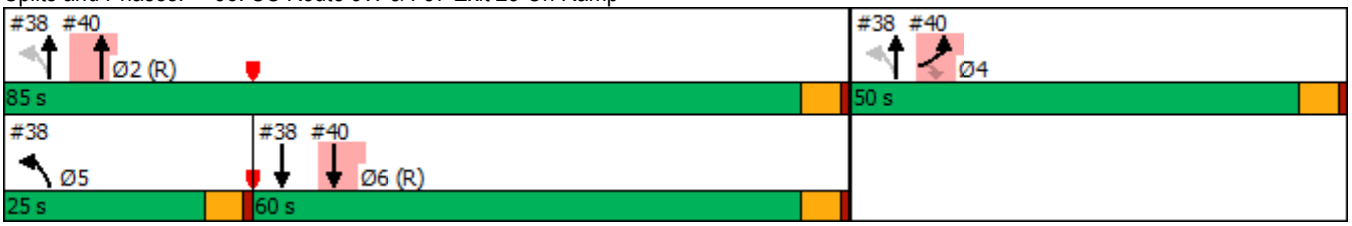
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			40.7	0.0	0.1			
Total Delay			82.5	0.4	180.5			
LOS			F	A	F			
Approach Delay				38.8	180.5			
Approach LOS				D	F			
Queue Length 50th (ft)			329	0	~1092			
Queue Length 95th (ft)			#601	0	#1231			
Internal Link Dist (ft)	234			147	226			
Turn Bay 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			

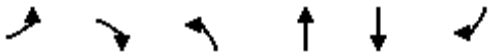
Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay: 132.0		Intersection LOS: 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.

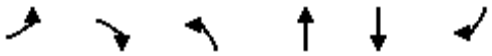
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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		

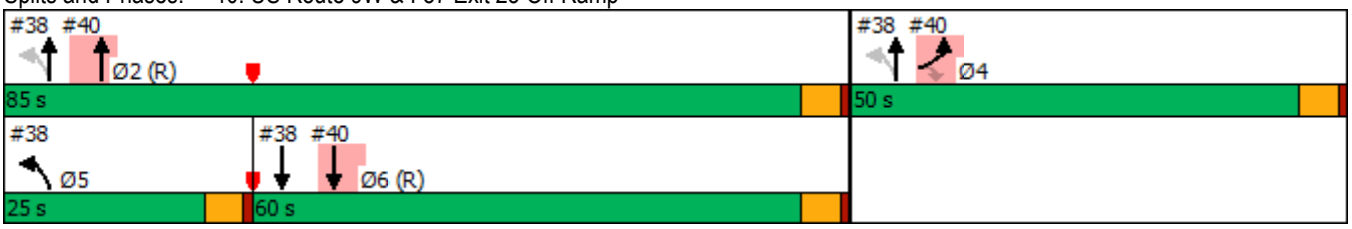


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Queue Delay	0.8	0.0		0.0	46.6		
Total Delay	56.1	17.3		7.4	57.6		
LOS	E	B		A	E		
Approach Delay	30.8			7.4	57.6		
Approach LOS	C			A	E		
Queue Length 50th (ft)	163	59		112	81		
Queue Length 95th (ft)	222	157		185	m62		
Internal Link Dist (ft)	218			304	147		
Turn 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		

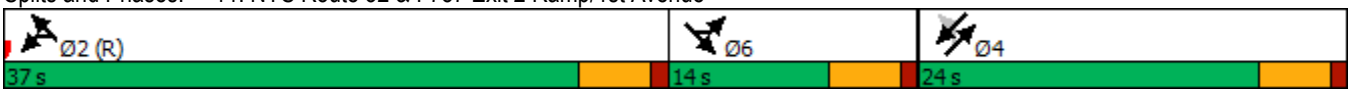
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	477	1311	-
HCM Lane V/C Ratio	-	-	0.186	0.012	-
HCM Control Delay (s)	-	-	14.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

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.

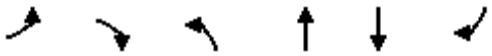
Splits and Phases: 16: Route 9W & NYS Route 32

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.			

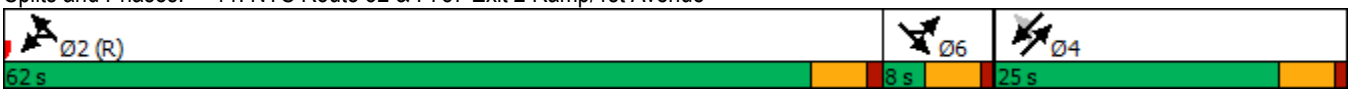
Splits and Phases: 21: NYS Route 144 & NYS Route 32

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

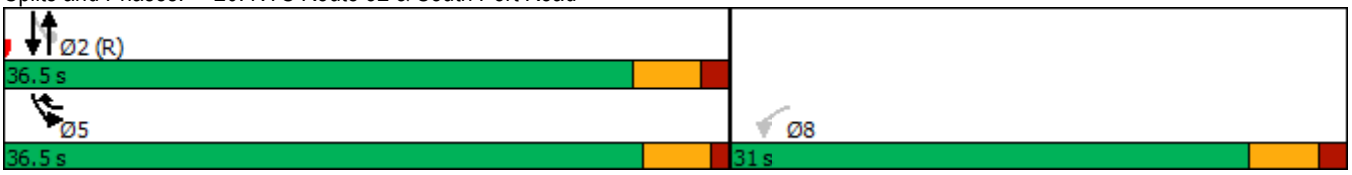


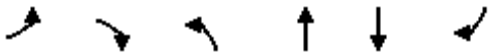
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	128	168	253	41	82	930
Future Volume (vph)	128	168	253	41	82	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	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

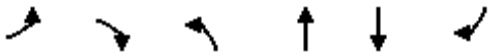
Intersection Summary			
Area Type:	Other		
Cycle Length: 67.5			
Actuated Cycle Length: 67.5			
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 11.6		Intersection LOS: 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





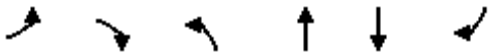
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	58	75	59	235	673	386
Future Volume (vph)	58	75	59	235	673	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	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			

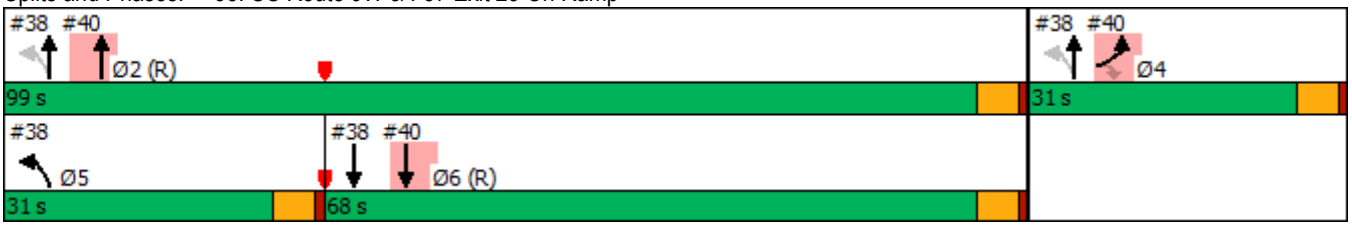
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4
Queue Delay			36.3	0.0	0.0			
Total Delay			110.3	0.4	90.3			
LOS			F	A	F			
Approach Delay				51.8	90.3			
Approach LOS				D	F			
Queue Length 50th (ft)			~376	0	~926			
Queue Length 95th (ft)			#597	0	#1066			
Internal Link Dist (ft)	234			147	226			
Turn Bay 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			

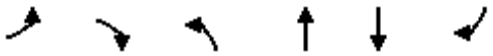
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 77.1		Intersection LOS: 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





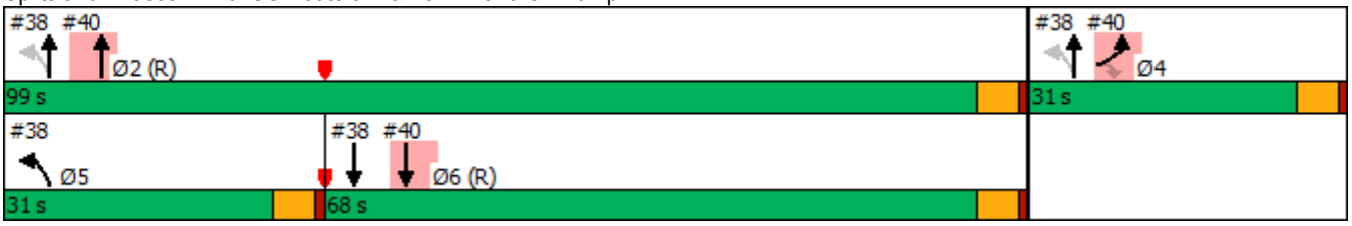
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5
Lane Configurations							
Traffic Volume (vph)	196	368	0	706	1246	0	
Future Volume (vph)	196	368	0	706	1246	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (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

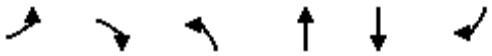
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	12.9	22.9	47.6		60.5	61.0
Actuated g/C Ratio	0.16	0.29	0.60		0.76	0.76
v/c Ratio	0.71	0.25	0.98		0.78	0.24
Control Delay	55.3	6.8	44.8		46.4	4.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.3	6.8	44.8		46.4	4.7
LOS	E	A	D		D	A
Approach Delay	33.7		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

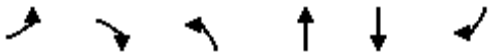
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 36.4 Intersection LOS: D
Intersection Capacity Utilization 71.7% ICU 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

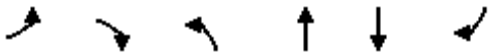
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	82	717	148	139	258
Future Volume (vph)	102	82	717	148	139	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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

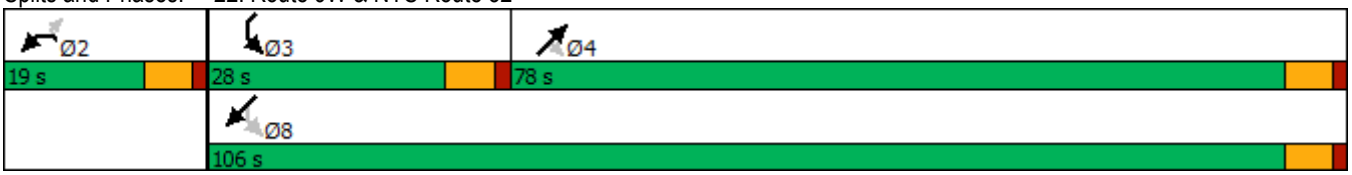
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	100	238	2035	176	208	821
Future Volume (vph)	100	238	2035	176	208	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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		

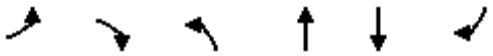
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	559	795	1246	-
HCM Lane V/C Ratio	-	-	0.239	0.048	0.016	-
HCM Control Delay (s)	-	-	13.5	9.8	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.2	0.1	-

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	-	-

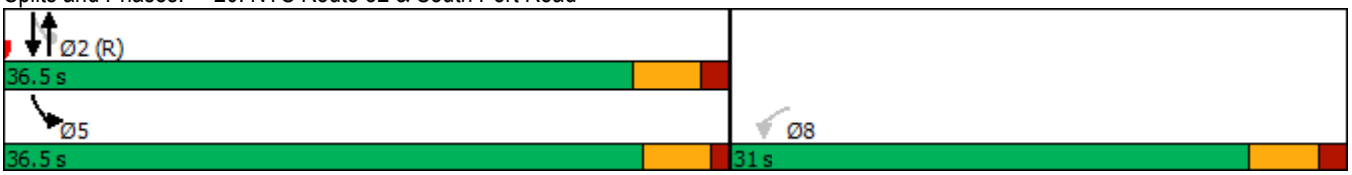
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	156	156	253	76	67	930
Future Volume (vph)	156	156	253	76	67	930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.969			
Flt Protected	0.976				0.950	
Satd. Flow (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

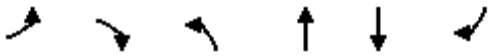
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Act Effct Green (s)	18.3		39.2		39.7	39.2
Actuated g/C Ratio	0.27		0.58		0.59	0.58
v/c Ratio	0.77		0.52		0.08	0.94
Control Delay	27.7		12.2		8.4	35.2
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	27.7		12.2		8.4	35.2
LOS	C		B		A	D
Approach Delay	27.7		12.2			33.4
Approach 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

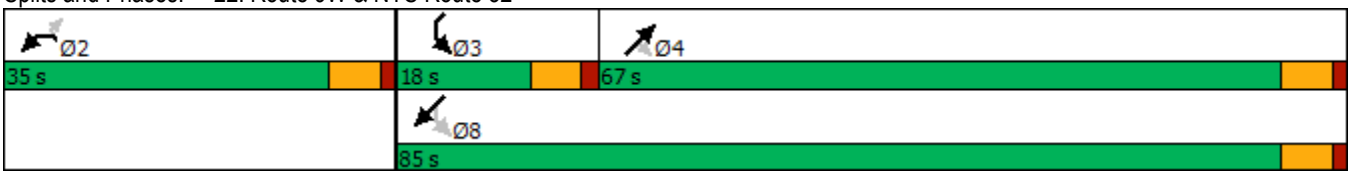
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	306	184	1081	99	150	1439
Future Volume (vph)	306	184	1081	99	150	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		200	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	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

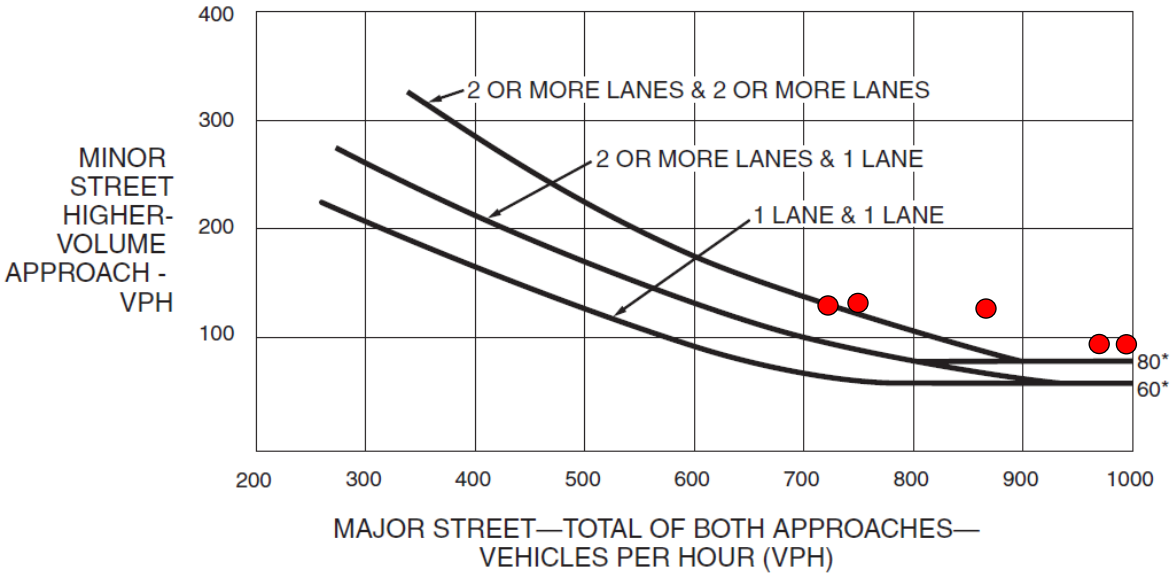
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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.

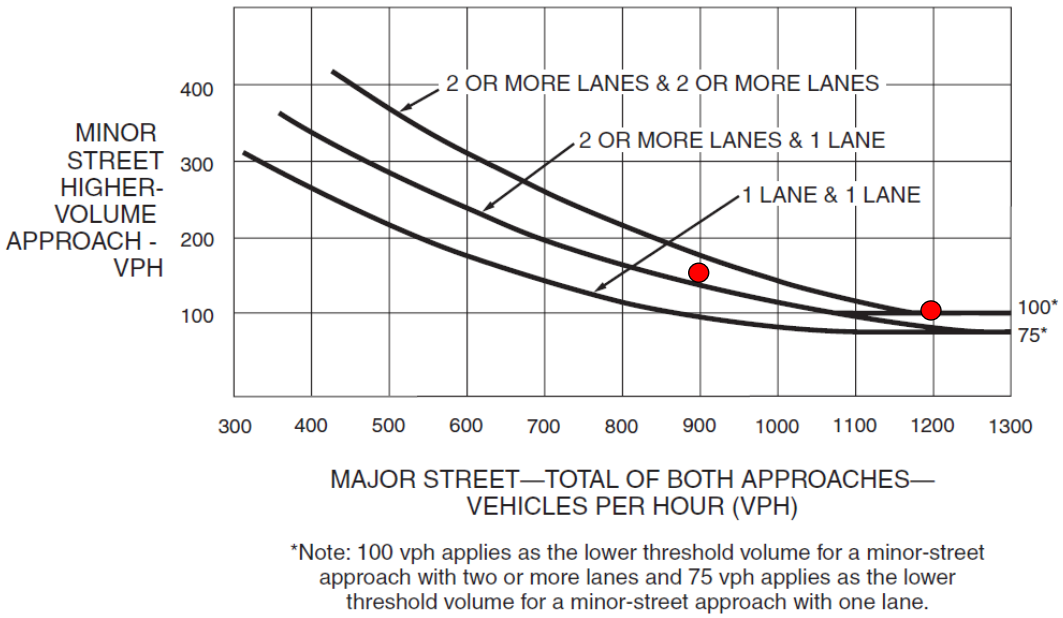
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

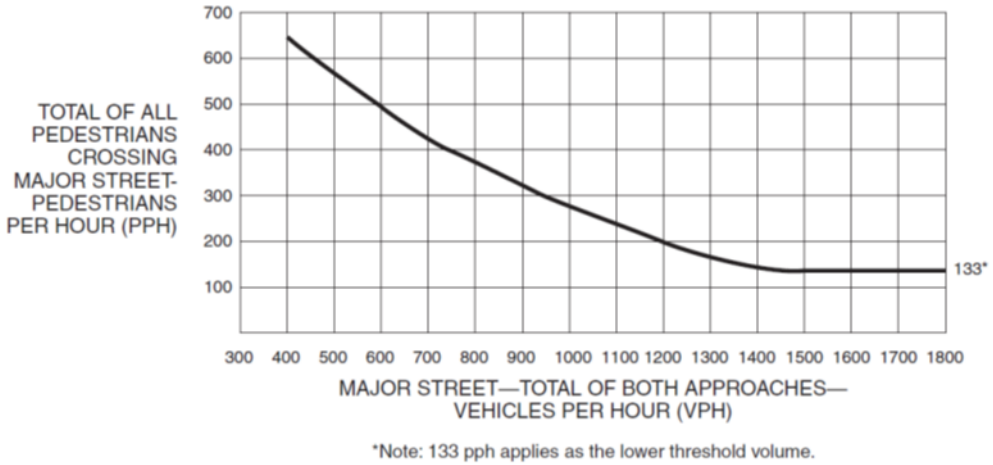
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

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.

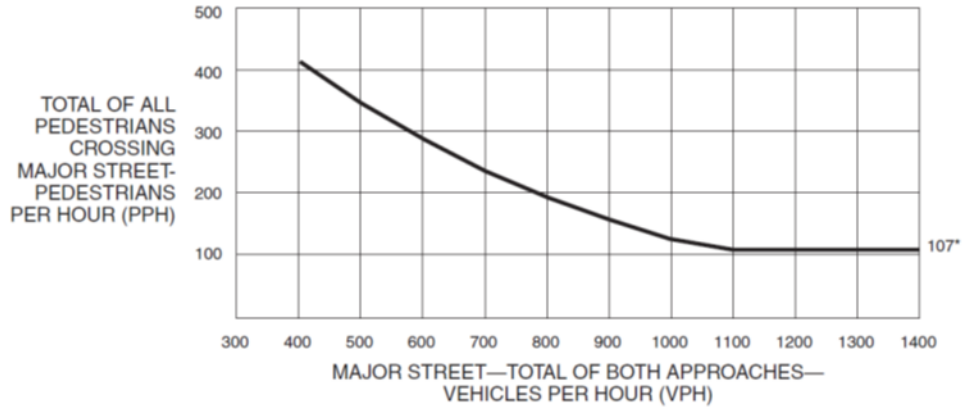
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

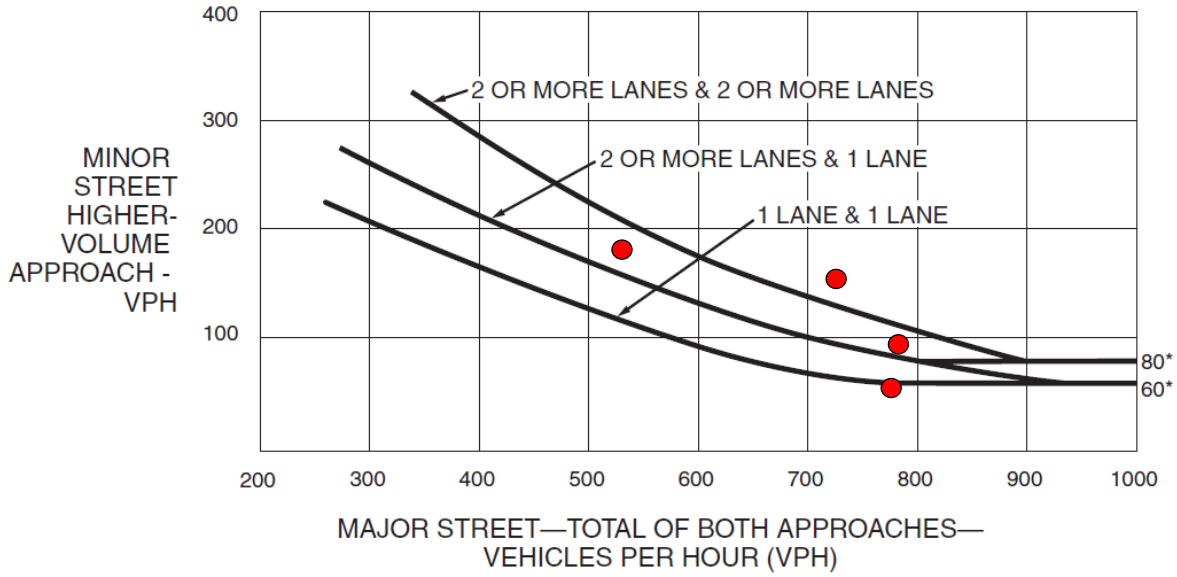
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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).

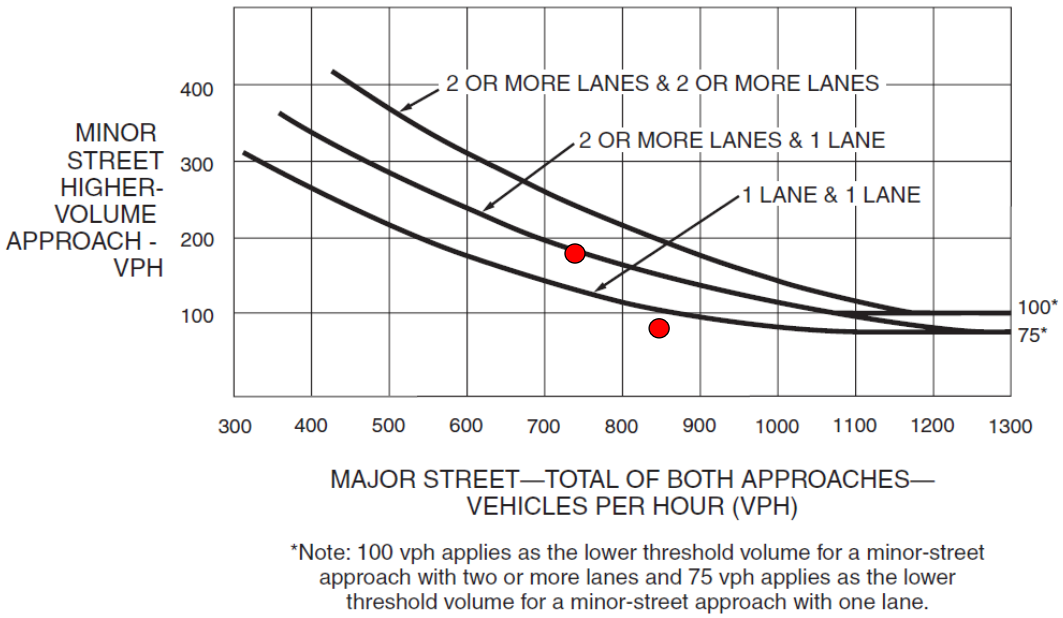
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

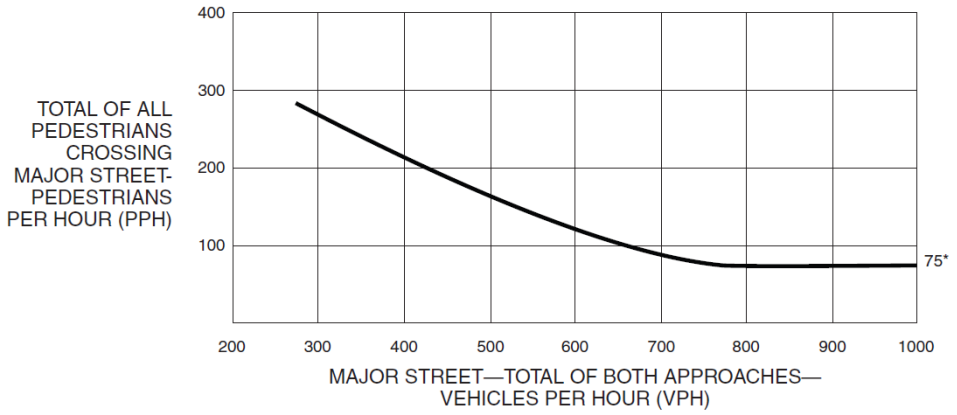
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

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.

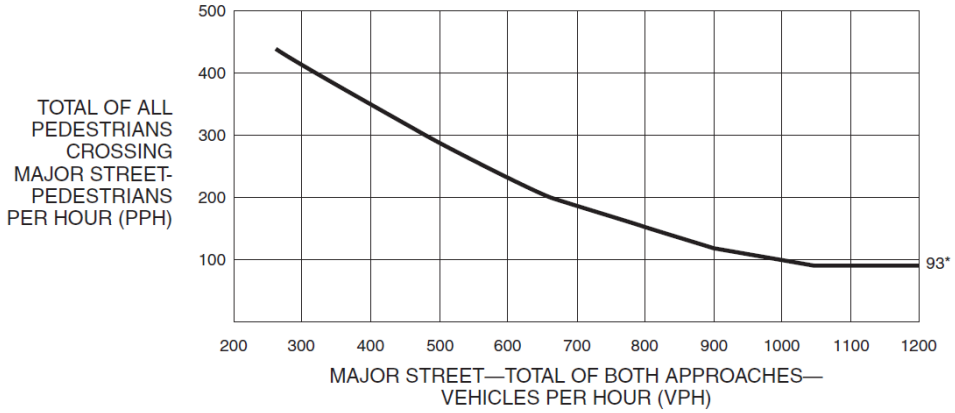
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

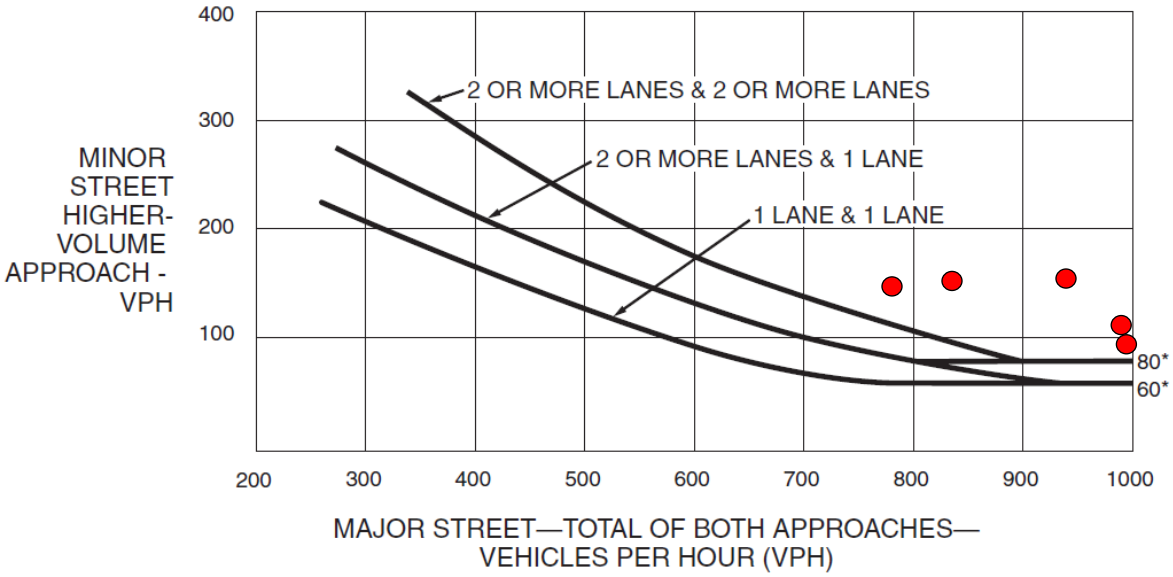
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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.

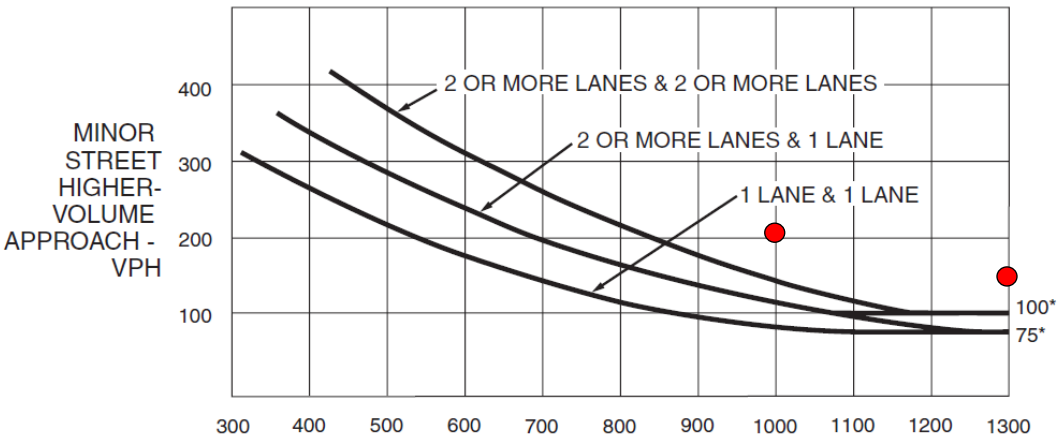
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

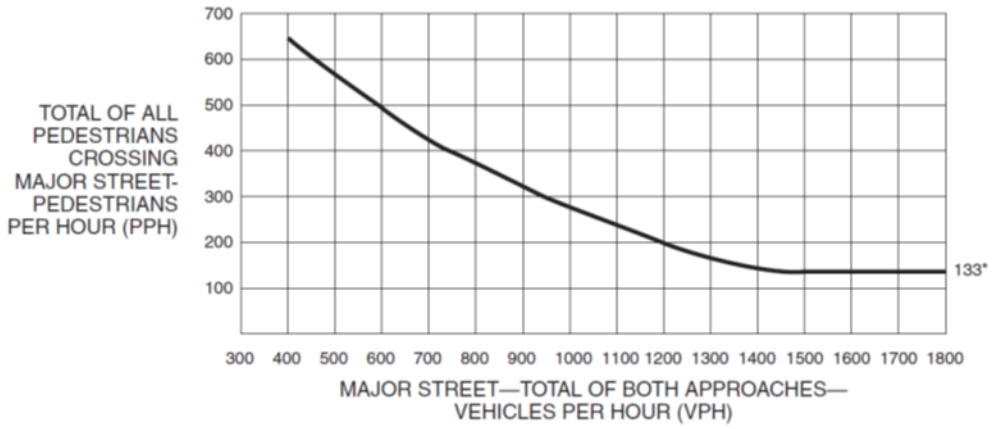
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

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.

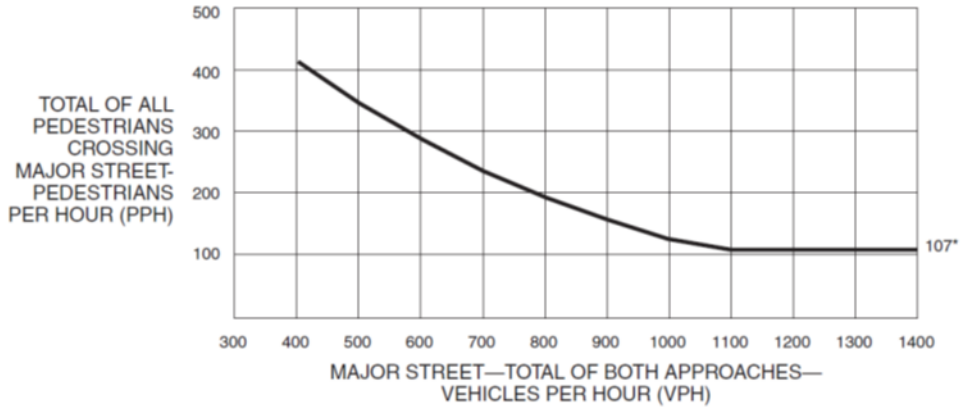
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

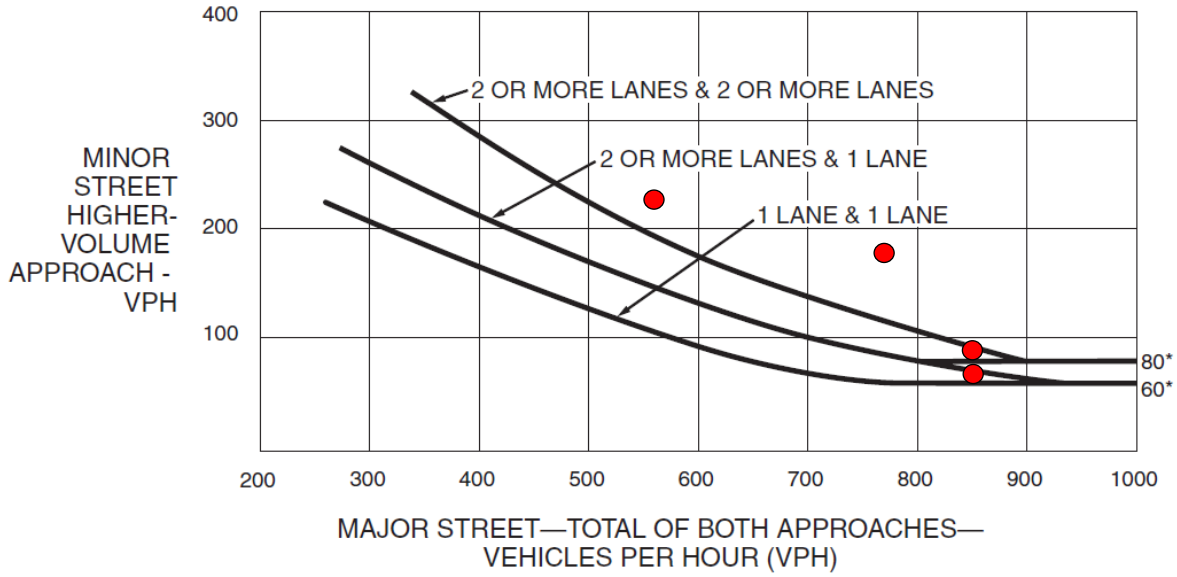
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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).

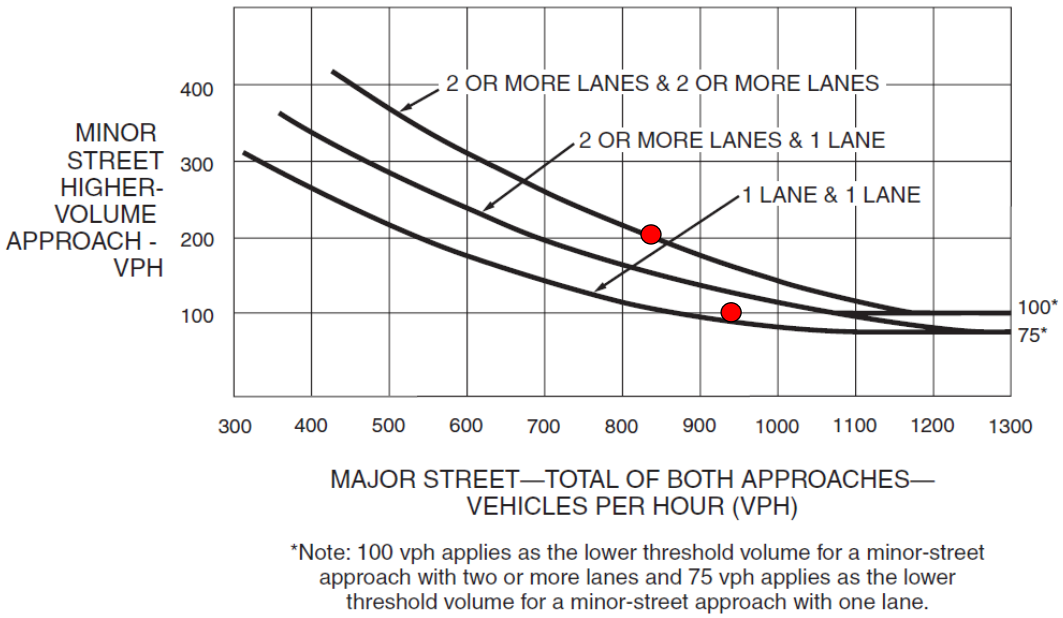
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

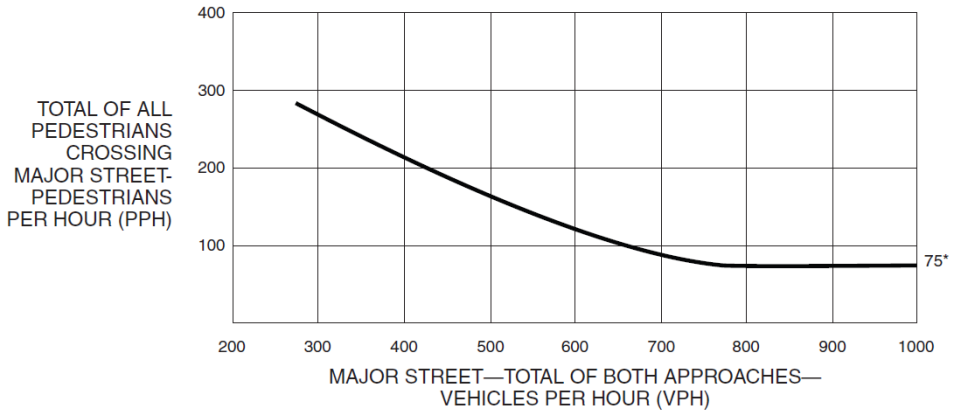
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

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.

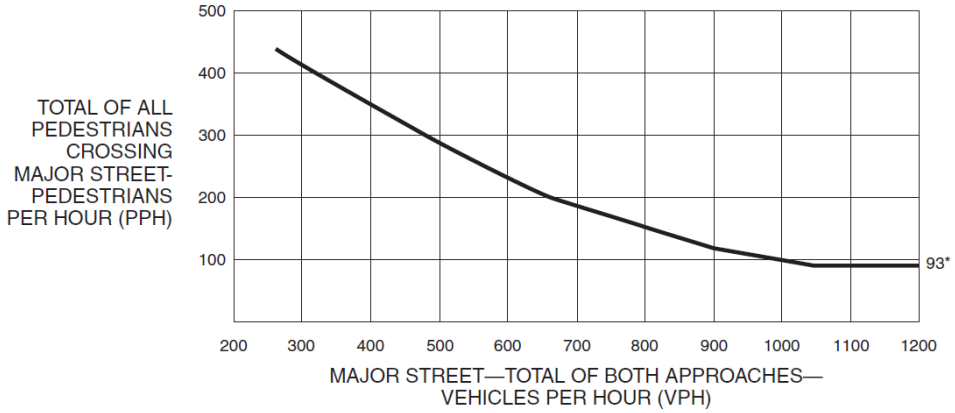
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

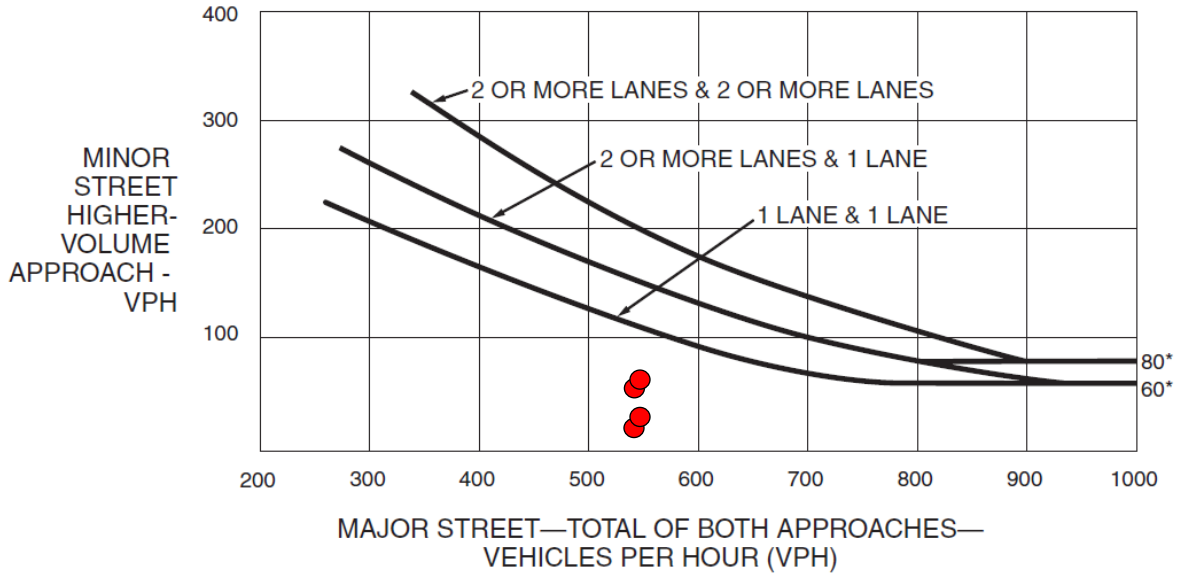
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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.

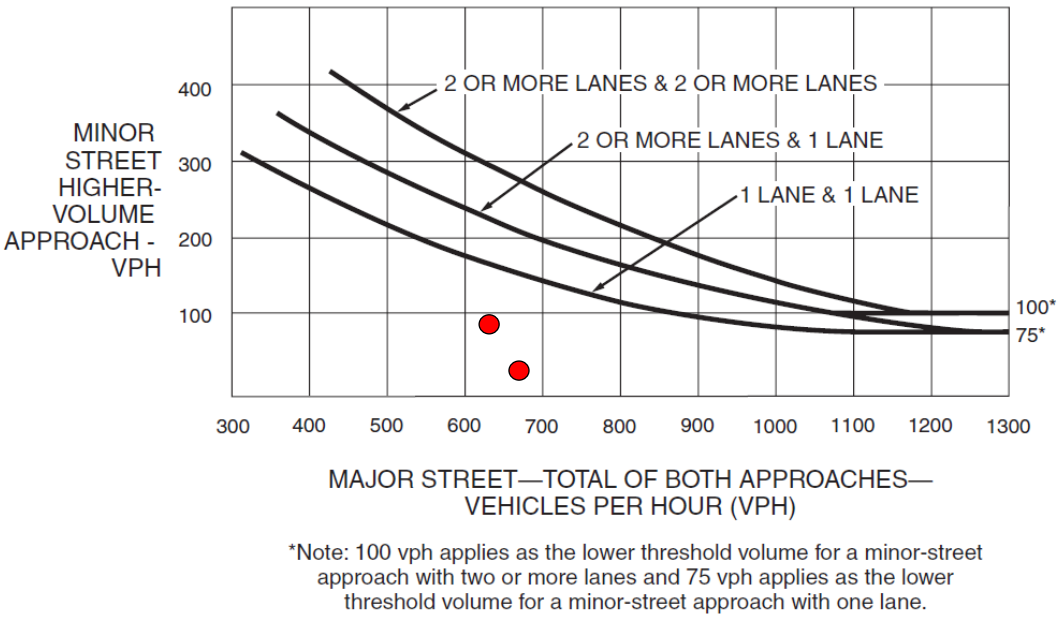
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

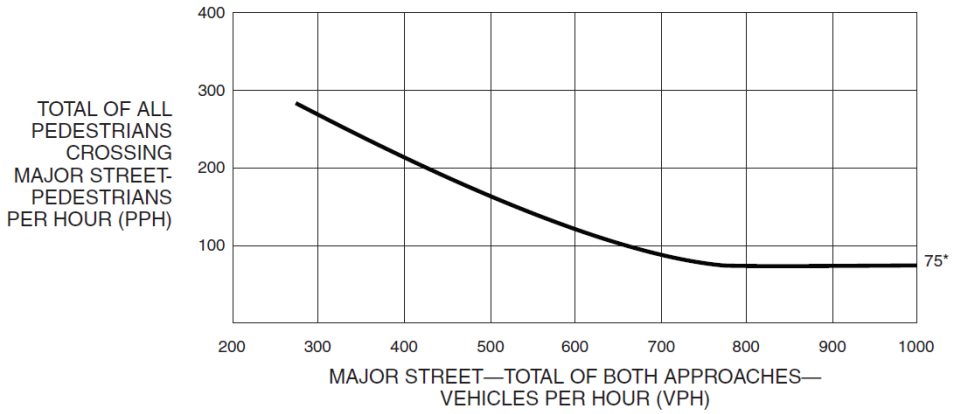
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

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.

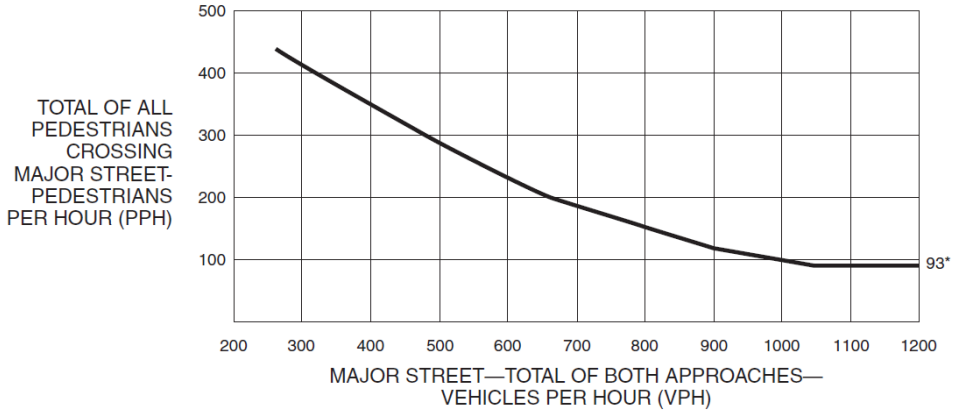
Warrant Not Met, no pedestrians were observed during the traffic counts.

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 F

DRINKING WATER QUALITY REPORT

Annual Drinking Water Quality Report for 2018
Town of Bethlehem Water District No.1
445 Delaware Avenue, Delmar, NY 12054
(Public Water Supply Identification Number NY0100191)

INTRODUCTION

To comply with State regulations, the Town of Bethlehem Department of Public Works issues an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, we conducted tests for over 80 contaminants. We detected 27 of those contaminants, and only found 1 of those contaminants at a higher level than the State allows. As we told you at that time, our water exceeded the drinking water standard for total trihalomethanes (TTHMs) and we are continuing our efforts to rectify the problem by performing increased levels of distribution system flushing and constructing improvements to one of our water treatment plants that will result in a reduced amount of the TTHMs being formed in the distribution system.

This report is an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. Our constant goal is to provide to you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. If you have any questions concerning this report or concerning your drinking water please contact: Mr. George S. Kansas P.E. Commissioner of Department of Public Works, 445 Delaware Ave, Delmar NY 12054, Telephone (518) 439-4955 or e-mail GKansas@townofbethlehem.org .

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Bethlehem Water District No. 1 draws its water from both "surface water" and "ground water" sources. During 2018, our system did not experience any restriction of our water sources. These sources are:

- Surface water drawn from the Vly Creek Reservoir located in the Town of New Scotland
- Groundwater from two (2) wells located in the Town of New Scotland
- Groundwater from eleven (11) wells located along the Hudson River
- Surface water drawn from the Alcove Reservoir located in the Town of Coeymans (City of Albany water purchased by the Town of Bethlehem)

The New Salem Water Purification Plant draws its water from the Vly Creek Reservoir, which has a storage capacity of 1.25 billion gallons. The New Salem Water Purification Plant has a peak capacity for purifying 6 million gallons of water per day. The treatment process consists of chlorination for disinfection; taste and odor control with the use of activated carbon; coagulation with aluminum sulfate; filtration with rapid sand filter, and corrosion control. There is no fluoride added to the Bethlehem Water Supply. Algae growth in the Vly Creek Reservoir is controlled by adding copper sulfate to the water and by mechanically mixing the water during the summer months. Water is pumped from the purification plant to a 5,750,000-gallon steel water storage tank. From that point, water is delivered by gravity through a network of water mains, which reach all the way from North Bethlehem to Selkirk.

There are also two deep wells to supplement the capacity of the New Salem Water Plant. We are permitted by NYS Department of Environmental Conservation to withdraw 1,130,000 gallons per day, or 1.13 million gallons per day (MGD), from the two wells combined. Groundwater or well water is stored below the surface of the earth in deep, porous rocks or porous deposits of sand or gravel called "aquifers." Groundwater is purified naturally as it filters through layers of soil, clay, rock and sand. This process, known as "percolation" takes years to complete. As a result, groundwater requires less treatment than surface water.

The Clapper Road Water Purification Plant is supplied by facilities including a groundwater infiltration system and a well field that consist of 11 drilled wells which is adjacent to the Hudson River, south of Henry Hudson Park. The Water Purification Plant has the ability to treat 6 million gallon per day. The plant uses 4 Trident filter units for water purification with chlorine as the primary disinfection agent. Chemicals used include coagulation with Polyaluminum Chloride (PAC) and a non-ionic polymer and a corrosion inhibitor.

To further strengthen the water distribution system and cooperate in a more regional approach to water supply, there are two interconnections with the City of Albany's water supply. One interconnection is located in a residential area on Kenwood Avenue and the other is in an industrial area on Creble Road. The Town currently purchases water from the City of Albany to supplement our capacity. We also have an emergency interconnect with the Town of Guilderland's water system in North Bethlehem. This interconnect can provide water from Bethlehem to Guilderland or vice versa depending upon which community needs supplemental water.

The City of Albany's water source is the Alcove Reservoir that is located on the Hannacroix Creek. Albany also has the Basic Creek Reservoir that serves as a secondary source. Treatment of Albany's water includes coagulation, sedimentation, pH, alkalinity adjustment and filtration at the Albany Filtration Plant. Chlorine is added at the Albany plant as a residual disinfectant to maintain microbiological quality throughout the distribution system. Albany does not add fluoride to its water supply. To view the City of Albany Annual Water Quality Report go to the following link; http://www.albanyny.org/Government/Departments/WaterAndWaterSupply/WaterQualityReport.aspx

FACTS AND FIGURES

The Bethlehem Water District serves approximately 35,000 people through 11,712 service connections. In 2018, the District provided 527,488,000 gallons of water from the New Salem Plant, 160,170,000 gallons from Well #1 and Well #2, and 453,212,000 gallons of water from the Clapper Road Plant. Supplemental water purchased from Albany was 474,125,000 gallons. The total volume of water produced from all sources in 2018 was 1,614,995,000 gallons. Approximately 1,488,850,280 gallons of water were billed to customers of Water District #1. The difference (7.8%) between the volume billed and the total volume produced is water used firefighting, flushing of the water distribution system, errors in water meters and water lost to leaks.

Our water system has over 220 miles of water mains and approximately 1,670 hydrants for fire protection. It also includes several covered water storage tanks with a combined capacity of 13,200,000 gallons. Additionally, there are water storage tanks with 2,000,000 gallons and 70,000 gallons at the Clapper Road Water Treatment Plant and the New Salem Water Treatment Plant, respectively, which hold finished water before being delivered to the town's pipe network. Average daily water production for the New Salem Plant; Clapper Road Plant; Well#1; Well#2 and Albany was 4,424,644 gallons per day, or 4.42 MGD.

The charge for water in 2018 was as follows:

Water Usage Tiers	Price per CCF[1]	Equivalent Price per 1,000 Gallons
Up to 500 CF[2]	$2.21	$2.95
501 CF to 5,000 CF	$4.58	$6.12
5,001 CF to 50,000 CF	$4.79	$6.40
50,001 CF to 500,000 CF	$3.26	$4.36
500,001 CF and over	$2.81	$3.76

1: CCF = hundred cubic feet
2: CF = cubic feet (1 cubic foot = 7.48 gallons of water)

Water customers located outside of the Water District were billed twice the In-District rates listed above. A 10% late fee was assessed on any bill not paid by the due date.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, metals including lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, synthetic organic compounds, and radioactive materials like Uranium and Radium. The tables presented below depict which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these compounds do not change frequently, though most of our data represented here is from 2018 analysis. Complete records are on file in the Water District Office. For a listing of all the parameters that we must analyze and the frequency of testing for compliance, please see the NYS Sanitary Code.

It should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791), the EPA website at www.epa.gov or the Albany County Health Department at (518) 447-4620.

INFORMATION ON UNREGULATED CONTAMINANTS

Unregulated Contaminant Monitoring 4 was conducted during 2018. This is a requirement of the 1996 Safe Drinking Water Act amendments. This monitoring provides a basis for future regulatory action to protect the public health. The number in parentheses refers to the number of measured for a total of 30 analytes. The breakdown of analytes is as follows: semi volatile organic chemicals (3), pesticides and pesticide manufacturing byproduct (9), metals (2), alcohols (3), cyanotoxin chemical contaminants (10), brominated haloacetic acid groups (3) and indicator compounds (2). We have listed those compounds that were detected in the tables presented below. There are no associated MCL's for these compounds at this time with the exception of Manganese. If you have any questions about the Unregulated Contaminant Monitoring Regulation or the results provided in the tables below, please contact the Albany County Department of Health at (518) 447-4620.

TOWN OF BETHLEHEM WATER DISTRIC No.1 NEW SALEM PURIFICATION PLANT & WELLS TABLE OF DETECTED CONTAMINANTS * Public Water Supply Identification Number NY010019						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity [1] (Highest turbidity sample from 5/7/18)	N	0.47	NTU	N/A	TT=5 NTU	Soil runoff
		100%			TT= % samples <0.3	
Inorganic Contaminants (Sample data from 10/18/18 for **WTP in boldface;** sample data from Well #1 from 4/19/16, Well #2 from 4/19/16 unless otherwise noted)						
Barium	N	**25.6** 36-37	ppb	2000	2000	Natural sources
Chloride WTP Range for wells	N	**62.5** 70-177	ppm	N/A	250	Geology; Naturally occurring
Color	N	**ND** 5-11	units	N/A	15	Suspended and dissolved materials; naturally occurring organic compounds such as tannins
Copper (sample data 6/7/17-6/12/17) Range of copper concentration	N	0.40[2] 0.03-0.49	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits;
Lead (sample data 6/7/17-6/12/17) Range of lead concentration	N	1[3] ND-4	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel	N	**0.9** 1.6-1.9	ppb	N/A	100	Geology; Naturally occurring
Nitrate (as Nitrogen) WTP Well samples from 10/18/18	N	ND 1.83-2.55	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Odor	N	**1** 1-1	units	N/A	3	Natural sources
pH (WTP) range for wells	N	**6.97** 6.97-7.10	units		6.5-8.5	
Sodium[4] (WTP) Range for wells	N	**67.3**	ppm	N/A	N/A	Geology; Road Salt
Sulfate		**54** 41-48	ppm	N/A	250	Naturally occurring
Zinc WTP	N	**316** 16.4-16.7	ppb	N/A	5000	Galvanized pipe; **corrosion inhibitor**
Disinfection Byproducts Stage 1						
Chlorine	N	0.81 0.06-1.94-	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Disinfection Byproducts Stage 2 (4 samples collected quarterly 2/14/18, 5/8/18, 8/7/18 & 11/12/18)						
Haloacetic Acids (HAA5) [5] Range of HAA5s all sites	N	55.1 10.7-72	ppb	N/A	60	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)[6] Wemple Rd Range of TTHMs all sites	**Y**	98.6 20.8-147	ppb	0	80	By-product of drinking water chlorination
Total Organic Carbon[7] (monthly samples from 2018)						
Total Organic Carbon Monthly Compliance Ratio	N	**1.07-1.53**	N/A	Compliance ratio >=1	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation,
Unregulated Contaminant Monitoring 4 (Quarterly samples collected 1/9/18, 4/25/18, 7/23/18 &10/24/18 and Well samples collected 1/9/18 & 7/23/18)						
Manganese	N	2.8-18.7	ppb	N/A	300	Naturally occurring
HAA6	N/A	1.35-19.5	ppb			
HAA9	N/A	12.0-92.5	ppb			
TOC	N/A	3.24-4.57				

FOOTNOTES-

1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected**.** State regulations require that entry point turbidity must always be below 1.0 NTU**.** The regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU. We also monitor the distribution system 5 times a week with 0.62 NTU being the average turbidity.
2. The level presented represents the 90th percentile of 30 test sites. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 30 samples were collected at your water system and the 90th percentile value was the 27th sample with the fourth highest value (level detected 0.32 mg/l). The action level for copper was not exceeded at any of the sites tested.
3. The level presented represents the 90th percentile of 30 test sites. The action level for lead was not exceeded at any of the 30 sites tested.
4. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.
5. The average shown represents the highest LRAA at this site for the 1st quarter of 2018. The LRAA was not exceeded at any of the four sites during any of the 4 quarters.
6. The average is based on an LRAA. The average shown represents the highest LRAA for the 3rd quarter of 2018. The LRAA was also exceeded at this site in the other 3 quarters of 2018.
7. The Interim Enhanced Surface Water Treatment Rule (IESWTR) requires monitoring of raw and finished water Total Organic Carbon (TOC). Depending on the raw water alkalinity value, proper water treatment should remove between 15% to 35% of the raw water TOC thus reducing the amount of disinfection byproducts produced**.** The removal or compliance ratio should be 1 or greater.

TOWN OF BETHLEHEM WATER DISTRIC No.1 CLAPPER ROAD WTP TABLE OF DETECTED CONTAMINANTS* Public Water Supply Identification Number NY0130034						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity [1] (Highest turbidity sample from 7/28/18)	N	1.5	NTU	N/A	TT=5 NTU	Soil runoff
		100%			TT= % samples < 0.3	
Inorganic Contaminants (Sample data from 10/31/18) unless otherwise noted)						
Barium	N	169	ppb	2000	2000	Geology; Naturally occurring
Chloride	N	69.6	ppm	N/A	250	Geology; Naturally occurring
Color	N	2				Suspended and dissolved materials; naturally occurring organic compounds such as tannins
Nickel	N	0.7	ppb	N/A	100	Geology; Naturally occurring
Odor	N	1	units	N/A	3	Natural sources
pH	N	7.26	units		6.5-8.5	
Sodium[2]	N	25..9	ppm	N/A	N/A	Geology; Road Salt
Zinc	N	6.3	ppb	N/A	5000	Galvanized pipe; **corrosion inhibitor**
Synthetic Organic Compounds (sample from 10/18/17)						
Dalapon Resamples from 12/5/17	N	2.06 2.13	ppb	N/A	50	Runoff from herbicide used on rights of way
Disinfection Byproducts						
Chlorine (average) based on daily testing	N	1.06	ppm	MRDLG	MRDL	Used in the treatment and disinfection of drinking water
Range of chlorine residual		0.62-2.78		N/A	4	
Total Organic Carbon[3] (monthly samples from 2018)						
Total Organic Carbon Monthly Compliance Ratio	N	1.00-1.63	N/A	Compliance ratio >=1	TT	Organic material both natural and manmade; Organic pollutants, decaying vegetation,
Unregulated Contaminant Monitoring Regulation 4 (Quarterly samples collected 1/9/18, 4/25/18, 7/23/18 &10/24/18)						
Manganese	N	ND-.939	ppb	N/A	300	Erosion of natural deposits
TOC	N/A	1.6-2.27	ppm	N/A	N/A	
Bromide	N/A	58.1-74.8	ppb	N/A	N/A	

FOOTNOTES-

1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected. State regulations require that entry point turbidity must always be below 1.0 NTU. The regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU
2. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.
3. The Interim Enhanced Surface Water Treatment Rule (IESWTR) requires monitoring of raw and finished water Total Organic Carbon (TOC). Depending on the raw water alkalinity value, proper water treatment should remove between 15% to 35% of the raw water TOC thus reducing the amount of disinfection byproducts produced. The removal or compliance ratio should be 1 or greater.

* The tables presented for Bethlehem WD#1 depict only those analytes that were detected. Many of the test results were **NOT DETECTABLE.** The type/group (number of contaminants in each group) tested for were as follows: volatile organic compounds (53) +MTBE, synthetic organic compounds (36), asbestos, color & odor; radiological chemicals (2). The inorganic contaminants tested for and not detected were: arsenic, cadmium, chromium, mercury nitrate, silver, selenium, antimony, beryllium, sulfate thallium, iron, manganese and cyanide; microbiological contaminants -E. coli.

Glossary of Terms Used in Data Tables

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
90th Percentile Value- The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT) -A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
Locational Running Annual Average (LRAA) - The LRAA is calculated by taking the average of the four most recent samples collected at each individual site.
N/A-not applicable

NON-DETECTED CONTAMINANTS

According to Federal and State regulations, the Town of Bethlehem routinely monitors your drinking water for various contaminants. We monitor our water supply for more than 90 potential contaminants. Contaminants that were analyzed for but were found to be below detection limits are not included in this report, however, all required testing was completed according to Local, State, and Federal laws.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables, our system was in violation of the total trihalomethanes regulation in 2018. We exceeded the MCL for the total trihalomethanes at one of our sites during each of the 4 quarters of monitoring. Trihalomethanes are byproducts of the drinking water disinfection process, which is needed to kill harmful organisms that may be in the water. The trihalomethanes form when natural organic matter (like

decomposing leaves and algae) react with the chlorine that is added to the water. The EPA provides the following health effects information on trihalomethanes: "Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer." We are working closely with the EPA and NYS and Albany County Departments of Health to correct this violation. We are currently in construction for improvements at the Clapper Road WTP that will allow us to remove more natural organic matter from the water and relocate the point of chlorine addition to the end of the drinking water treatment process. This will result in a significant reduction in the formation of trihalomethanes in the distribution system and get us into compliance with the State and Federal regulation.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Town of Bethlehem is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at *http://www.epa.gov/safewater/lead*

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to continually monitor your drinking water daily, monthly, quarterly or annually for different contaminants and report to Local, State, and Federal authorities. During 2018, our system was in compliance with applicable New York State drinking water operating, monitoring and reporting requirements for drinking water regulations.

WHAT IS THE SOURCE WATER ASSESSMENT PROGRAM (SWAP)?

To emphasize the protection of surface and ground water sources used for public drinking water, Congress amended the Safe Drinking Water Act (SDWA) in 1996. The amendments require that New York State Department of Health's Bureau of Public Water Supply Protection is responsible for ensuring that source water assessments are completed for all of New York's public water systems.

A source water assessment provides information on the potential contaminant threats to public drinking water sources:

- Each source water assessment will: determine where water used for public drinking water comes from (delineate the source areas)
- Inventory potential sources of contamination that may impact public drinking water sources
- Assess the likelihood of a source water area becoming potential contaminated

SWAP summaries for each of our water sources are attached to this report.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water storage facilities; and
- Saving water lessens the strain on the water system during dry spells or droughts, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Only run the dishwasher and clothes washer when there is a full load.
- Turn off the tap when brushing your teeth and washing dishes.
- Use water saving showerheads.
- Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute.
- Water gardens and lawns for only a couple of hours after sunset or in the early morning to avoid excessive evaporation.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. If there is a period of time when no water is being used, like overnight or during the day if nobody is home, check your water meter at the beginning and end of the time period. If the meter is showing a different number at the end of the period, you have a leak.

2018 CAPITAL IMPROVEMENTS

We completed or continued to work on many capital projects in 2018. The design of the Clapper Road WTP was completed and put out to bid, with construction starting in January 2019. The project is scheduled to be completed by November 2020. Boiler replacement at the New Salem Water Treatment Plant was completed and put into service. A water main extension on Rt. 144 (River Road) was installed to improve water quality by eliminating two dead ends in our water distribution system. Solar Bee mixers were installed in the Vly Creek Reservoir to reduce algae growth, and tank mixers were installed in the 5.75 million gallon tank to improve water quality. Finally, a new gate system was installed on the Vly Creek Reservoir dam to better control the water levels in the reservoir.

CLOSING

Thank you for allowing us to continue providing you and your family with clean, quality drinking water this year. We ask that all of our customers help us protect our water system and resources. Please call the Department of Public Works at (518) 439-4955 if you have any questions or concerns.

Town of Bethlehem
NY0100191
Source Water Assessment Summary

The NYS DOH has completed Source Water Assessments for Bethlehem's Vly Creek Reservoir, New Salem wells and the Infiltration Gallery & well field. The assessments are summarized below. The assessments include susceptibility ratings based on the risk posed by each potential source of contamination and how likely contaminants could enter the wells, the reservoir or Hudson River. The susceptibility rating is an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. See section "Are there contaminants in our drinking water?" of this report, for information concerning low levels of contaminants in your water.

New Salem Wells: The wells draw water from a high yield aquifer. Contaminants, if present, can move relatively quickly in high yield aquifers. The assessment has determined that the wells are susceptible to the microbes; bacteria, viruses and protozoa. Microbes can originate from improperly maintained or failing septic systems. Disinfection of the well water insures that any microbes that might reach the wells will be eliminated. The assessment has also determined that the wells are susceptible to various chemical types, such as nitrates, pesticides and petroleum products. Nitrates and pesticides can come from agricultural practices. Petroleum products can originate from leaking storage tanks. Fortunately, stored fuels are some distance from the wells.

Vly Creek Reservoir: This assessment found the amount of agricultural lands in the Vly Creek Reservoir's assessment area results in a potential for protozoa and pesticide contamination. However, there are presently no notable contamination threats.

The Hudson River and Dinmore Road well field (Clapper Road WTP raw water source): The assessment found the amount of pasture in the assessment area results in a potential for protozoa contamination. There is also a high density of sanitary wastewater discharges upstream, which result in susceptibility to other contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination.

Both of the Bethlehem water treatment plants perform multi-level treatment to insure you receive safe drinking water. Additionally, as this annual report shows your water is routinely monitored for a great number of potential contaminants.

A copy of the full Source Water Assessment, including a map of the assessment area, is available for review by contacting us at the number provided in this report.

City of Albany
NY0100189
Alcove and Basic Creek Reservoirs
Source Water Assessment Summary

The NYS DOH has completed a Source Water Assessment for the City of Albany's Alcove and Basic Creek Reservoirs. The assessments are summarized below. The assessments include susceptibility ratings based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoirs. The susceptibility rating is an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. See section "Are there contaminants in our drinking water?" of this report, for information concerning low levels of contaminants in your water.

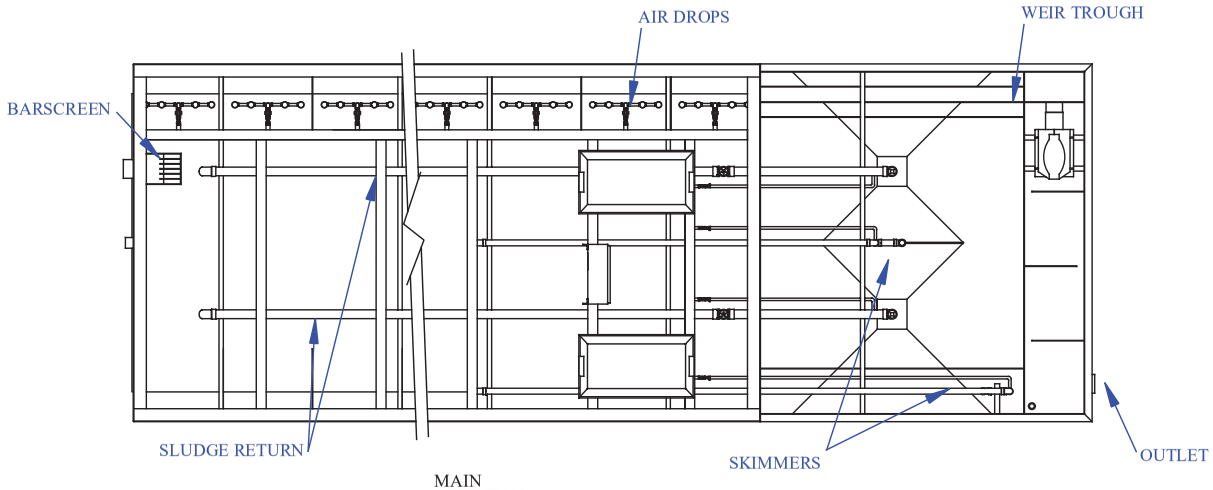
This assessment found the amount of pasture in the Alcove Reservoir assessment area results in a potential for protozoa contamination. It should be noted that the Albany Department of Water routinely tests for disease causing protozoa. In the last several years none have been detected in the reservoir. There are no other notable contamination threats to the reservoir. It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

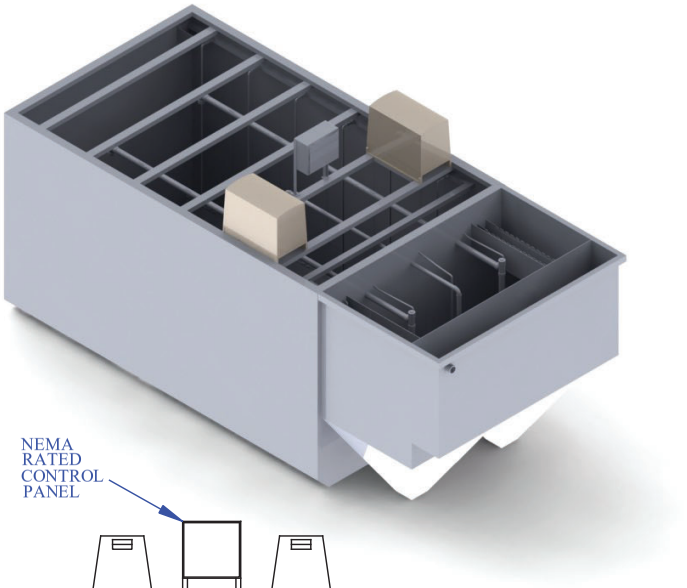
This assessment found the amount of pasture in the Basic Creek Reservoir assessment area results in a potential for protozoa contamination. While there are some facilities present that are permitted to discharge, they do not represent an important threat to source water quality based on the type of discharge. There is also notable contamination susceptibility associated with landfills north of the reservoir. It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination. Albany's water treatment plant performs multi level treatment to insure you receive safe drinking water. Additionally, as this annual report shows your water is routinely monitored for a great number of potential contaminants.

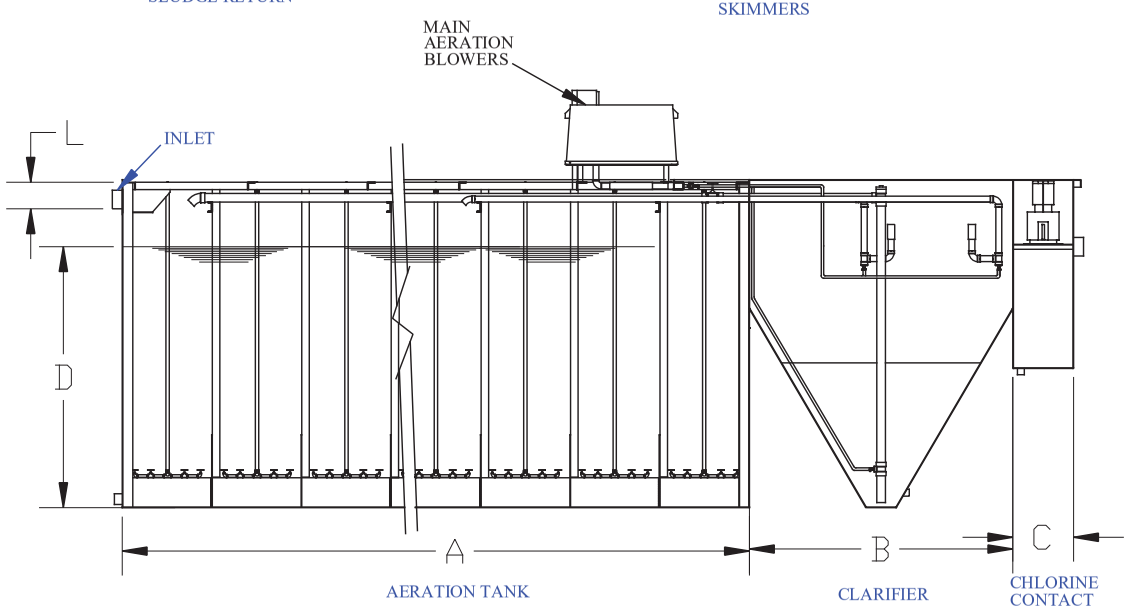
APPENDIX G

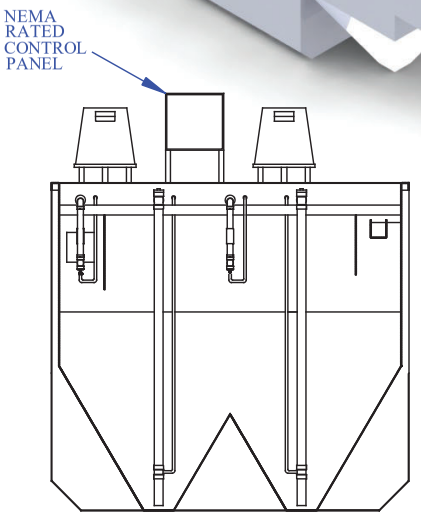
ON-SITE SEWAGE TREATMENT PACKAGE

MODEL	GPD	AERATION VOLUME	CLARIFIER VOLUME	C.C.T. VOLUME	A	B	C	D	E	F	G	H	J	K	L
B-15.0	15,000	15,429	3,242	399	18'-0"	5'-9"	2'-0"	9'-8"	11'-0"	7'-0"	4'-1"	2'-6"	4'-10"	12'-0"	0'-11"
B-16.0	16,000	16,286	3,242	428	19'-0"	5'-9"	2'-0"	9'-8"	11'-0"	7'-0"	4'-1"	2'-6"	5'-0"	12'-0"	0'-11"
B-17.0	17,000	17,143	3,242	457	20'-0"	5'-9"	2'-0"	9'-8"	11'-0"	7'-0"	4'-1"	2'-6"	5'-2"	12'-0"	0'-11"
B-18.0	18,000	18,000	3,242	485	21'-0"	5'-9"	2'-0"	9'-8"	11'-0"	7'-0"	4'-1"	2'-6"	5'-4"	12'-0"	0'-11"
B-19.0	19,000	19,715	3,242	514	23'-0"	5'-9"	2'-0"	9'-8"	11'-0"	7'-0"	4'-1"	2'-6"	5'-6"	12'-0"	0'-11"
B-20.0	20,000	20,572	4,202	657	24'-0"	8'-10"	2'-0"	9'-8"	11'-0"	4'-4"	5'-4"	2'-6"	6'-4"	12'-0"	0'-11"
B-22.5	22,500	23,144	4,202	657	27'-0"	8'-10"	2'-0"	9'-8"	11'-0"	4'-4"	5'-4"	2'-6"	6'-4"	12'-0"	0'-11"
B-25.0	25,000	25,715	4,202	657	30'-0"	8'-10"	2'-0"	9'-8"	11'-0"	4'-4"	5'-4"	2'-6"	6'-4"	12'-0"	0'-11"









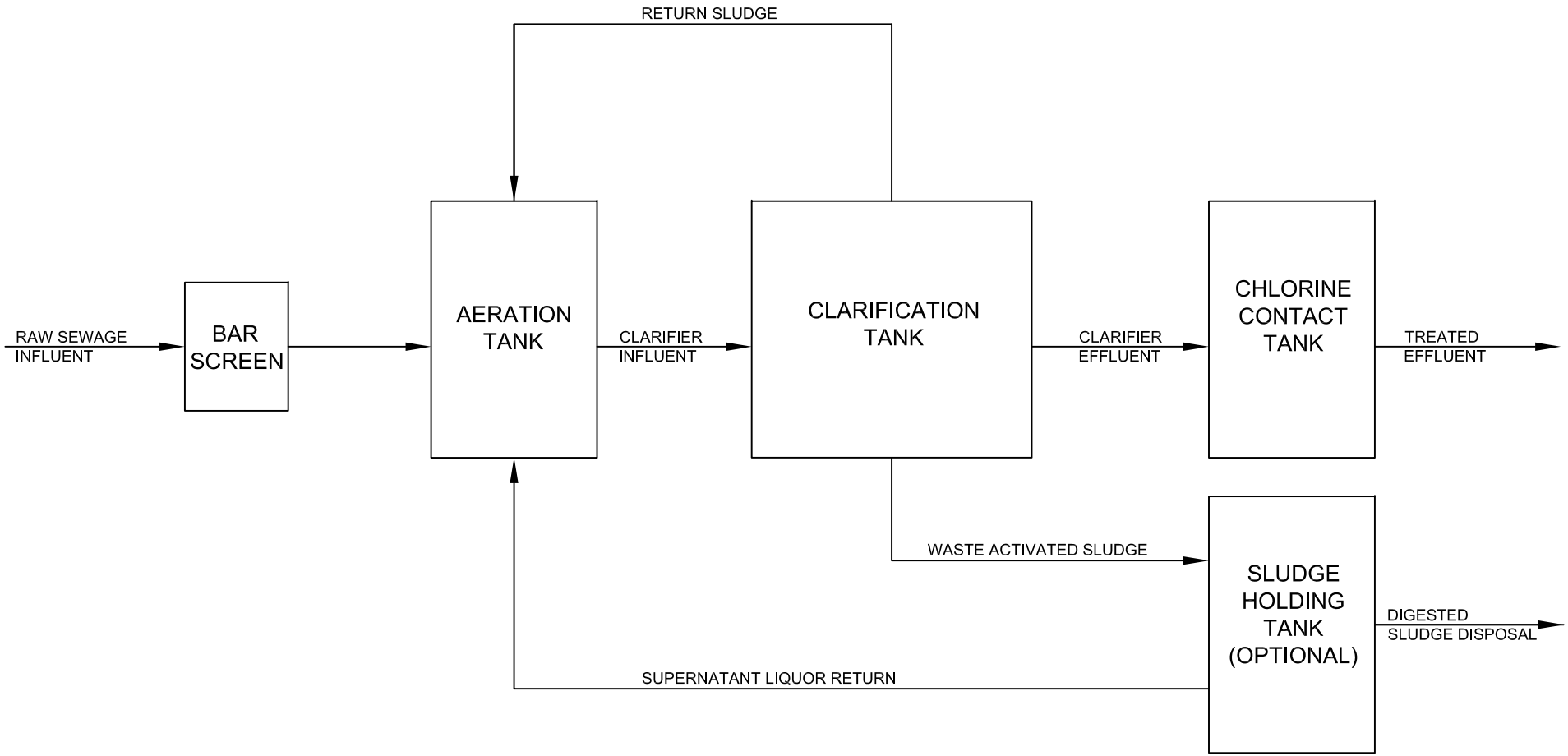
- ALL INLET AND OUTLETS ARE 4"

delta treatment systems

TITLE: STEEL PACKAGE PLANTS 15,000 GPD - 25,000 GPD

SIZE A | DWG. NO. B-15.0 TO B-25.0 | REV A

SCALE: NTS | WEIGHT: | SHEET 1 OF 1



FLOW DIAGRAM
EXTENDED AERATION PROCESS

DELTA ENVIRONMENTAL PRODUCTS
P. O. BOX 969 DENHAM SPRINGS, LA 70727

SPECIFICATIONS
DELTA EXTENDED AREATION
WASTE TREATMENT PLANT

GENERAL SPECIFICATIONS
The treatment plant described by these specifications is a Delta Process Equipment Incorporated Model B-17.0 . The plant shall essentially consist of an inlet bar screen, rectangular aeration tank, air diffusion system with blower assembly, hopper type clarifier with necessary baffles and overflow weir trough, sludge return piping, surface skimmers, and chlorination tank. Additional features and accessories are as shown on the Delta Process job drawing or drawings and as hereinafter specified and described.

OPERATING CONDITIONS
The plant shall be capable of treating 17,000 gallons per day of domestic raw sewage waste with an organic loading of 28.57 pounds of BOD5. Load figures are based on a design population of _____and per capita daily BOD5 of _____ pounds. A minimum of 2100 cubic feet of aeration capacity shall be provided for each pound of BOD5.

CONSTRUCTION
The treatment plant proper shall be constructed of ¼ inch structural grade steel plate adequately braced for either above or below ground installation. All welded steel structural members shall be joined by electric arc welding. Where required for structural strength or water tightness, such welds shall be continuous.

CORROSION PROTECTION
Corrosion protected or corrosion resistant materials shall be used throughout. All tank surfaces shall be sandblasted to a commercial finish (SSPC-SP6). Immediately after sandblasting, one coat of coal tar epoxy shall be applied. A second coat shall be applied no later than 48 hours after application of the first coat. Total film thickness of the finished coating shall be approximately 12 mils. All grating shall be hot dip galvanized after fabrication. Cathodic protection shall be provided for below grade plants.

SLUDGE HOLDING / DIGESTER TANK (Optional)
A sludge holding tank shall be provided as an integral part of the aeration tank at the inlet end. The compartment shall be of fabricated steel and conform to the design of the aeration tank structure. The compartment shall provide _____ gallons capacity based on _____ people and _____ cubic feet per person.

Air shall be supplied at the rate of 30 cfm per 1000 cubic feet of tank capacity.

The sludge holding tank shall be complete with air diffuser assembly, manually operated sludge diversion valve and decant port to the aeration tank.

Digested sludge shall be drawn by manual discharge.

INFLUENT CHAMBER
A welded steel influent chamber shall be provided as shown on the plans to receive the incoming flow. The inlet chamber shall be designed with a bar screen fabricated of one-quarter inch by one-inch flat steel bars on two-inch centers.

AERATION TANK
The aeration tank shall be sized to provide 24-hour detention of the design flow. Tank design shall be such as to provide efficient mixing and aeration, and to maintain hydraulic velocities sufficient to prevent deposition of solids.

AIR DIFFUSION
Air diffusion drop pipes of 1-inch schedule 40 galvanized pipe shall supply air to diffusers. Each drop pipe shall have a plug valve for air adjustment and a union connection to facilitate drop pipe removal. Diffusers shall be spaced a maximum of 12 inches apart so as to insure uniform air bubble distribution. Drop pipes shall be easily removable by one man without the aid of hoists or other mechanical advantage.

CLARIFIER
The clarifier shall be designed so as to provide optimum liquid-solid separation and shall be sized to provide four hours detention of full design flow. Hopper walls shall be sloped a minimum of 1.7 vertical to 1.0 horizontal with the flat bottom area of the hopper no greater than one square foot. Surface rise rate shall not exceed 400 gallons per square foot per day based on a 24-hour runoff period. The settling tank shall include inlet hydraulic baffling, scum baffles, and effluent weir trough. Adjustable multiple V-notch PVC weir plates secured with stainless steel machine screws shall be provided for final leveling at the effluent trough. The average effluent weir overflow rate shall not exceed 1,700 gallons per day per foot of weir length.

SLUDGE RETURN
A 3-inch diameter airlift sludge pump, with piping for routing the sludge to the inlet of the aeration tank, shall be provided in each clarifier hopper. A plug valve shall be provided for air adjustment to vary the pumping rate from 50 to 150% of average daily flow. The pump shall be constructed of schedule 80 PVC pipe. A removable plug shall be provided at the top of the pump to allow cleaning and maintenance.

SCUM RETURN
Two scum pumps shall be provided in the clarifier to return scum to the aeration tank. The pump inlets shall be vertically adjustable to maximize skimmer efficiency. Plug valves shall be provided for air adjustment. The pumps shall be constructed on 2-inch diameter schedule 80 PVC pipe.

CHLORINE CONTACT TANK
A chlorine tank shall be included integral to the treatment plant proper to achieve chlorination of the final effluent. The tank shall be baffled to provide proper mixing and shall be sized to provide a detention time of not less than 30 minutes at design flow.

CHLORINATION
A chlorinator shall be provided for chlorination of the plant effluent. The chlorinator shall operate on the flow-through principal. Flow through the chlorinator is regulated by a weir plate sized to provide water contact with the appropriate number of tablets in the feed tubes for constant, controlled dosage.
The chlorinated effluent then flows through the chlorine tank where it is held for the required time to permit effective disinfection before final discharge. The chlorinator shall be a _Jet_ Model _108_.

BLOWERS
Provide _duplex_ air blower / blowers, with sufficient capacity to furnish total treatment plant air requirements. Each blower shall be capable of delivering _80_ cfm at _5.0_ psi discharge pressure. The blower assembly shall be mounted on a structural steel base and will be complete with inlet filter silencer and vibration isolation pipe coupling. When duplex blowers are provided, each blower shall be equipped with a check valve. Belt drive assemblies shall be furnished complete with sheaves, bushings and belts as required. A molded fiberglass enclosure shall be furnished for each blower-motor assembly to provide weather protection and noise suppression. The blower shall be a positive displacement _Sutorbilt_ Model _3M_.

BLOWER MOTOR
Each blower shall be driven by a _5.0_ HP, ____ phase, _____ volt, 60-cycle _2,075_ RPM, drip proof electric motor. Motor shall not be loaded beyond nameplate ratings.

ELECTRICAL
A factory assembled electrical control center shall be provided. The control center shall contain circuit breakers of the thermal magnetic type for disconnect purposes and protection of motor branch circuits. Circuit breakers shall also be provided for control and accessory circuits. Magnetic starters shall include overload protection in all phase legs and shall be of the ambient compensated type. A time clock shall be provided to vary the running time of each blower and to alternate the blowers on plants where dual blowers are supplied. All components shall be internally wired to a numbered terminal strip for convenient wiring by electrical contractor. The control center enclosure shall be of NEMA 4X construction. Manual switches shall be provided for electrical equipment mounted on the plant. All electrical conduit, wiring, and connections from the power pole or source to the manufacturer's control panel, and from the panel to job assembled equipment on the treatment plant shall be the responsibility of the contractor.

PIPING
All necessary piping and valves inside the plant shall be provided by the manufacturer. At the exterior wall of the plant, as shown on the plans, the manufacturer shall provided properly sized inlet and outlet grout boxes. The manufacturer shall not be responsible for piping or valves outside of the treatment plant. All air valve actuators inside the plant shall be readily accessible to the operator.

GRATING, LADDER, AND HANDRAIL
Galvanized bar grating of adequate strength supported by heavy structural steel braces shall be provided over the service access areas of the plant. The grating shall be constructed of rectangular steel bearing bars with cross bars every 4 inches. Sections of grating over areas requiring service access shall be limited to a size readily removable by one man. Complete grating over the entire plant shall be optional.

An access ladder shall be provided for above ground plants. Uprights shall be constructed of steel angle with rungs of ¾" minimum diameter. The ladder shall be of welded construction with a maximum of 12" rung spacing.

A handrail shall be provided, as required, around grating walkway areas. The railing and uprights shall be constructed of steel angle joined together by electrical arc welding. The handrail shall be built in compliance with OSHA requirements and corrosion protected in a manner similar to the treatment plant proper.

START UP
After the treatment plant has been installed with all necessary electrical connections completed and influent and effluent piping in place, the manufacturer shall inspect the installation, inform the owner as to any necessary adjustments, and, instruct the plant operator on proper operation of the plant. A maintenance manual shall be provided for the operator. The manual shall include normal operation description, maintenance schedule, wiring diagram, and manufacturer's equipment manuals for major components.

WORKMANSHIP AND EXPERIENCE
All workmanship and materials shall be of the highest quality. The waste treatment plant shall be the product of an experienced manufacturer actively engaged in research and development of sewage treatment facilities.

APPENDIX H

60 FOOT BUILDING PHOTO SIMULATION

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.

APPENDIX I

EMERGENCY SERVICES CORRESPONDENCE

SELKIRK FIRE DISTRICT

BOARD OF FIRE COMMISSIONERS

P.O. Box 5, Selkirk, New York 12158
(518) 767-0010 Fax: (518) 767-0015

Charles Wickham Jr., *Chairman*

Robert Burns, Deputy Chairman
Edward Ward, Commissioner
Stephanie Krause, Secretary
Mitchell Lake, Commissioner
Timothy Stark Sr., Commissioner
Doug Ophardt, Treasurer

10-18-19

Ashley A. Erdmann, PE
McFarland-Johnson Inc.
60 Railroad Place Suite 402
Saratoga Springs, New York 12866

RE: Port of Albany Expansion Project - Beacon Island Property, Town of Bethlehem

Dear Ms. Erdmann,

During our recent discussions you indicated this project is an expansion of the current Port of Albany within the Town of Bethlehem, south of the Normans Kill Creek. Your map indicates a maximum building (worst case scenario) of 1.13 million Sq. Ft. could be built. However, a specific tenant/project has not been identified, therefore additional discussions will be required once a tenant is acknowledged and the use of the site is made available. Only then will we be able to discuss additional resources, if any.

We also discussed the following:

- The need for adequate water supply.
- Future planning to extend municipal water further into the Port facility.
- Designated Drafting site along the Hudson River.

In conclusion, The Selkirk Fire District will serve this proposed project along with our mutual- aid Departments if needed.

Thank you for asking for our input, and we look forward to work with you and The Albany Port District Commission in the future.

Respectfully,

Charles Wickham Jr.

Charles A. Wickham Jr.
Chairman-Board of Fire Commissioners
(c) 518-669-7816
cwickham@selkirkfd.org

CC: Commissioners
Chief

McFarland Johnson

60 Railroad Place
Suite 402
Saratoga Springs, NY 12866
Phone: (518) 580-9380
Fax: (518) 580-9383
www.mjinc.com

TELEPHONE CONVERSATION MEMO

NAME/COMPANY: Charles Wickham and Stephanie Krause from Selkirk Fire Department, Steve Boisvert and Ashley Erdmann McFarland Johnson, and Richard Hendrick of the Port of Albany

DATE: October 8, 2019

TIME: 10:00am

SUBJECT: Port of Albany Expansion Project

PROJECT NO.: 18437.00

Summary:

- MJ provided a brief overview of the Project, the emergency access driveways, and the proposed water supply. The Project Site currently has no municipal water.
    - The Project will be tying into the Town water and bringing water to the site through two (2) potential connection points
        - Commissioner Wickham asked if we could help get water to buildings north across the Normans Kill.
            - Port agreed to provide a watermain stub on site just south of the Normans Kill for future extension
    - The building will include a sprinkler system with a fire exterior loop
- Commissioner Wickham requested adequate access for a pumper truck to be able to draw water from the Hudson River. This could be accomplished as follows:
    - Project can accommodate either via a wharf or specifically created flat, solid area adjacent to river, or
    - Project can provide a dry hydrant
- Commissioner Wickham stated a 1.13 million SF building at 85 FT tall can be serviced through their existing mutual aid connections with other local firefighting departments, i.e. City of Albany
- Commissioner Wickham stated they would provide a "Will Serve" letter by the end of the week for the Port of Albany Expansion Project

APPENDIX J

UPDATED ECONOMIC & FISCAL IMPACT REPORT

Economic & Fiscal Impact

Port of Albany Expansion Project

camoin associates 3|10 Ltd
ECONOMIC DEVELOPMENT

120 West Avenue, Suite 303

Saratoga Springs, NY 12866

518.899.2608

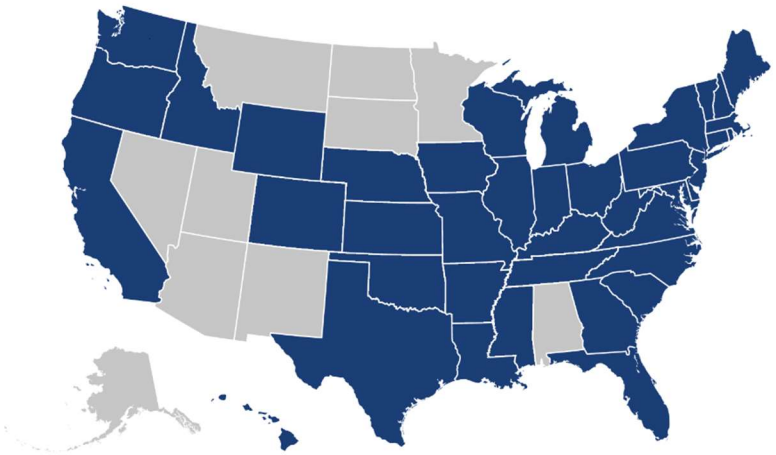
ABOUT CAMOIN 310

Camoin 310 has provided economic development consulting services to municipalities, economic development agencies, and private enterprises since 1999. Through the services offered, Camoin Associates has had the opportunity to serve EDOs and local and state governments from Maine to California; corporations and organizations that include Lowes Home Improvement, FedEx, Amazon, Volvo (Nova Bus) and the New York Islanders; as well as private developers proposing projects in excess of $6 billion. Our reputation for detailed, place-specific, and accurate analysis has led to projects in 40 states and garnered attention from national media outlets including Marketplace (NPR), Forbes magazine, The New York Times and The Wall Street Journal. Additionally, our marketing strategies have helped our clients gain both national and local media coverage for their projects in order to build public support and leverage additional funding. We are based in Saratoga Springs, NY, with regional offices in Portland, ME; Boston, MA; Richmond, VA and Brattleboro, VT. To learn more about our experience and projects in all of our service lines, please visit our website at **www.camoinassociates.com**. You can also find us on Twitter **@camoinassociate** and on **Facebook**.

THE PROJECT TEAM

Rachel Selsky, AICP
Project Principal

Daniel Stevens, AICP
Project Manager and Analyst



CONTENTS

EXECUTIVE SUMMARY

The Albany Port District Commission (APDC) recently purchased approximately 81 acres of vacant land in the Town of Bethlehem to expand industrial port operations (referred to as "Port of Albany Expansion Project" or the "Project"). The addition of 81 acres of land, known formally as Beacon Island, increased the size of the port district by 25% and will allow the port, which had been fully built out, to attract new business investment and development. While no specific tenants or projects have been identified to date, APDC has been exploring several development scenarios with project sizes ranging from 1.13 million square-feet to 160,000 square feet. An analysis was conducted by Camoin 310 to estimate the total economic impact and fiscal benefits of developing the site for future industrial operations. The following development scenarios were provided by McFarland Johnson and Camoin 310 did not analyze the market viability of these concepts.

Port Development Concepts		
Concept ID	Total Square Feet	Description
A.	1,130,000	Single 1-Story Industrial Building
B.	900,800	Single Industrial Building With 2-Story Admin
C.	810,000	Four 1-Story Industrial Buildings, Each with 2-Story Admin
D.	160,000	Single 1-Story Industrial Building with 2-Story Admin
D.1	508,000	Single 1-Story Industrial Building with 2-Story Admin

Source: McFarland Johnson

Economic Impact

Based on the economic impact analysis and assumptions developed, the total new jobs, earnings, and sales were calculated for Albany County. Assuming the maximum build out of the property to a 1.13 million square-foot industrial facility, 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, and approximately $295 million in new sales. 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 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 $113 million in sales 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 jobs in supporting industries in the local economy during the construction phase.

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	$ 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	$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

Fiscal Benefits

The 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 selected. 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).

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*	$ 4,330,000	$ 3,460,000	$ 3,120,000	$ 2,080,000	$ 6,580,000
Town of Bethlehem and Other Local Property Tax Revenue*	$ 1,000,000	$ 801,000	$ 723,000	$ 481,000	$ 1,520,000
Total Tax Revenues	**$ 13,000,000**	**$ 10,700,000**	**$ 10,000,000**	**$ 4,650,000**	**$ 14,200,000**

Source: Camoin 310

*Includes both direct on-site impacts and off-site impacts generated from economic impact of development

Fiscal Costs (Municipal Services)

The potential increase in fiscal costs was examined, including potential cost increases for municipal service providers. Representatives of the Bethlehem Police Department, the Selkirk Fire Department, and Delmar-Bethlehem EMS were interviewed. Based on the input provided, minor new costs are expected for the Bethlehem Police Department and Delmar-Bethlehem EMS, as follows:

Summary: Annual Municipal Service Cost Impacts (Concept A)		
Service Provider	Type of Impact	Estimated Annual Cost Increase
Bethlehem Police Department	Increased overtime expenditures associated with incremental call volume	$ 15,743
Delmar-Bethlehem EMS	Incremental net increase in staffing costs associated with incremental call volume	$ 2,558
Total		**$ 18,302**

Source: EMSI; Camoin 310

School District Impact

The impacts to the Bethlehem Central School District (the "District") were studied to understand potential new revenue and new costs the District could expect as a result of the Project. As a purely industrial development, the Project will not directly generate any new school aged children who will be enrolled in the District and therefore no new costs to the district attributable to the Project are anticipated.

As a result, the District will therefore experience a net fiscal benefit from the Project due to an influx of new property tax revenue and no new costs. The initial annual estimated new property tax revenues from the Property and the economic impacts generated within the School District are expected to total between $2.1 million and $6.7 million, depending on the development concept. A 10-year projection of the property tax revenue generated by the Project for the District indicates the potential for between $21.2 million and $67.3 million in new property tax revenue for the district over 10 years.

Estimated School District Tax Revenues (Indirect Off-Site Revenue) (10-Years)					
	Concept A	Concept B	Concept C	Concept D	Concept D.1
10-Year Total	$ 44,300,000	$ 35,400,000	$ 31,900,000	$ 21,200,000	$ 67,300,000
10-Year Average	$ 4,430,000	$ 3,540,000	$ 3,190,000	$ 2,120,000	$ 6,730,000

Source: Camoin 310

1. INTRODUCTION

The Albany Port District Commission (APDC) recently purchased approximately 81 acres of vacant land in the Town of Bethlehem to expand industrial port operations (The "Port of Albany Expansion Project" or the "Project"). The addition of the land, known formally as Beacon Island, increased the size of the port district by 25% and will allow the port, which had been fully built out, to attract new business and development. While no specific tenants or projects have been identified to date, APDC has been exploring what future development may occur on the property by identifying several development concepts ranging from 1.13 million square feet to 160,000 square feet.

McFarland Johnson is working with the Port to prepare a Draft Generic Environmental Impact Statement as part of the State Environmental Quality Review (SEQR) process for future development of the property. McFarland Johnson commissioned Camoin 310 to complete an economic and fiscal impact study to address the local fiscal and economic impact of the project and any potential impacts to the Bethlehem Central School District.

Specifically, the following analyses are included in this report:

ECONOMIC IMPACT

- One-time economic impact from construction of new facilities
- Annual economic from new industrial business operations

FISCAL IMPACT

- New local fiscal revenues including property tax revenue and sales tax revenue
- New municipal service delivery costs to local government (emergency services and highway maintenance)

SCHOOL DISTRICT IMPACT

- Identification of new costs to the school district
- Estimated new school district property tax revenues

1.2 Development Scenarios

A total of five port development concepts were prepared by McFarland Johnson, as shown in the table below. The property is currently zoned as Heavy Industrial (HI) and it is anticipated that any new development will be consistent with the allowable industrial uses within the district. As no specific types of industrial uses have been identified (e.g., manufacturing, warehousing), this analysis assumes "general" industrial development will occur. Specific methodologies are detailed further in Section 2. No market analysis was conducted as part of this report to determine the viability of these concepts.

Concept A, consisting of a 1.13 million square foot two-story industrial use facility represents the maximum development potential of the site based on existing zoning and site capacity and is the focus of this analysis as the "preferred alternative." The economic and fiscal impacts are also presented for the alternative concepts.

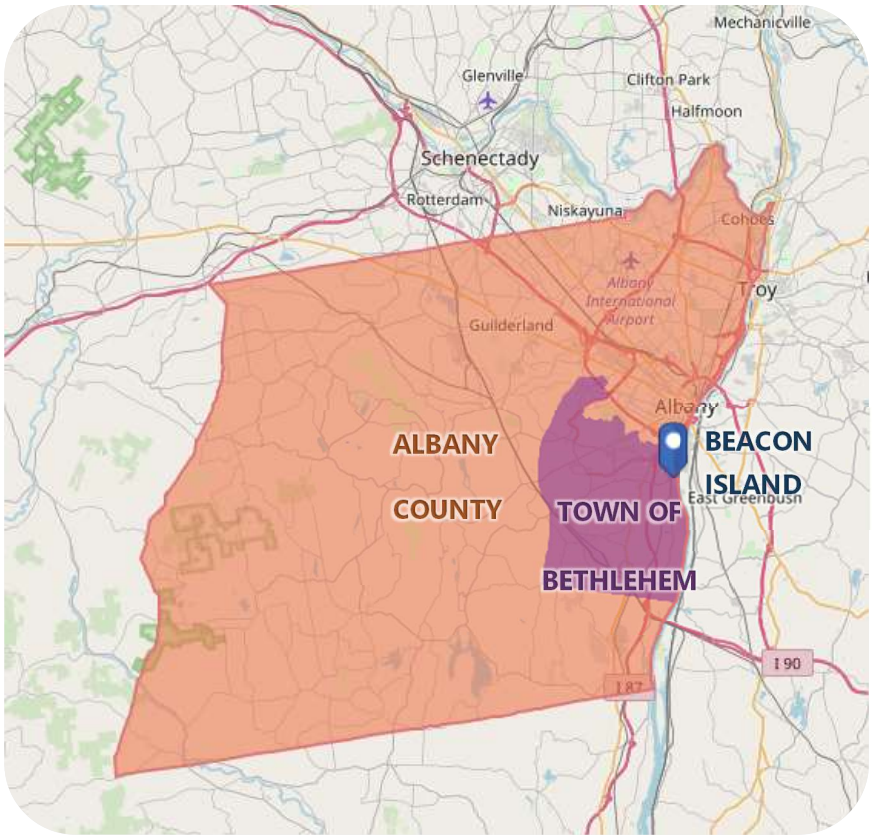
Port Development Concepts		
Concept ID	Total Square Feet	Description
A.	1,130,000	Single 1-Story Industrial Building
B.	900,800	Single Industrial Building With 2-Story Admin
C.	810,000	Four 1-Story Industrial Buildings, Each with 2-Story Admin
D.	160,000	Single 1-Story Industrial Building with 2-Story Admin
D.1	508,000	Single 1-Story Industrial Building with 2-Story Admin

Source: McFarland Johnson

1.3 Analysis Geographies

The economic impact analysis considers the new economic activity generated by the Project within Albany County. As such, results are reported as new jobs, wages, and sales generated countywide.

Fiscal impacts are examined at each local level where substantial effects would be expected, including Albany County, the Town of Bethlehem, and relevant local taxing jurisdictions. The following reference map shows the geographies of Albany County, the Town of Bethlehem, and the location of the subject property (Beacon Island).

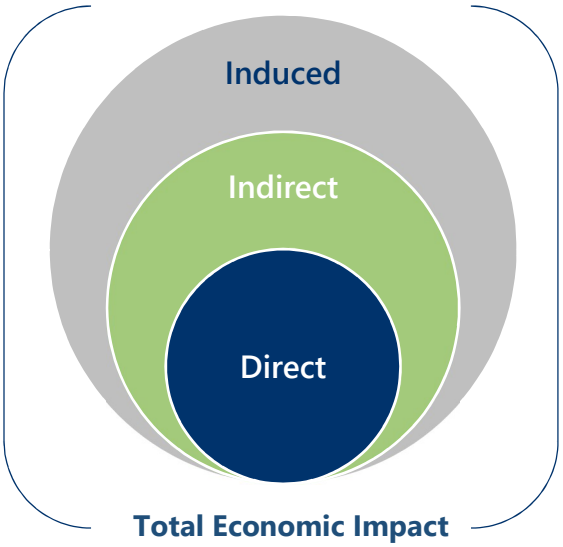


2. ECONOMIC IMPACT

Methodology

The economic impact includes not only the "direct" economic impacts, such as on-site jobs, but also the secondary economic impacts that are generated throughout the economy through the economic "ripple" effect. The three specific types of impacts considered in the analysis include:

Measuring the Total Economic "Ripple Effect"



- **Direct:** The most immedidate impacts, which include the jobs at new businesses that locate on the site and the local spending on goods and services by those new businesses.
- **Indirect:** Indirect effects occur at businesses within Albany County that supply goods and services to new businesses on Beacon Island and re-spend a portion of that revenue. In other words, for every dollar spent by a new Beacon Island business at a local supplier, a portion of that dollar will again be spent on goods and services at other businesses in the county. This is considered the indirect effect.
- **Induced:** Another "ripple" effect that occurs is when workers at both directly impacted businesses and indirectly impacted businesses spend a portion of their wages at businesses within Albany County for things such as retail goods and services. The portion of the spending by new businesses on Beacon Island that is paid to workers and re-spent in the county economy is consdiered the induced impact.

The sum of the direct, indirect, and induced impacts equals the total economic impact of new industrial development. The EMSI Input-Output model is used to calculate the total economic impact, including the three different types of impacts.

Economic Impact of Construction

Estimated Construction Costs

Preliminary order of magnitude construction cost estimates were provided by McFarland Johnson for each of the development scenarios. The costs range from a high of $200 million (Concept A) to a low of $85 million (Concept D). The costs include new building construction, site work, bridge construction, rail extensions, and a wharf.

Due to the fact that no specific development proposals currently exist, it is not possible to know the proportion of construction spending on labor and materials that will be sourced from within Albany County. To estimate the impact specific to Albany County, the portion of construction services sourced from within Albany County (contractors based in the county) was estimated by determining the number of existing industrial building and

heavy civil engineering construction jobs in Albany County relative to the Capital Region as a whole. Albany County's proportion of these jobs was found to be approximately 42%. Therefore, the analysis assumes that 42% of construction spending will occur within Albany County.

The estimated construction cost for each concept is shown in the following chart along the with estimated portion of that cost that will be spent within Albany County.

Estimated Construction Costs			
Concept ID	Total Square Feet	Estimated Construction Cost	Est. Construction Spending in Albany County
A.	1,130,000	$ 200,000,000	$ 84,000,000
B.	900,800	$ 140,000,000	$ 58,800,000
C.	810,000	$ 130,000,000	$ 54,600,000
D.	160,000	$ 85,000,000	$ 35,700,000
D.1	508,000	$ 110,000,000	$ 46,200,000

Source: McFarland Johnson; Camoin 310

Construction Impact Analysis

The results of the analysis are shown below for each of the concepts. Note that "induced" impacts are included in the "indirect" impacts reported below.

One-Time Construction Economic Impact: Scenario A			
	Direct	Indirect	Total
Jobs	932	168	1,100
Earnings	$ 31,182,429	$ 9,666,553	$ 40,848,982
Sales	$ 84,000,000	$ 29,139,130	$ 113,139,130

Source: EMSI; Camoin 310

One-Time Construction Economic Impact: Scenario B			
	Direct	Indirect	Total
Jobs	653	117	770
Earnings	$ 21,827,700	$ 6,766,587	$ 28,594,287
Sales	$ 58,800,000	$ 20,397,391	$ 79,197,391

Source: EMSI; Camoin 310

One-Time Construction Economic Impact: Scenario C			
	Direct	Indirect	Total
Jobs	606	109	715
Earnings	$ 20,268,579	$ 6,283,259	$ 26,551,838
Sales	$ 54,600,000	$ 18,940,435	$ 73,540,435

Source: EMSI; Camoin 310

One-Time Construction Economic Impact: Scenario D			
	Direct	Indirect	Total
Jobs	396	71	468
Earnings	$ 13,252,532	$ 4,108,285	$ 17,360,817
Sales	$ 35,700,000	$ 12,384,130	$ 48,084,130

Source: EMSI; Camoin 310

One-Time Construction Economic Impact: Scenario D.1			
	Direct	Indirect	Total
Jobs	513	92	605
Earnings	$ 17,150,336	$ 5,316,604	$ 22,466,940
Sales	$ 46,200,000	$ 16,026,522	$ 62,226,522

Source: EMSI; Camoin 310

Economic Impact of Operations

Estimated On-Site Jobs

The first step to understanding the total annual economic impact of each development concept is to estimate the number of on-site (direct) jobs that can be expected. The number of jobs at industrial facilities is closely correlated with the size and type of facility. Typically, industrial facilities employ one worker per 500 to 1,500 square feet with higher intensity operations such as manufacturing employing a greater number of workers per square foot compared to a use such as warehousing and distribution. The square feet per job ratio can even vary within categories. For example, a traditional warehouse may employ one worker per 1,500 square feet or greater, while on average a large-scale e-fulfillment center requires one employee per 700 to 1,000 square feet of space.[1]

Development concepts A, B, and C do not assume any particular type of industrial space or business. Therefore, the analysis examined the range of industrial jobs to square feet ratios to determine an appropriate value to utilize in estimating the number of on-site jobs.

Square Feet of Industrial Space per Worker		
Square feet per Worker	Space Type	Source
527	General Industrial	BOMA
2,000	Regional Warehouse	URS
2,000	Refrigerated Distribution	URS
500	Flex	URS
781	Warehousing/Storage	ITE
535	Manufacturing	ITE
549	General Light Industrial	ITE
549	Heavy Industrial	ITE
500	Industrial Park	ITE
535	Manufacturing	ITE
781	Warehousing/Storage	ITE
850	Warehousing/Storage	NAIOP
900	General Industrial	NAIOP
1,572	Warehousing/Storage	U.S. EIA
2,114	Warehousing/Storage	USDOE

Sources:

BOMA	Building Owners and Managers Association
URS	URS Community Planning & Urban Design Group
ITE	Institute of Transportation Engineers
NAIOP	Commercial Real Estate Development Association
U.S. EIA	U.S. Energy Information Administration
USDOE	U.S. Department of Energy

The table to the right provides several estimates for industrial square feet per worker ranging from 500 to approximately 2,100. The average of the identified values

[1] NAIOP Commercial Real Estate Development Association. "E-Commerce is Growing, and So is Demand for Warehouse Labor." 2017.

is 980, which is in line with the industry standard approach of 1,000 square feet of industrial space per worker. **Therefore, the 1,000 SF/worker ratio ("employment ratio") is used for the analysis for Concepts A, B, and C.**

Concepts D and D.1 anticipate industrial activity related specifically to the off-shore wind generation industry. Specifically, they were designed with more job intensive activities in mind, including manufacturing and assembly activities such as the assembly of towers for wind turbines. The square feet per worker for manufacturing space is typically less than other uses such as warehousing/storage. **Therefore, based on the research shown in the table above and generally acceptable industry standards, the ratio of 500SF/worker is used in the analysis for Concepts D and D.1**

As shown in the table to the right, the employment ratio is applied to the total (gross) square footage of each of the development concepts to estimate the total number of on-site jobs. The estimated on-site jobs range from a high of 1,130 (Concept A) to a low of 320 (Concept D).

Estimated Jobs: Annual Operations			
Concept ID	Total Square Feet	Employment Ratio (SF per worker)	Estimated Permanent On-Site Jobs
A.	1,130,000	1,000	1,130
B.	900,800	1,000	901
C.	810,000	1,000	810
D.	160,000	500	320
D.1	508,000	500	1,016

Source: Camoin 310

Ongoing Operations Impact Analysis

The on-site jobs for each concept, calculated in the previous section, represent the "direct" jobs and were used as the input for the economic impact model. It is assumed that these jobs are "net new" to Albany County. In other words, without the Project, these jobs would not be created elsewhere in the County. This assumption is reasonable based on the unique nature of the port development site and lack of comparable sites in Albany County.

Several industrial sectors were selected as the modeling parameters to account for differences in the impact multipliers across different industrial sectors. This was done to ensure the results represent an average across multiple industry sectors because no specific industries or businesses have been identified for the property yet. The following industry sectors were used to provide a cross-section of industries that best align with the types of operations most likely to occupy the property in the future. Note that Concepts D and D.1 were modeled only with the industry "All Other Miscellaneous Manufacturing" due to their expected manufacturing uses.

Industry Modeling Parameters		
NAICS	Industry Description	Applied to Concepts
339999	All Other Miscellaneous Manufacturing	A, B, C, D, D.2
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	A, B, C
488310	Port and Harbor Operations	A, B, C
488320	Marine Cargo Handling	A, B, C
493110	General Warehousing and Storage	A, B, C

Source: Camoin 310

The results of the analysis are shown below for each of the concepts. Note that "induced" impacts are included in the "Indirect" impacts reported below.

Annual Economic Impact to Albany County: Concept A			
	Direct	Indirect	Total
Jobs	1,130	540	**1,670**
Earnings	$ 72,502,223	$ 29,000,889	**$ 101,503,112**
Sales	$ 211,502,675	$ 83,477,244	**$ 294,979,919**

Source: EMSI; Camoin 310

Annual Economic Impact to Albany County: Concept B			
	Direct	Indirect	Total
Jobs	901	430	**1,331**
Earnings	$ 57,796,462	$ 23,118,585	**$ 80,915,047**
Sales	$ 168,603,194	$ 66,545,400	**$ 235,148,594**

Source: EMSI; Camoin 310

Annual Economic Impact to Albany County: Concept C			
	Direct	Indirect	Total
Jobs	810	387	**1,197**
Earnings	$ 51,970,620	$ 20,788,248	**$ 72,758,868**
Sales	$ 151,608,112	$ 59,837,671	**$ 211,445,783**

Source: EMSI; Camoin 310

Annual Economic Impact to Albany County: Concept D			
	Direct	Indirect	Total
Jobs	320	202	**522**
Earnings	$ 36,435,634	$ 11,659,403	**$ 48,095,037**
Sales	$ 110,759,560	$ 33,959,135	**$ 144,718,694**

Source: EMSI; Camoin 310

Annual Economic Impact to Albany County: Concept D.1			
	Direct	Indirect	Total
Jobs	1,016	643	**1,659**
Earnings	$ 115,683,139	$ 37,018,604	**$ 152,701,743**
Sales	$ 351,661,602	$ 107,820,252	**$ 459,481,855**

Source: EMSI; Camoin 310

Development Concept Comparison

The following tables provides a comparison of the total annual economic impact of each concept resulting from ongoing operations on the property. Concept A has the greatest countywide economic impact with approximately 1,670 jobs generated along with $102 million in annual earnings and a total annual economic output of $295 million.

Annual Economic Impact to Albany County: Concept Comparison					
	Concept A	Concept B	Concept C	Concept D	Concept D.1
Jobs	1,670	1,330	1,200	236	751
Earnings	$ 102,000,000	$ 80,900,000	$ 72,800,000	$ 14,400,000	$ 45,600,000
Sales	$ 295,000,000	$ 235,000,000	$ 211,000,000	$ 41,800,000	$ 133,000,000

Source: EMSI; Camoin 310

Note: Figures rounded

Summary of Job Impact by Occupation Type

The following tables detail the number and type of jobs that are expected to be created for each development concept, for both the construction phase and ongoing operations.

Operations Job Impact: Concept A	
Job Type	# of Jobs
Transportation and Material Moving Occupations	521
Office and Administrative Support Occupations	251
Production Occupations	210
Sales and Related Occupations	154
Management Occupations	92
Installation, Maintenance, and Repair Occupations	76
Business and Financial Operations Occupations	66
Arts, Design, Entertainment, Sports, and Media Occupations	55
Food Preparation and Serving Related Occupations	42
Building and Grounds Cleaning and Maintenance Occupations	40
Architecture and Engineering Occupations	27
Computer and Mathematical Occupations	26
Healthcare Practitioners and Technical Occupations	24
Construction and Extraction Occupations	22
Personal Care and Service Occupations	20
Other	43

Source: EMSI; Camoin 310

Construction Job Impact: Concept A	
Job Type	# of Jobs
Construction and Extraction Occupations	653
Management Occupations	102
Office and Administrative Support Occupations	84
Transportation and Material Moving Occupations	48
Sales and Related Occupations	42
Business and Financial Operations Occupations	42
Installation, Maintenance, and Repair Occupations	30
Architecture and Engineering Occupations	27
Production Occupations	22
Building and Grounds Cleaning and Maintenance Occupations	15
Food Preparation and Serving Related Occupations	13
Healthcare Practitioners and Technical Occupations	13
Computer and Mathematical Occupations	9
Personal Care and Service Occupations	7
Arts, Design, Entertainment, Sports, and Media Occupations	5
Other	15

Source: EMSI; Camoin 310

Operations Job Impact: Concept B	
Job Type	# of Jobs
Transportation and Material Moving Occupations	365
Office and Administrative Support Occupations	176
Production Occupations	147
Sales and Related Occupations	108
Management Occupations	64
Installation, Maintenance, and Repair Occupations	53
Business and Financial Operations Occupations	46
Arts, Design, Entertainment, Sports, and Media Occupations	38
Food Preparation and Serving Related Occupations	29
Building and Grounds Cleaning and Maintenance Occupations	28
Architecture and Engineering Occupations	19
Computer and Mathematical Occupations	18
Healthcare Practitioners and Technical Occupations	17
Construction and Extraction Occupations	16
Personal Care and Service Occupations	14
Other	30

Source: EMSI; Camoin 310

Construction Job Impact: Concept B	
Job Type	# of Jobs
Construction and Extraction Occupations	457
Management Occupations	71
Office and Administrative Support Occupations	59
Transportation and Material Moving Occupations	33
Sales and Related Occupations	30
Business and Financial Operations Occupations	30
Installation, Maintenance, and Repair Occupations	21
Architecture and Engineering Occupations	19
Production Occupations	15
Building and Grounds Cleaning and Maintenance Occupations	11
Food Preparation and Serving Related Occupations	9
Healthcare Practitioners and Technical Occupations	9
Computer and Mathematical Occupations	6
Personal Care and Service Occupations	5
Arts, Design, Entertainment, Sports, and Media Occupations	4
Other	11

Source: EMSI; Camoin 310

Operations Job Impact: Concept C	
Job Type	# of Jobs
Transportation and Material Moving Occupations	339
Office and Administrative Support Occupations	163
Production Occupations	137
Sales and Related Occupations	100
Management Occupations	60
Installation, Maintenance, and Repair Occupations	50
Business and Financial Operations Occupations	43
Arts, Design, Entertainment, Sports, and Media Occupations	36
Food Preparation and Serving Related Occupations	27
Building and Grounds Cleaning and Maintenance Occupations	26
Architecture and Engineering Occupations	17
Computer and Mathematical Occupations	17
Healthcare Practitioners and Technical Occupations	16
Construction and Extraction Occupations	15
Personal Care and Service Occupations	13
Other	28

Source: EMSI; Camoin 310

Construction Job Impact: Concept C	
Job Type	# of Jobs
Construction and Extraction Occupations	425
Management Occupations	66
Office and Administrative Support Occupations	55
Transportation and Material Moving Occupations	31
Sales and Related Occupations	27
Business and Financial Operations Occupations	27
Installation, Maintenance, and Repair Occupations	19
Architecture and Engineering Occupations	18
Production Occupations	14
Building and Grounds Cleaning and Maintenance Occupations	10
Food Preparation and Serving Related Occupations	8
Healthcare Practitioners and Technical Occupations	8
Computer and Mathematical Occupations	6
Personal Care and Service Occupations	5
Arts, Design, Entertainment, Sports, and Media Occupations	4
Other	10

Source: EMSI; Camoin 310

Operations Job Impact: Concept D	
Job Type	# of Jobs
Production Occupations	155
Office and Administrative Support Occupations	74
Sales and Related Occupations	44
Management Occupations	36
Transportation and Material Moving Occupations	33
Arts, Design, Entertainment, Sports, and Media Occupations	32
Business and Financial Operations Occupations	24
Installation, Maintenance, and Repair Occupations	18
Architecture and Engineering Occupations	18
Food Preparation and Serving Related Occupations	15
Computer and Mathematical Occupations	12
Building and Grounds Cleaning and Maintenance Occupations	11
Healthcare Practitioners and Technical Occupations	10
Construction and Extraction Occupations	8
Personal Care and Service Occupations	8
Healthcare Support Occupations	4
Other	19

Source: EMSI; Camoin 310

Construction Job Impact: Concept D	
Job Type	# of Jobs
Construction and Extraction Occupations	278
Management Occupations	43
Office and Administrative Support Occupations	36
Transportation and Material Moving Occupations	20
Sales and Related Occupations	18
Business and Financial Operations Occupations	18
Installation, Maintenance, and Repair Occupations	13
Architecture and Engineering Occupations	12
Production Occupations	9
Building and Grounds Cleaning and Maintenance Occupations	6
Food Preparation and Serving Related Occupations	5
Healthcare Practitioners and Technical Occupations	5
Computer and Mathematical Occupations	4
Personal Care and Service Occupations	3
Arts, Design, Entertainment, Sports, and Media Occupations	2
Other	6

Source: EMSI; Camoin 310

Operations Job Impact: Concept D.1	
Job Type	# of Jobs
Production Occupations	492
Office and Administrative Support Occupations	236
Sales and Related Occupations	140
Management Occupations	115
Transportation and Material Moving Occupations	105
Arts, Design, Entertainment, Sports, and Media Occupations	103
Business and Financial Operations Occupations	77
Installation, Maintenance, and Repair Occupations	57
Architecture and Engineering Occupations	57
Food Preparation and Serving Related Occupations	48
Computer and Mathematical Occupations	38
Building and Grounds Cleaning and Maintenance Occupations	35
Healthcare Practitioners and Technical Occupations	33
Construction and Extraction Occupations	26
Personal Care and Service Occupations	25
Healthcare Support Occupations	14
Other	60

Source: EMSI; Camoin 310

Construction Job Impact: Concept D.1	
Job Type	# of Jobs
Construction and Extraction Occupations	359
Management Occupations	56
Office and Administrative Support Occupations	46
Transportation and Material Moving Occupations	26
Sales and Related Occupations	23
Business and Financial Operations Occupations	23
Installation, Maintenance, and Repair Occupations	16
Architecture and Engineering Occupations	15
Production Occupations	12
Building and Grounds Cleaning and Maintenance Occupations	8
Food Preparation and Serving Related Occupations	7
Healthcare Practitioners and Technical Occupations	7
Computer and Mathematical Occupations	5
Personal Care and Service Occupations	4
Arts, Design, Entertainment, Sports, and Media Occupations	3
Other	8

Source: EMSI; Camoin 310

3. FISCAL IMPACTS

Fiscal Impact Scenarios

Two fiscal impact scenarios are analyzed in this section:

1) **Land Remains Tax Exempt; New Buildings Fully Taxable:** APDC currently owns the property and as such, the land is currently wholly exempt from property taxes. APDC has expressed its intent to maintain ownership of the land, which will keep it exempt. However, APDC intends to make the land available for private development and any future buildings constructed on the land will be subject to property taxes. The analysis of this scenario also explores potential fiscal implications if a future tenant were to receive a property tax abatement incentive from the Town of Bethlehem Industrial Development Agency (IDA) through a Payment in Lieu of Taxes (PILOT) agreement.

2) **Entire Property is Tax Exempt:** At the request of the Town of Bethlehem, a second fiscal scenario was analyzed to understand the fiscal impacts of the project if the entire property, both land and buildings are tax exempt in the future.

Fiscal Impact Scenario 1:

PROPERTY TAX REVENUE ANALYSIS

The Project will add new taxable valuation to the Town of Bethlehem and Albany County, resulting in new property tax revenues for local municipalities and taxing jurisdictions. APDC currently owns the property after purchasing the two parcels in November 2018 from a private owner. As a result, the land is currently wholly exempt from property taxes. While APDC intends to retain ownership of the land, the area of future building will be leased to a private entity. Therefore, a private entity will own any buildings constructed on the property and pay property taxes on the assessed value of any new building(s).

On-Site Property Tax Revenue Generation

The property tax revenue analysis considers the potential new building assessed value for each of the five development concepts. The future assessed value of new industrial buildings is estimated using a cost approach that is based on the cost to build or replace a structure (including hard and soft costs) and is typically used by assessors to value industrial properties.

The following table shows the estimated Full Market Value (FMV) of future buildings based on their estimated construction cost (see section 2. Economic Impacts). The corresponding Assessed Value (AV) of new building(s) for each concept is also shown based on the local Town of Bethlehem equalization rate[2] of 95%.

[2] An equalization rate is New York State's measure of a municipality's level of assessment. An equalization rate of 100% means that the Town is assessing property at 100% of market value. The rate is used to account for account for the differences in how individual municipalities assess property.

Estimated Increase in Valuation (Building Only)		
Concept ID	Est. Increase in Full Market Value*	Est. Increase in Assessed Value**
A.	$ 78,000,000	$ 74,100,000
B.	$ 66,000,000	$ 62,700,000
C.	$ 65,000,000	$ 61,750,000
D.	$ 15,000,000	$ 14,250,000
D.1	$ 40,000,000	$ 38,000,000

** Based on estimated construction costs*

*** Based on equalization rate of 95%*

Source: McFarland Johnson; Camoin 310

The following table indicates the various property taxes that future taxable buildings will be subject to and the associated annual property tax revenue estimates for each development concept. The analysis assumes that the Town of Bethlehem Water District will be expanded to encompass the property. It is expected that Albany County will provide sewer service to the development. The results of the analysis show that Concept A will generate an estimated $2.22 million in annual property tax revenues with $1.57 million of that revenue going to the Bethlehem Central School District. The other four concepts are estimated to generate between approximately $427,000 and $1.88 million in total new property tax revenues.

Estimated Net Increase in Annual Property Tax Revenue (On-Site)						
Property Tax Type	Tax Rate*	Concept A	Concept B	Concept C	Concept D	Concept D.1
Albany County	*3.797886*	$ 281,423	$ 238,127	$ 234,519	$ 54,120	$ 144,320
Town of Bethlehem (General Fund)	*0.87704*	$ 64,989	$ 54,990	$ 54,157	$ 12,498	$ 33,328
Highway Tax	*1.710737*	$ 126,766	$ 107,263	$ 105,638	$ 24,378	$ 65,008
Ambulance/EMS	*0.317667*	$ 23,539	$ 19,918	$ 19,616	$ 4,527	$ 12,071
Selkirk Fire Dept.	*1.490534*	$ 110,449	$ 93,456	$ 92,040	$ 21,240	$ 56,640
Town Water District	*0.526999*	$ 39,051	$ 33,043	$ 32,542	$ 7,510	$ 20,026
Bethelehem Central School District	*21.25*	$ 1,574,625	$ 1,332,375	$ 1,312,188	$ 302,813	$ 807,500
Total	***29.970863***	**$ 2,220,841**	**$ 1,879,173**	**$ 1,850,701**	**$ 427,085**	**$ 1,138,893**

*per 1,000 taxable assessed valuation (2019 rates)

Source: Town of Bethlehem; Camoin 310

Assumes Sewer Service Provided by Albany County and not Town of Bethlehem

Off-Site Property Tax Revenue Generation

In addition to the property tax revenue generated directly from new industrial development, new property tax revenue will also be generated throughout Albany County as a result of the economic impact of new business activity on the property. As economic activity increases, so do property values, and therefore, property tax revenue.

To estimate the portion of property tax revenue in the county that can be attributed to future development of the site, the ratio of total sales associated with each development to the Gross Regional Product of Albany County is used (representing the total economic activity in the county). The new sales generated by development of the Project will account for approximately 0.13% to 0.89% of the county's Gross Regional

Product. This is, in effect, the increase in the property tax base that will result from the economic activity generated by future development. This ratio is applied to total property tax levies by the county's various taxing jurisdictions (counties, cities, villages, towns, and school districts).

The on-site property tax revenue, calculated previously, is subtracted from this total to estimate the off-site countywide property tax revenue benefits as a result of the Project. The off-site property tax revenue benefits are estimated to range from $2.8 million to $9.0 million to Albany County, depending on the development concept. The following table shows how these figures were calculated.

Potential Net Increase in Annual Property Tax Revenue (Off-Site)					
Property Tax Type	Concept A	Concept B	Concept C	Concept D	Concept D.1
A. Total Sales Attributable to Project[1]	$ 294,979,919	$ 235,148,594	$ 211,445,783	$ 144,718,694	$ 459,481,855
B. Gross Regional Product (Albany County)[2]	$ 33,203,710,232	$ 33,203,710,232	$ 33,203,710,232	$ 33,203,710,232	$ 33,203,710,232
C. Percent Increase in GRP from Project (A*B)	0.89%	0.71%	0.64%	0.44%	1.38%
D. Total Annual County Property Tax Levy[3]	$ 735,713,142	$ 735,713,142	$ 735,713,142	$ 735,713,142	$ 735,713,142
E. Property Tax Revenue Increase Attributable to Project (C*D)	$ 6,536,035	$ 5,210,319	$ 4,685,122	$ 3,206,613	$ 10,180,996
F. On-Site Property Tax Revenue[4]	$ 2,220,841	$ 1,879,173	$ 1,850,701	$ 427,085	$ 1,138,893
G. Off-Site (Countywide) Property Tax Revenue Benefit (E-F)	**$ 4,315,194**	**$ 3,331,146**	**$ 2,834,421**	**$ 2,779,528**	**$ 9,042,103**

1. Based on calculated total economic impact to Albany County
2. 2018 GRP. Source: EMSI
3. Includes all taxing jurisdictions within Albany County. Source: NYS Comptroller
4. Represents property tax payments from new on-site tenant(s)

To estimate the portion of the off-site countywide property tax revenue that is received by Town of Bethlehem taxing jurisdiction, it is necessary to consider the proportion of economic activity generated by the Project that occurs within the Town of Bethlehem.

According to the EMSI economic impact model discussed previously, approximately 90% of the economic impacts of new development will occur within the Town of Bethlehem. Therefore, 90% of the countywide (off-site) fiscal impacts are assumed to occur in the Town of Bethlehem because they are the impacts generated by new economic activity and not from the property itself.

The estimated fiscal benefit to the Town of Bethlehem Taxing Jurisdictions is approximately $2.5 million to $8.1 million annually (including county property tax revenue generated off-site, but within the Town).

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

Based on existing property tax rates, as previously discussed, the following table provides a breakdown of the estimated distribution of (off-site) property tax revenue by taxing jurisdiction in the Town of Bethlehem.

Estimated Net Increase in Annual Property Tax Revenue (Off-Site)					
Property Tax Type	Concept A	Concept B	Concept C	Concept D	Concept D.1
Albany County (Town of Bethlehem Portion)	$ 492,136	$ 379,908	$ 323,258	$ 316,998	$ 1,031,228
Town of Bethlehem (General Fund)	$ 113,648	$ 87,732	$ 74,650	$ 73,204	$ 238,140
Highway Tax	$ 221,680	$ 171,128	$ 145,610	$ 142,790	$ 464,511
Ambulance/EMS	$ 41,164	$ 31,777	$ 27,038	$ 26,515	$ 86,255
Selkirk Fire Dept.	$ 193,146	$ 149,100	$ 126,867	$ 124,410	$ 404,720
Town Water District	$ 68,289	$ 52,717	$ 44,856	$ 43,987	$ 143,094
Bethelehem Central School District	$ 2,753,610	$ 2,125,670	$ 1,808,700	$ 1,773,672	$ 5,769,945
Total	**$ 3,883,674**	**$ 2,998,031**	**$ 2,550,979**	**$ 2,501,575**	**$ 8,137,893**

Source: Camoin 310

The following chart shows the combined on- and off-site estimated fiscal revenues to Town of Bethlehem taxing jurisdictions (including property tax revenue generated for Albany County from within the Town).

Estimated Increase in Annual Town of Bethlehem Property Tax Revenue (Total - On- and Off-Site)					
Property Tax Type	Concept A	Concept B	Concept C	Concept D	Concept D.1
Albany County (Town of Bethlehem Portion)	$ 773,560	$ 618,036	$ 557,778	$ 371,118	$ 1,175,548
Town of Bethlehem (General Fund)	$ 178,637	$ 142,722	$ 128,807	$ 85,702	$ 271,467
Highway Tax	$ 348,446	$ 278,391	$ 251,248	$ 167,168	$ 529,519
Ambulance/EMS	$ 64,703	$ 51,694	$ 46,654	$ 31,041	$ 98,326
Selkirk Fire Dept.	$ 303,594	$ 242,557	$ 218,908	$ 145,650	$ 461,360
Town Water District	$ 107,340	$ 85,759	$ 77,398	$ 51,497	$ 163,120
Bethelehem Central School District	$ 4,328,235	$ 3,458,045	$ 3,120,888	$ 2,076,484	$ 6,577,445
Total	**$ 6,104,515**	**$ 4,877,204**	**$ 4,401,680**	**$ 2,928,660**	**$ 9,276,786**

Source: Camoin 310

SALES TAX REVENUE ANALYSIS

Sales Tax Revenue – One-Time Construction Phase

The one-time construction phase earnings generated by the economic impact of constructing new industrial facilities (described in section 2. Economic Impacts) would lead to additional sales tax revenue for Albany County. For the purposes of this analysis, it is assumed that 50% of construction phase earnings (earnings earned as a result of the construction phase) would be spent within Albany County and that 25% of those purchases would be taxable. As a result of the construction phase employment, the County would receive between $87,000 (Concept D) and $204,000 (Concept A) in new sales tax revenues from the one-time economic

impacts of project construction. The estimated one-time county sales tax revenue from construction for each concept is shown below.

One-Time County Sales Tax Revenue from Construction					
	Concept A	Concept B	Concept C	Concept D	Concept D.1
Total New Earnings	$ 40,848,982	$ 28,594,287	$ 26,551,838	$ 17,360,817	$ 22,466,940
Earnings Spent in County (50%)	$ 20,424,491	$ 14,297,144	$ 13,275,919	$ 8,680,409	$ 11,233,470
Spending Subject to Sales Tax (25%)	$ 5,106,123	$ 3,574,286	$ 3,318,980	$ 2,170,102	$ 2,808,368
County Sales Tax Revenue (4%)	**$ 204,245**	**$ 142,971**	**$ 132,759**	**$ 86,804**	**$ 112,335**

Source: Camoin 310

Sales Tax Revenue – Ongoing Industrial Operations

The additional earnings generated in Albany County as a result of the economic impact of ongoing operations of future industrial businesses on the property would lead to additional sales tax revenue for the county. It is assumed that 70% of the earnings would be spent within Albany County and that 25% of those purchases would be taxable. Under these assumptions, Albany County would receive between $336,665 (Concept D) and $710,522 (Concept A) in sales tax proceeds. As previously noted, the County distributes a portion of this revenue to its municipalities.

Albany County Annual Sales Tax Revenue					
	Concept A	Concept B	Concept C	Concept D	Concept D.1
New Annual Earnings	$ 101,503,112	$ 80,915,047	$ 72,758,868	$ 48,095,037	$ 152,701,743
Earnings Spent in County (70%)	$ 71,052,178	$ 56,640,533	$ 50,931,208	$ 33,666,526	$ 106,891,220
Spending Subject to Sales Tax (25%)	$ 17,763,045	$ 14,160,133	$ 12,732,802	$ 8,416,631	$ 26,722,805
County Sales Tax Revenue (4%)	**$ 710,522**	**$ 566,405**	**$ 509,312**	**$ 336,665**	**$ 1,068,912**

Source: Camoin 310

MUNICIPAL SERVICES COSTS

The Project has the potential to result in increased municipal service costs. The costs examined in this analysis include emergency medical services (EMS), fire department, police, and Town Highway. These service types are those with the greatest potential for adverse impacts, although there may be other minor municipal costs incurred not considered in this analysis.

Emergency Medical Services (EMS)

The Delmar-Bethlehem EMS provided input as to the anticipated impacts of the Project to their capacity and expenses. Overall, the Project is not expected to significantly increase costs. EMS anticipates an incremental increase in call volumes and associated costs but does not foresee a need to hire additional personnel or purchase new equipment as a result of the Project.

The estimated increase in costs for EMS is based only the new staffing costs that won't be recovered by EMS billing. In other words, a large portion of the new costs to EMS will be recovered by insurance and patient billing and therefore do not represent "true" net costs to EMS or Albany County. While annual staffing costs are approximately $500,000, approximately 80% of those costs are assumed to be covered by billing (based on EMS currently receiving approximately 80% of its revenue from billing).

The increase in costs associated with an incremental increase in call volume was estimated based on the incremental change in the daytime population in the Town of Bethlehem. In other words, it is assumed that the number of calls received correlates with the number of people in the Town. The staffing expenses (not

covered by billing) associated with daytime calls were estimated based on the percentage of calls that are received during daytime hours. It is assumed that the Project will result almost entirely in new daytime calls rather than overnight calls. The daytime population of the Town is expected to grow by approximately 3.9% as a result of on-site employment. Therefore, it is assumed that the EMS calls during the daytime will increase roughly proportional to this increase. When the 3.9% factor is applied to the costs attributable to daytime calls, it provides an estimate of approximately $2,560 in new annual costs to the Delmar-Bethlehem EMS. The analysis is presented in the table below.

Annual Estimated Fiscal Impact to EMS (Concept A)		
A. Net Staffing Costs*	$	100,000
B. Percent of Calls During Day**		65%
C. Costs Attributable to Daytime Calls (A*B)	$	65,100
D. Current Town Daytime Population		28,753
E. Increase in Daytime Population from Project		1,130
F. Percent Increase (E/D)		3.9%
Incremental Annual Increase in Costs (C*F)	**$**	**2,558**

**Costs are those staffing costs not covered by billing*

***6:00 AM to 6:00 PM*

Source: Delmar-Bethlehem 2018 EMS Response Report; ESRI Business Analyst; Camoin 310

Police Services

The Town of Bethlehem Police Department was contacted to determine the potential impacts of the Project on departmental capacity and expenses. Representatives of the police department reported that:

- Overall, the Department does not anticipate that development of the property for future industrial use will directly result in the need to hire new personnel or purchase new equipment.
- However, the Project will result in more resources being allocated to address the increased need for police services due to the Project, which will restrain the Department's existing resources. An increase in expenses associated with responding to an increased number of calls is likely, including overtime expenditures.
- The Project, along with the continued population and commercial growth in the Town of Bethlehem, will draw the Department closer to the point where it will be required to expand its capacity through new personnel and equipment.

Based on the input received from the Police Department, the increased costs associated with the increase in call volumes was estimated. For the purposes of this analysis, it is assumed that overtime costs will increase proportional to the overall growth of the Town of Bethlehem due to the project. Based on the expected increase in assessed value of the Project (Concept A), the Town's total assessed value will increase by approximately 4.5%. When this factor is applied to the department's current police personnel overtime expenditures of approximately $348,000, it results in an estimated increase of $15,743 in new annual expenses to the department due to the Project.

Annual Estimated Fiscal Impact to Police Department		
Total Town Assessed Value	$	4,193,752,400
Est. Project Assessed Value	$	190,000,000
Percent Increase		4.5%
Current Police Overtime Costs	$	347,493
Incremental Annual Increase	**$**	**15,743**

Source: Town of Bethlehem 2019 Budget; Camoin 310

Fire Department

The Selkirk Fire Department, which will serve the Project, was contacted to understand the potential impacts of the Project on the Fire Department. The anticipated impact of the Project on fire services is highly dependent on the scale and type of industrial facility located on the site. The Fire Department provided input based upon a build-out scenario of a 1.13 million square foot industrial warehouse facility (Concept A). In the event that future industrial uses differ from this scenario, the Department should be consulted for an updated understanding of impacts.

Based on Concept A, the Department does not expect to incur significant new costs. The Department, currently all-volunteer, will not need to hire paid firefighters as a result of the Project. The Department also has heavy rescue equipment and does not foresee the need to purchase additional equipment. There may be other nominal new costs for the Department associated with an incremental increase in call volumes and providing additional training for water/boat-related call responses. It should be noted that the Department has an existing aerial truck but depending on the exact height and footprint of future development a new larger truck may be necessary. As there are a number of large footprint buildings and industrial facilities, it is assumed for this analysis that the existing aerial truck will be able to serve the Project.

Highway Department[3]

Potential impacts on the cost of services provided by the Bethlehem Highway Department were considered in the analysis. The Project will not feature any new public roads that will require construction, maintenance, or plowing. Therefore, no significant fiscal impacts are expected for the town's highway department.

There may be minor increased "wear and tear" on the local road network that may affect the maintenance schedule of local roads; however, the area already has a number of industrial facilities that generate truck traffic. The Draft Traffic Impact Study (TIS) that was completed was reviewed to understand the potential costs associated with increased maintenance costs. The TIS found that the Project will generate a maximum of 465 trips at peak time in the morning and 529 trips during the PM peak hour. The proposed development was estimated to increase the number of trucks on the surrounding roadway network from 8% to 27% during the peak truck timeframe (Midday). The Study states that "the increase in truck traffic is only a fraction of the existing truck traffic within the study area." As such, the new truck traffic is not expected to significantly impact the maintenance schedule of existing roadways.

[3] The Highway Department was contacted several times to provide input for this analysis but no feedback was received.

SUMMARY OF IDA PILOT SCENARIOS

The Town of Bethlehem offers real property tax abatements (PILOT) benefits to certain projects that result in an increase in the property tax assessment by the taxing jurisdiction (County, Town and School District). The PILOT (Payment In Lieu of Taxes) consists of an agreed- upon percentage of the improvements that would be otherwise due on the property if the project was completed without IDA tax abatements. The IDA offers a Standard and an Enhanced Abatement and each are awarded on a case-by-case basis.

The Standard Abatement commences at 50% of the increase in assessed valuation resulting from a project and then declines by 5% per year for a ten-year period. This abatement is designed for projects that are eligible for IDA assistance and meet a standard level of economic impact including, job creation, business development and tax generation. This program provides abatement for the Town, County and School District taxes throughout the Town.

The Enhanced Abatement is designed to enhance the regional competitive position of the Town in attracting high quality business development that meets very specific economic benefit criteria.

To be eligible for the enhanced abatement, an applicant must demonstrate the project's ability to substantially meet the following criteria:

- Extraordinary new job creation and capital investment
- Net new business investment in the Capital Region
- Reuse or redevelopment of abandoned or underutilized real estate
- Consistency with the Town's comprehensive plan recommendations
- Market penetration: potential for catalytic effect for subsequent projects
- Consistency with regional target industries
- Business development that promotes diversification

While no PILOT agreement is in place, the fiscal implications of both the Standard and Enhanced PILOTs were analyzed for each of the five concepts for hypothetical purposes. The following chart summarizes the property tax revenue differences under the various abatement scenarios for each concept.

Summary: 12-Year Property Tax Revenue Comparison of IDA PILOT (Abatement) Scenarios*

Concept	No Abatement	Standard Abatement	Enhanced Abatement
Concept A	$ 28,962,456	$ 22,571,894	$ 13,768,774
Concept B	$ 24,506,694	$ 19,099,295	$ 11,650,501
Concept C	$ 24,135,380	$ 18,809,912	$ 11,473,978
Concept D	$ 5,569,703	$ 4,340,749	$ 2,647,841
Concept D.1	$ 14,852,542	$ 11,575,330	$ 7,060,910

** Includes Sum of County, Town, School District Revenues*

Source: Camoin 310

PILOT ANALYSIS TABLES

Concept A

Fiscal Analysis - No IDA Abatement - Concept A			
Year	Town Revenue	County Revenue	School District Revenue
1	$364,793	$281,423	$1,574,625
2	$370,264	$285,645	$1,598,244
3	$375,818	$289,929	$1,622,218
4	$381,456	$294,278	$1,646,551
5	$387,178	$298,692	$1,671,250
6	$392,985	$303,173	$1,696,318
7	$398,880	$307,720	$1,721,763
8	$404,863	$312,336	$1,747,590
9	$410,936	$317,021	$1,773,803
10	$417,100	$321,777	$1,800,410
11	$423,357	$326,603	$1,827,417
12	$429,707	$331,502	$1,854,828
Total	$4,757,337	$3,670,101	$20,535,018

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept A				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$182,396	$140,712	$787,313
2	45%	$203,645	$157,105	$879,034
3	40%	$225,491	$173,958	$973,331
4	35%	$247,946	$191,281	$1,070,258
5	30%	$271,024	$209,085	$1,169,875
6	25%	$294,739	$227,380	$1,272,239
7	20%	$319,104	$246,176	$1,377,410
8	15%	$344,134	$265,486	$1,485,451
9	10%	$369,843	$285,319	$1,596,423
10	5%	$396,245	$305,688	$1,710,390
11	0%	$423,357	$326,603	$1,827,417
12	0%	$429,707	$331,502	$1,854,828
Total		$3,707,631	$2,860,294	$16,003,969

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept A				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$37,582	$28,993	$162,222
4	80%	$76,291	$58,856	$329,310
5	70%	$116,153	$89,608	$501,375
6	60%	$157,194	$121,269	$678,527
7	50%	$199,440	$153,860	$860,882
8	40%	$242,918	$187,402	$1,048,554
9	30%	$287,655	$221,915	$1,241,662
10	20%	$333,680	$257,421	$1,440,328
11	10%	$381,021	$293,943	$1,644,675
12	0%	$429,707	$331,502	$1,854,828
Total		$2,261,642	$1,744,769	$9,762,363

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept B

Fiscal Analysis - No IDA Abatement - Concept B			
Year	Town Revenue	County Revenue	School District Revenue
1	$308,671	$238,127	$1,332,375
2	$313,301	$241,699	$1,352,361
3	$318,000	$245,325	$1,372,646
4	$322,770	$249,005	$1,393,236
5	$327,612	$252,740	$1,414,134
6	$332,526	$256,531	$1,435,346
7	$337,514	$260,379	$1,456,876
8	$342,577	$264,285	$1,478,730
9	$347,715	$268,249	$1,500,911
10	$352,931	$272,273	$1,523,424
11	$358,225	$276,357	$1,546,276
12	$363,598	$280,502	$1,569,470
Total	$4,025,439	$3,105,470	$17,375,784

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept B				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$154,335	$119,064	$666,188
2	45%	$172,315	$132,935	$743,798
3	40%	$190,800	$147,195	$823,588
4	35%	$209,801	$161,853	$905,603
5	30%	$229,328	$176,918	$989,894
6	25%	$249,394	$192,398	$1,076,510
7	20%	$270,011	$208,303	$1,165,501
8	15%	$291,190	$224,642	$1,256,920
9	10%	$312,944	$241,424	$1,350,820
10	5%	$335,284	$258,659	$1,447,253
11	0%	$358,225	$276,357	$1,546,276
12	0%	$363,598	$280,502	$1,569,470
Total		$3,137,227	$2,420,249	$13,541,820

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept B				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$31,800	$24,532	$137,265
4	80%	$64,554	$49,801	$278,647
5	70%	$98,284	$75,822	$424,240
6	60%	$133,010	$102,612	$574,139
7	50%	$168,757	$130,189	$728,438
8	40%	$205,546	$158,571	$887,238
9	30%	$243,401	$187,774	$1,050,637
10	20%	$282,345	$217,818	$1,218,739
11	10%	$322,402	$248,721	$1,391,648
12	0%	$363,598	$280,502	$1,569,470
Total		$1,913,697	$1,476,343	$8,260,461

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept C

Fiscal Analysis - No IDA Abatement - Concept C			
Year	Town Revenue	County Revenue	School District Revenue
1	$303,994	$234,519	$1,312,188
2	$308,554	$238,037	$1,331,870
3	$313,182	$241,608	$1,351,848
4	$317,880	$245,232	$1,372,126
5	$322,648	$248,910	$1,392,708
6	$327,488	$252,644	$1,413,599
7	$332,400	$256,434	$1,434,803
8	$337,386	$260,280	$1,456,325
9	$342,447	$264,184	$1,478,169
10	$347,583	$268,147	$1,500,342
11	$352,797	$272,169	$1,522,847
12	$358,089	$276,252	$1,545,690
Total	$3,964,448	$3,058,418	$17,112,515

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept C				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$151,997	$117,260	$656,094
2	45%	$169,705	$130,920	$732,529
3	40%	$187,909	$144,965	$811,109
4	35%	$206,622	$159,401	$891,882
5	30%	$225,854	$174,237	$974,896
6	25%	$245,616	$189,483	$1,060,199
7	20%	$265,920	$205,147	$1,147,842
8	15%	$286,778	$221,238	$1,237,876
9	10%	$308,202	$237,766	$1,330,353
10	5%	$330,204	$254,740	$1,425,325
11	0%	$352,797	$272,169	$1,522,847
12	0%	$358,089	$276,252	$1,545,690
Total		$3,089,693	$2,383,578	$13,336,640

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept C				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$31,318	$24,161	$135,185
4	80%	$63,576	$49,046	$274,425
5	70%	$96,794	$74,673	$417,812
6	60%	$130,995	$101,058	$565,439
7	50%	$166,200	$128,217	$717,401
8	40%	$202,432	$156,168	$873,795
9	30%	$239,713	$184,929	$1,034,719
10	20%	$278,067	$214,518	$1,200,274
11	10%	$317,518	$244,952	$1,370,562
12	0%	$358,089	$276,252	$1,545,690
Total		$1,884,702	$1,453,974	$8,135,303

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept D

Fiscal Analysis - No IDA Abatement - Concept D			
Year	Town Revenue	County Revenue	School District Revenue
1	$70,152	$54,120	$302,813
2	$71,205	$54,932	$307,355
3	$72,273	$55,756	$311,965
4	$73,357	$56,592	$316,644
5	$74,457	$57,441	$321,394
6	$75,574	$58,302	$326,215
7	$76,708	$59,177	$331,108
8	$77,858	$60,065	$336,075
9	$79,026	$60,966	$341,116
10	$80,212	$61,880	$346,233
11	$81,415	$62,808	$351,426
12	$82,636	$63,750	$356,698
Total	$914,873	$705,789	$3,949,042

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept D				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$35,076	$27,060	$151,406
2	45%	$39,163	$30,212	$169,045
3	40%	$43,364	$33,453	$187,179
4	35%	$47,682	$36,785	$205,819
5	30%	$52,120	$40,209	$224,976
6	25%	$56,681	$43,727	$244,661
7	20%	$61,366	$47,342	$264,887
8	15%	$66,180	$51,055	$285,664
9	10%	$71,124	$54,869	$307,004
10	5%	$76,201	$58,786	$328,921
11	0%	$81,415	$62,808	$351,426
12	0%	$82,636	$63,750	$356,698
Total		$713,006	$550,057	$3,077,686

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept D				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$7,227	$5,576	$31,197
4	80%	$14,671	$11,318	$63,329
5	70%	$22,337	$17,232	$96,418
6	60%	$30,230	$23,321	$130,486
7	50%	$38,354	$29,589	$165,554
8	40%	$46,715	$36,039	$201,645
9	30%	$55,318	$42,676	$238,781
10	20%	$64,169	$49,504	$276,986
11	10%	$73,273	$56,527	$316,284
12	0%	$82,636	$63,750	$356,698
Total		$434,931	$335,533	$1,877,378

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Concept D.1

Fiscal Analysis - No IDA Abatement - Concept D.1			
Year	Town Revenue	County Revenue	School District Revenue
1	$187,073	$144,320	$807,500
2	$189,879	$146,484	$819,613
3	$192,727	$148,682	$831,907
4	$195,618	$150,912	$844,385
5	$198,553	$153,176	$857,051
6	$201,531	$155,473	$869,907
7	$204,554	$157,805	$882,955
8	$207,622	$160,172	$896,200
9	$210,736	$162,575	$909,643
10	$213,898	$165,014	$923,287
11	$217,106	$167,489	$937,137
12	$220,363	$170,001	$951,194
Total	$2,439,660	$1,882,103	$10,530,778

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Standard IDA Abatement - Concept D.1				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	50%	$93,537	$72,160	$403,750
2	45%	$104,434	$80,566	$450,787
3	40%	$115,636	$89,209	$499,144
4	35%	$127,152	$98,093	$548,850
5	30%	$138,987	$107,223	$599,936
6	25%	$151,148	$116,605	$652,430
7	20%	$163,643	$126,244	$706,364
8	15%	$176,479	$136,147	$761,770
9	10%	$189,663	$146,318	$818,678
10	5%	$203,203	$156,763	$877,123
11	0%	$217,106	$167,489	$937,137
12	0%	$220,363	$170,001	$951,194
Total		$1,901,349	$1,466,817	$8,207,163

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Analysis - Enhanced IDA Abatement - Concept D.1				
Year	Abatement	Town Revenue	County Revenue	School District Revenue
1	100%	$0	$0	$0
2	100%	$0	$0	$0
3	90%	$19,273	$14,868	$83,191
4	80%	$39,124	$30,182	$168,877
5	70%	$59,566	$45,953	$257,115
6	60%	$80,612	$62,189	$347,963
7	50%	$102,277	$78,903	$441,478
8	40%	$124,573	$96,103	$537,720
9	30%	$147,516	$113,803	$636,750
10	20%	$171,118	$132,011	$738,630
11	10%	$195,395	$150,740	$843,423
12	0%	$220,363	$170,001	$951,194
Total		$1,159,816	$894,753	$5,006,340

Source: Camoin 310; Town of Bethlehem IDA;

Assumes 1.5% annual increase in property tax rates

Fiscal Scenario #2 (Exempt from Property Taxes)

As previously discussed, 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. This section 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.

As previously discussed, the off-site *countywide* property tax revenue is estimated to range from $2.8 million to $9.0 million annually, depending on the concept. This is property tax that will be generated by new economic activity occurring in the County and not generated from the site itself. To estimate the portion of the countywide property tax revenue that is received by Town of Bethlehem taxing jurisdiction, it is necessary to consider the proportion of economic activity generated by the Project that occurs within the Town of Bethlehem.

According to the EMSI economic impact model discussed previously, approximately 90% of the economic impacts of new development will occur within the Town of Bethlehem. Therefore, 90% of the countywide (off-site) fiscal impacts are assumed to occur in the Town of Bethlehem because they are the impacts generated by new economic activity and not from the property itself.

The estimated fiscal benefit to the Town of Bethlehem Taxing Jurisdictions is approximately $2.5 million to $8.1 million annually (including county property tax revenue generated off-site, but within the Town). This revenue would occur even if the entire project remains tax-exempt.

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

Based on existing property tax rates, as previously discussed, the following table provides a breakdown of the estimated distribution of (off-site) property tax revenue by taxing jurisdiction in the Town of Bethlehem.

Estimated Net Increase in Annual Property Tax Revenue (Off-Site)					
Property Tax Type	Concept A	Concept B	Concept C	Concept D	Concept D.1
Albany County (Town of Bethlehem Portion)	$ 492,136	$ 379,908	$ 323,258	$ 316,998	$ 1,031,228
Town of Bethlehem (General Fund)	$ 113,648	$ 87,732	$ 74,650	$ 73,204	$ 238,140
Highway Tax	$ 221,680	$ 171,128	$ 145,610	$ 142,790	$ 464,511
Ambulance/EMS	$ 41,164	$ 31,777	$ 27,038	$ 26,515	$ 86,255
Selkirk Fire Dept.	$ 193,146	$ 149,100	$ 126,867	$ 124,410	$ 404,720
Town Water District	$ 68,289	$ 52,717	$ 44,856	$ 43,987	$ 143,094
Bethelehem Central School District	$ 2,753,610	$ 2,125,670	$ 1,808,700	$ 1,773,672	$ 5,769,945
Total	**$ 3,883,674**	**$ 2,998,031**	**$ 2,550,979**	**$ 2,501,575**	**$ 8,137,893**

Source: Camoin 310

DGEIS Section 3.17 Fiscal and Economic Impact

SECTION 3.17.1 ENVIRONMENTAL SETTING

Sections 1, 2, and 3 of this report are presented herein to serve as Section 3.17.1

SECTION 3.17.2 POTENTIAL IMPACTS

Sections 3 of this report is presented herein to serve as Section 3.17.2.

SECTION 3.17.3 MITIGATION MEASURES

No mitigation measures are required pursuant to section 3.17 of the DGEIS.

4. SCHOOL DISTRICT IMPACTS

The subject property is located in the Bethlehem Central School District and future development of Beacon Island was analyzed to determine potential impacts to the District pursuant to DGEIS Section 3.16 School District.

School District Revenues (DGEIS Section 3.16.1 Environmental Setting)

As previously discussed, the development of the property will result in new taxable valuation that will be subject to the Bethlehem Central School District property tax. As of the 2019-2020 School Year, the property tax rate for the school district is $21.25. Based on this rate, future industrial port development of the property will result in between approximately $303,000 and $1.6 million in direct annual property tax revenue for the School District. Over ten years, beginning with the first year of full taxation, the Project is estimated to generate between $3.1 million and $16.1 million for the School District, depending on the development concept.

Estimated School District Tax Revenues (Direct On-Site) (10-Years)						
Year	Est. Tax Rate*	Concept A	Concept B	Concept C	Concept D	Concept D.1
1	21.25	$ 1,574,625	$ 1,332,375	$ 1,312,188	$ 302,813	$ 807,500
2	21.36	$ 1,582,515	$ 1,339,052	$ 1,318,763	$ 304,330	$ 811,546
3	21.46	$ 1,590,445	$ 1,345,762	$ 1,325,371	$ 305,855	$ 815,613
4	21.57	$ 1,598,415	$ 1,352,505	$ 1,332,013	$ 307,388	$ 819,700
5	21.68	$ 1,606,425	$ 1,359,283	$ 1,338,687	$ 308,928	$ 823,808
6	21.79	$ 1,614,475	$ 1,366,094	$ 1,345,396	$ 310,476	$ 827,936
7	21.90	$ 1,622,565	$ 1,372,940	$ 1,352,137	$ 312,032	$ 832,085
8	22.01	$ 1,630,696	$ 1,379,819	$ 1,358,913	$ 313,595	$ 836,254
9	22.12	$ 1,638,867	$ 1,386,734	$ 1,365,722	$ 315,167	$ 840,445
10	22.23	$ 1,647,079	$ 1,393,683	$ 1,372,566	$ 316,746	$ 844,656
10-Year Total		**$ 16,106,108**	**$ 13,628,245**	**$ 13,421,756**	**$ 3,097,328**	**$ 8,259,542**
10-Year Average		**$ 1,610,611**	**$ 1,362,824**	**$ 1,342,176**	**$ 309,733**	**$ 825,954**

**Year 1 Tax Rate based on 2019-2020 tax rate. Assumes an average tax rate increase of 0.5% based on most recent 5-year annual average.*

Source: Camoin 310

The School District will also receive property tax revenue from new off-site development that occurs in the School District as a result of the Project. The following table provides an estimate of this "Indirect Off-Site" property tax revenue for the District.

Estimated School District Tax Revenues (Indirect Off-Site) (10-Years)						
Year	Est. Tax Rate*	Concept A	Concept B	Concept C	Concept D	Concept D.1
1	21.25	$ 2,753,610	$ 2,125,670	$ 1,808,700	$ 1,773,672	$ 5,769,945
2	21.36	$ 2,767,378	$ 2,136,298	$ 1,817,744	$ 1,782,540	$ 5,798,794
3	21.46	$ 2,781,215	$ 2,146,980	$ 1,826,833	$ 1,791,453	$ 5,827,788
4	21.57	$ 2,795,121	$ 2,157,715	$ 1,835,967	$ 1,800,410	$ 5,856,927
5	21.68	$ 2,809,097	$ 2,168,503	$ 1,845,147	$ 1,809,412	$ 5,886,212
6	21.79	$ 2,823,143	$ 2,179,346	$ 1,854,372	$ 1,818,459	$ 5,915,643
7	21.90	$ 2,837,258	$ 2,190,242	$ 1,863,644	$ 1,827,552	$ 5,945,221
8	22.01	$ 2,851,445	$ 2,201,194	$ 1,872,962	$ 1,836,689	$ 5,974,947
9	22.12	$ 2,865,702	$ 2,212,200	$ 1,882,327	$ 1,845,873	$ 6,004,822
10	22.23	$ 2,880,030	$ 2,223,261	$ 1,891,739	$ 1,855,102	$ 6,034,846
10-Year Total		**$ 28,164,000**	**$ 21,741,407**	**$ 18,499,435**	**$ 18,141,162**	**$ 59,015,147**
10-Year Average		**$ 2,816,400**	**$ 2,174,141**	**$ 1,849,943**	**$ 1,814,116**	**$ 5,901,515**

**Year 1 Tax Rate based on 2019-2020 tax rate. Assumes an average tax rate increase of 0.5% based on most recent 5-year annual average.*

Source: Camoin 310

The following table shows the total estimated property tax revenue for the Bethlehem Central School District from both direct on-site property tax revenues and indirect off-site property tax revenues generated from new economic activity generated in the School District.

Total Estimated School District Tax Revenues (On and Off-Site Generated Revenue) (10-Years)					
Year	Concept A	Concept B	Concept C	Concept D	Concept D.1
1	$ 4,328,235	$ 3,458,045	$ 3,120,888	$ 2,076,484	$ 6,577,445
2	$ 4,349,894	$ 3,475,350	$ 3,136,507	$ 2,086,870	$ 6,610,341
3	$ 4,371,661	$ 3,492,741	$ 3,152,204	$ 2,097,308	$ 6,643,401
4	$ 4,393,537	$ 3,510,220	$ 3,167,979	$ 2,107,798	$ 6,676,627
5	$ 4,415,522	$ 3,527,786	$ 3,183,834	$ 2,118,340	$ 6,710,020
6	$ 4,437,617	$ 3,545,440	$ 3,199,768	$ 2,128,935	$ 6,743,579
7	$ 4,459,823	$ 3,563,182	$ 3,215,782	$ 2,139,583	$ 6,777,306
8	$ 4,482,140	$ 3,581,013	$ 3,231,875	$ 2,150,285	$ 6,811,202
9	$ 4,504,569	$ 3,598,933	$ 3,248,050	$ 2,161,039	$ 6,845,267
10	$ 4,527,110	$ 3,616,943	$ 3,264,305	$ 2,171,848	$ 6,879,502
10-Year Total	**$ 44,270,108**	**$ 35,369,652**	**$ 31,921,191**	**$ 21,238,490**	**$ 67,274,689**
10-Year Average	**$ 4,427,011**	**$ 3,536,965**	**$ 3,192,119**	**$ 2,123,849**	**$ 6,727,469**

**Year 1 Tax Rate based on 2019-2020 tax rate. Assumes an average tax rate increase of 0.5% based on most recent 5-year annual average.*

Source: Camoin 310

School District Costs (DGEIS Section 3.16.2 Potential Impacts)

Major development projects can potentially result in increased costs to local school districts associated with an increase in school aged children; however, the future development of Beacon Island will be entirely industrial in nature. The property is zoned for Heavy Industrial and the Port of Albany is pursuing industrial developers and tenants for the site. No residential development is anticipated. Therefore, the Bethlehem Central School District is not anticipated to incur any increased costs associated with increased enrollment of students as a direct result of future industrial development on the property. No potential significant adverse impacts on the School District are found.

Mitigation Measures (DGEIS Section 3.16.3)

No mitigation measures are necessary due to the finding of no potential significant adverse impacts on the School District.

APPENDIX A: WHAT IS AN ECONOMIC IMPACT ANALYSIS?

The purpose of conducting an economic impact study is to ascertain the total cumulative changes in employment, earnings and output in a given economy due to some initial "change in final demand". To understand the meaning of "change in final demand", consider the installation of a new widget manufacturer in Anytown, USA. The widget manufacturer sells $1 million worth of its widgets per year exclusively to consumers in Canada. Therefore, the annual change in final demand in the United States is $1 million because dollars are flowing in from outside the United States and are therefore "new" dollars in the economy.

This change in final demand translates into the first round of buying and selling that occurs in an economy. For example, the widget manufacturer must buy its inputs of production (electricity, steel, etc.), must lease or purchase property and pay its workers. This first round is commonly referred to as the "Direct Effects" of the change in final demand and is the basis of additional rounds of buying and selling described below.

To continue this example, the widget manufacturer's vendors (the supplier of electricity and the supplier of steel) will enjoy additional output (i.e. sales) that will sustain their businesses and cause them to make additional purchases in the economy. The steel producer will need more pig iron and the electric company will purchase additional power from generation entities. In this second round, some of those additional purchases will be made in the US economy and some will "leak out". What remains will cause a third round (with leakage) and a fourth (and so on) in ever-diminishing rounds of industry-to-industry purchases. Finally, the widget manufacturer has employees who will naturally spend their wages. Again, those wages spent will either be for local goods and services or will "leak" out of the economy. The purchases of local goods and services will then stimulate other local economic activity. Together, these effects are referred to as the "Indirect Effects" of the change in final demand.

Therefore, the total economic impact resulting from the new widget manufacturer is the initial $1 million of new money (i.e. Direct Effects) flowing in the US economy, plus the Indirect Effects. The ratio of Total Effects to Direct Effects is called the "multiplier effect" and is often reported as a dollar-of-impact per dollar-of-change. Therefore, a multiplier of 2.4 means that for every dollar ($1) of change in final demand, an additional $1.40 of indirect economic activity occurs for a total of $2.40.

Key information for the reader to retain is that this type of analysis requires rigorous and careful consideration of the geography selected (i.e. how the "local economy" is defined) and the implications of the geography on the computation of the change in final demand. If this analysis wanted to consider the impact of the widget manufacturer on the entire North American continent, it would have to conclude that the change in final demand is zero and therefore the economic impact is zero. This is because the $1 million of widgets being purchased by Canadians is not causing total North American demand to increase by $1 million. Presumably, those Canadian purchasers will have $1 million less to spend on other items and the effects of additional widget production will be cancelled out by a commensurate reduction in the purchases of other goods and services.

Changes in final demand, and therefore Direct Effects, can occur in a number of circumstances. The above example is easiest to understand: the effect of a manufacturer producing locally but selling globally. If, however, 100% of domestic demand for a good is being met by foreign suppliers (say, DVD players being imported into the US from Korea and Japan), locating a manufacturer of DVD players in the US will cause a change in final demand because all of those dollars currently leaving the US economy will instead remain. A situation can be envisioned whereby a producer is serving both local and foreign demand, and an impact analysis would have to be careful in calculating how many "new" dollars the producer would be causing to occur domestically.

APPENDIX B: WHAT IS A FISCAL IMPACT ANALYSIS?

Fiscal impact analysis is a tool that compares, for a given project or policy change, changes in governmental costs against changes in governmental revenues. For example, a major residential development project in Town A will mean new residents that require new services and facilities such as fire and police protection, libraries, schools, parks, and others. At the same time, Town A will receive new revenues from the project in the form of property tax revenues, local sales tax revenue, and other taxes and fees. A fiscal impact analysis compares the total expected costs to the total expected revenues to determine the net fiscal impact of the proposed development on Town A.

Typical revenues and costs in a fiscal impact analysis include (but are not limited to) the following:

- Property tax
- Sales tax
- Income tax
- Other local taxes
- Water and sewer fees
- One-time construction-related fees
- Impact fees
- Miscellaneous fees
- Increased staffing costs
- Water and sewer and other infrastructure costs
- Road maintenance costs
- Public school costs
- Police and fire protection costs
- New parks and recreation facilities
- Miscellaneous costs

There are several standard methodologies that can be employed in a fiscal impact analysis. The two general approaches to fiscal impact analysis are *average* costing and *marginal* costing:

- **Average Costing:** This method establishes an existing average cost per unit of service. So for example, to understand new road maintenance costs in Town A, this methodology would calculate the average cost per road-mile in the town currently. This average cost would then be multiplied by the number of new road miles added to the Town because of the development.

  Similar to the average costing approach is the "Proportional Evaluation Method" that uses the proportion of local property the development comprises (typically measured by assessed value.) For example, if the development in Town A increases the town's total assessed value by 1%, then under this method it is assumed that the town's costs and revenues will increase by 1%. This 1% factor is only applied to those costs and revenues likely to be affected by the Project.

- **Marginal Costing (Case Study):** The marginal approach addresses the Town's *capacity* to deliver services. For example, If Town A does not have the equipment or manpower to maintain the new roads, then additional costs will be incurred to purchase new equipment and hire additional staff. Conversely, a school district may have excess space due to historically declining enrollments, obviating the need to build new schools for an influx of new residents.

  This approach involves case studies and interviews with local officials and experts. It takes a more detailed look at the deficient (or excess) capacity to deliver services by getting more precise estimates of how different government bodies will be affected by a given development.

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APPENDIX K

PUBLIC HEARING AND PUBLIC MEETING TRANSCRIPT

PUBLIC HEARING

TOWN OF BETHLEHEM, NEW YORK

TOWN OF BETHLEHEM PLANNING BOARD

DATE: 9-3-19

Bethlehem NY Planning Board Public Hearing 9-3-19

ATTENDEES:

JOHN SMOLINSKY, Chairman

SCOTT LEWENDON, Member

GIANNA AIEZZA, Member

BRIAN GYORY, Member

MARK SWEENEY, Counsel

KATE POWERS, Recused member

ROBERT LESLIE, Director of planning

LESLIE LOMBARDO, Senior Planner

DEBORAH KITCHEN, Planning assistant

ELIZABETH STAUBACH, Economic Development Coordinator

JOELYN HAKES, Town designated engineer Representative

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CHAIRMAN SMOLINSKY: Welcome, everyone, to the September 3rd meeting of the Bethlehem Planning Board. We have a quorum tonight. I'll call the meeting to order.

First order of business is a couple of comments on regular-agenda items, except I would ask you, if your comment is on the Port project, please hold that until we open the public hearing in a -- a -- in a few minutes.

So, if anyone would like to comment on the other agenda items, please come on up.

MR. SEGAL: Good evening.

I -- I -- my name's Art Segal. I've been a resident of Fieldstone Drive, for eighteen years and I'm a member of the Fieldstone Coalition to preserve the safety and character of our street. A group of my neighbors have strongly opposed the creation of a cut-through street, from Fieldstone to the proposed new Charlotte development.

We respectfully request that certain materials be added to the Planning Board record, which were not part of the agenda packet for this evening's meeting and that they be carefully reviewed and considered. I have made copies of these

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materials for each of you, as well as a copy for the Board, itself and Debby was kind enough, I think, to pass those -- to pass those out.

So, these include -- and I'll just describe them briefly.

On the petition dated October 2nd, 2015, signed by Fieldstone residents, when a cut-through street was first proposed four years ago. This petition describes why a third access to the proposed development on Fieldstone, will endanger the safety of the many small children playing on Fieldstone, the residents who walk there, destroy protected wetlands, created unneeded and dangerous Elm Avenue (phonetic spelling) and town park shortcut and cause additional speeding opportunities and hazards.

Second, is a letter dated June 17th, 2015, from the county of Albany, Department of Public Works, which states as follows. The town should consider connections between subdivisions against whether or not the through connection to Fieldstone Drive, from this subdivision, will encourage cut-through traffic from Murray Avenue, to County Route 52 Elm Avenue and Old Elm Avenue. In addition, the

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connection to Fieldstone Drive, forces wetland mitigation.

Third, is a letter dated June 17th, 2015, from the Albany County Planning Board, adopting the conclusions of the Albany Planning Department of Works, that I just read.

A letter dated June 24th, 2015, from the Army Corps of Engineers, recommending that to the environmentally-sound protected wetlands for any project should not be disturbed.

Finally, a letter dated August 22nd, 2016, from Licensed Civil Engineer, Andrew Mahey (phonetic spelling), a resident on Fieldstone Drive, provided a detailed analysis of what the Fieldstone cut-through and the significant wetland disturbances will cause, violates basic environmental and conservation principles, will create excessive and dangerous cut-through traffic and is inconsistent with town planning best practices and the town's own comprehensive planning. This letter also points to the flaws of the incomplete and inadequate traffic study, which was conducted to support the cut-through, four years ago.

I'm also providing a copy of my

Bethlehem NY Planning Board Public Hearing 9-3-19 comments for your reference and convenience.

We also ask that you seriously consider and give due weight to the following materials, which were, in fact, included in the agenda packet. The letter from the Department of Environmental Conservation, dated of June -- July 22nd, 2015, that stated, the project proposes several wetland crossings for the roadways. It is recommended, as part of the SEQRA for this project, that alternatives be evaluated to avoid and minimize wetland's crossings to the greatest extent practicable.

Second, we'd like you to consider the recent opinion of the Bethlehem Superintendent of Highways, John Anastasi (phonetic spelling), opposing a third roadway, on the grounds that it will require additional and unnecessary time and cost, to clean and maintain the roadway and associated culverts and retaining walls. The convenient-space objection -- objections of Superintendent Anastasi's predecessor, are no longer an issue, or a concern.

Third, we would like you to consider, obviously, the letter from the Bethlehem Department of Public Works, dated June 2nd, 2019, indicating a

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Fieldstone water-utility connection, is not needed to meet recommended standards.

And finally, the report from C.T. Yale Associates (phonetic spelling), dated February 27th, 2019, which addresses the Fieldstone issue as follows.

This connection would require a large disturbance of federal wetlands to complete approximately one acre. This large wetland's disturbance, coupled with the maintenance requirements transmitted to the town for this right-of-way, economic impacts of construction and potential hardships, have ruled this as impractical alternative to the proposed layout.

The desire to have this cut-through four years ago, was based upon a comprehensive plan that is now outdated and is currently in the process of being revised and refreshed, to emphasize what this town is now all about. Fewer cars, fewer cut-throughs, fewer neighborhood disturbances, where plentiful for opportunities for enjoyable and safe walking and biking, greater protection of our environment, natural habitats and wildlife and meaningful preservation of the character and safety

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of our residential communities.

Fieldstone Drive has been in existence as a dead-end street for twenty-five years. There is a second generation of children, who are growing up there. There is no longer a temporary-sub street that was expected to be extended after a year or two, to complete a development project. It has grown in to a permanent and mature community.

There are twelve children under twelve now on this narrow, twisty street, six of them who moved in within the last several years, all under eight years old and all living in two houses, just behind a -- beyond a blind curve, that on any given day, is concerning, even at fifteen miles an hour and downright terrifying, when cars are parked along the road, creating just barely enough room for a single car to get through, creating a thirty-mile-per-hour thoroughfare on the street.

Given these conditions and the environmental impacts, it's simply not acceptable under any standard. We ask, that in addition to all the information now before you, that points decisively in favor of approving a plan containing two, more than sufficient, egress and ingress roads,

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you seriously consider the concerns of the residents of Fieldstone and the many neighbors on Murray and other streets in the area who have joined us. We respectfully request that you reject any insistence upon a third access to the development through Fieldstone.

Failing to do so, will -- will create a real and completely preventable threat to the health, safety and well-being of the residents of this town and unnecessarily destroy protected natural resources, open spaces, habitats, all of which we already have too few of in our town.

Thank you very much.

CHAIRMAN SMOLINSKY: All right. Thank you, Art.

Okay. Anyone else? Comments on agenda items.

MS. INFINTINO: My name is Sarah Infintino (phonetic spelling) and I live at 20 Fieldstone and my children are four and seven.

Part of the reason we moved to Fieldstone, three-and-a-half years ago, was because it was a quiet street without a lot of traffic. Building this thoroughfare will increase the amount

of traffic on the street, likely going at faster rates of speed.

Also, most -- everyone is familiar with the neighbors on the street and the traffic on the street is primarily people who reside on Fieldstone Drive. I think this thoroughfare will increase the number of unfamiliar people in our neighborhood.

The increase in traffic flow and the rates of speeding is a deterrent to our children's safe -- is a detriment to our children's safety. We are just one family, with small children in the neighborhood. Taking a walk or riding bikes would be a more perilous undertaking overall, for the children.

Thank you.

CHAIRMAN SMOLINSKY: Thank you.

Anyone else?

Seeing no one else, we'll move on to minutes approval.

We have the minutes of Tuesday, August 20th and Rob, there are some changes to it, if you want to discuss the slight corrections you made.

MR. LESLIE: Yeah.

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We had a -- a change on the -- the rate for the -- in regards to the project on just we would move to strike that. I think it's on page 2, I believe, if I'm right.

And, then, there's just some minor clarifications to the item related to the -- the subdivision. Again, those are some minor clarifications, none of which changes the substance of the --.

CHAIRMAN SMOLINSKY: No. I don't think --

MR. LESLIE: Okay.

CHAIRMAN SMOLINSKY: -- so, unless we have a request from a Board member.

Can I have a motion to approve the minutes of August 20th?

MR. GYORY: Well, John, is there a possibility that we can hold till next -- and I think it would be best if we just hold because it's not --.

CHAIRMAN SMOLINSKY: Sure.

I don't --.

MR. GYORY: I don't -- I don't think it'll hold anything up.

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CHAIRMAN SMOLINSKY: No. No.

MR. GYORY: It's --.

CHAIRMAN SMOLINSKY: There's no harm, no foul, I guess.

MR. GYORY: Thank you.

CHAIRMAN SMOLINSKY: All right. So, our first order of business tonight, is the Port Road/South Beacon Island/Albany Port district expansion project.

First, I'll turn the floor over to Kate Powers.

MS. POWERS: So, I've notified the Board, just because of my work at the Attorney General's Office and a possibility of a future conflict, I have decided it's in the best interest of my role there and my role as a Planning Board member of the public, to recuse myself from the Port project.

So, I will be doing that. I'll be stepping right outside and returning, after consideration on this matter.

CHAIRMAN SMOLINSKY: Okay. Thank you, Kate.

Couple of general things to talk about

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before we start. The Applicant has hired a Transcriber. Someone to --.

MR. LEWENDON: Stenographer.

CHAIRMAN SMOLINSKY: Yeah. Stenographer, but they don't do stenography.

Anyhow, someone to trans -- record the transcript for this project.

We all -- have a sign-up sheet in the back, for those of you who want to address this project and there is a sign-up sheet right up here, if you've forgotten to do that. It helps the Stenographer spell names correctly and -- and determine who's -- who's who, as they're speaking.

It's also important to introduce yourself when you come up. Speak into the microphone, loud and clear. It's adjustable up and down. The angle adjusts. That also helps all of us understand and hear what you're saying. It helps the recording on the video, if you do that clearly.

On that note, I'd like a motion to open the public hearing.

MR. GYORY: So moved.

MS. AIEZZA: Second.

CHAIRMAN SMOLINSKY: All in favor?

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ALL: Aye.

CHAIRMAN SMOLINSKY: Aye.

Again, just a couple of protocol mentions. I already mentioned the microphone, but one speaker at a time throughout this process. Please respect whoever has the floor, at the time.

Interruptions are really not a good thing. If more than one person is talking, that means there are several people that aren't listening and it makes it harder for all of us to listen to two, or three voices at the same time. So, let's try to avoid that.

And I'd like a motion to waive the reading of the notice and to indent the notice into the record of the hearing?

MS. AIEZZA: So moved.

MR. SWEENEY: Second.

CHAIRMAN SMOLINSKY: All in favor?

BOARD: Aye.

CHAIRMAN SMOLINSKY: All right. I'd like Rob and Mark to start out with, probably, the short history of the app -- project application, what we've done so far, what steps you've gone through. And then, Mark and/or Rob will talk about the purpose

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and procedure of today's public hearing.

MR. Sure.

Thanks, John.

Just by way of -- sort of a background, the application by the Port, for the expansion of eight -- about eighty-two acres into the town of Bethlehem, the application was submitted and reviewed by the Planning Board, for an initial application, in late 2018. Then, in early January, the Planning Board determined that the project may have a -- a significant effect on the environment and that an environmental-impact statement should be prepared.

So, the Board then the -- the Board conducted a public-scoping session process. The public-scoping session was held on March 3rd, which gave the opportunity to provide comment from the public. And then on March 27th, the final scope, with the draft of the environmental-impact statement was accepted and since -- since that March report, we have been -- we're working on addressing the section of this draft.

Moving ahead to August -- August 6th, the Town Planning Board formally accepted the draft -

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- two drafts, as complete and after two meetings, the Board scheduled a public hearing for tonight, September 3rd. The Board has also maintained a public-comment period, from October -- from August 7th through September 13th. So there's about -- I don't know, one more week that it will be available for the public to provide written comments, for those members of the public who aren't able to attend tonight's meeting. Written comments will be accepted through September 13th.

So, that's where we are with regards to the history of the projects and the scoping session process, that we've gone through and drafts, as well.

CHAIRMAN SMOLINSKY: Thank you, Rob.

MR. SWEENEY: So tonight, for the public hearing, basically, it's an opportunity for the public and the Board members to address their comments to the Board and the Applicant. The Applicant will be providing a presentation tonight on the project.

We ask that you make your comments at the microphone, as we discussed. And then, we're -- those comments will be accepted and reviewed by the

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Board, the staff, the town -- town-designated engineer, and provided to the Applicant for responses.

So, the responses from the Applicant will come in the final generic Environmental Impact Statement, that will be provided as the next real step and milestone in this process. So, the comment period will remain open for another ten days after this public hearing and -- actually, until September 14th and -- so, it will remain open. So, if there is a comment that you didn't make tonight and would like to add with -- till September 14th, to do so in writing.

But, the purpose of tonight is to receive the comments and not have a -- a question-and-answer session, so much as an opportunity for you to ask your questions or make a comment that can then be responded to by the Applicant. And then those responses, will be reviewed by the Board and determined whether they're sufficient and they'll be -- if they are, that will be accepted. If not, the Applicant will have some more work to do and we'll take it from there.

But the process right now is to get

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all of your comments, all the comments from the board as part of the public record. It'll be captured by the Stenographer and turned into a transcript. That transcript will then be part of the final generic and Environmental Impact Statement and used to -- as a basis for creating the comments and responses within that realm.

If there's any questions from the board, or the staff --?

CHAIRMAN SMOLINSKY: Thank you, Mark.

Now, I'd like to turn the floor over to the Applicant and its consultants for a full discussion of the draft, generic Environmental Impact Statement.

And I think, one thing I'd say, Mark, is after we hear -- after this presentation, we'll open the floor for public comments. We'll open the floor for Board comments. And, I'm -- I'm thinking we would give the Applicant another opportunity, if there's anything they want to add based on what they've heard.

MR. SWEENEY: We certainly can do that if you'd like.

CHAIRMAN SMOLINSKY: We'll see how it

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MR. SWEENEY: Right.

Steve?

MR. BOISVERT: Good evening.

I'm Steve Boisvert with McFarland Johnson and I have here with me, professionals that contributed to the preparation of the Environmental Impact Statement. They are experts in their respective fields. What I'd like to do is go through a presentation that will introduce each of the professional experts and they will prepare a presentation, about their particular subject matter.

I also would like to let you know that we have here, the C.E.O. of The Port of Albany, Rich Hendrick and we also have Megan Daly, Head -- Director.

So with that, by way of background, how we got here, back in 2016, the Port commissioned a marketing study. The marketing study concluded, saying that their current supply chain, which is warehouse distribution, light manufacturing, was in strong need for the fore -- foreseeable future. They also concluded that, currently, the Port owns about four hundred acres, from which over ninety percent is

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currently occupied. So, in order to plan for future growth, they needed to purchase additional land.

That study was validated in 2018, early 2018, and in late 2018, the Port purchased property formerly known as Beacon Island and that at least eighty acres from which the project is being proposed on.

The location of the project, is such that it is bound on the East Hudson River, to the North of Normans Kill, to the West was actually a transmission line, owned by National Grid and just to the west of that, is River Road.

The property outlined in magenta, also has two easements accompanied to the property, from which National Grid granted an access easement, along the southern portion of the property tying in the Route 11 look and also midway down to properties, tying them to -- also River Road. They're used for the utility easement.

Access to the property currently does not exist. A new road will be extended from Port Road South, with a bridge over Normans Kill and will traverse through the property and then come out the south easement and tie into River Road. As currently

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shown, the area, that's vacant land right now and is zoned heavy industrial.

So, the Environmental Impact Statement and generic SEQRA Laws allow us to prepare engineering scenario, in which, right now, the Port does not have any proposed tenant, or project in mind. Therefore, we're not proposing any specific use, other than it will be an industrial use and it won't have any specific project plans.

So, what we have done, is prepare a series of concept plans, that will be a culmination of the worst-case scenario, from which the Environmental Impact Statement will analyze that worst-case scenario. So, what I'll do now, is walk you through the concept plans and various sizes and shapes that comprise of the ultimate worst-case, or concept that we are evaluating under the Environmental Impact Statement.

So, the first concept is a hundred and sixty thousand square foot fabrication building, that will be earmarked for the offshore-wind industry. And the project also includes -- all projects includes access to the north over Normans Kill, again, meandering over through the property and tying

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into River Road. They also all have a -- also all have a rail component, the existing rail line will be extended over Normans Kill, through the property and terminate just before it leaves the site. All the concepts will have a wharf, that will be able to address potential maritime use.

So, these two -- this concept and the next one, specifically address the offshore-wind scenario, in which a small manufacturing, or fabrication building will be erected and the balance of the property will be used for storage, or a staging area, prior to it being shipped out to sea.

This is an offshore-wind manufacturing plant, that could potentially, to manufacture turbines, or blades, again, with a -- a large area outside the building for storage, staging, before being shipped out to sea.

The next concept is a concept with a multi-tenant, multi-building scenario, currently as a port currently operates, in which there's four buildings here, which could potentially be subdivided and sold off to an individual company, or a company that would subdivide the building into multiple tenants. This particular scenario does include a

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public road -- town -- a port road south of the town would be extended through the property and tie into River Road, thereby creating either two to four lots, which include the road. Total square footage here is about eight hundred to ten thousand square feet. And then, this scenario is five hundred thousand square feet and the very first scenario is a hundred and sixty thousand square feet.

So, you can see we're growing in size, the project and each project is getting slightly larger than as a cumulative effect. This is a nine hundred thousand square foot building that could be used as a warehouse, or a distribution center, where potentially, even a larger manufacturing plant has access to the same points to the north and the south. Employee parking, truck parking, loading docks, all along the eastern edge.

So, we took all the major components of each of these concepts and took the worst-case scenario and created the final concept, which captures all of the hypothetical impacts, the worst impacts, associated with previous concepts and that is the project that was -- is evaluated at one point three one million square feet, two-story building,

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that will house industrial use, a total of eighty-five feet high and has all of the components that we talked about, with regard to the rail and the wharf.

So, this is the project that was evaluated in the Environmental Impact Statement. It did account for storm water and you'll hear from all of our experts as to the impact that this project has on the environment.

As Rob mentioned, we did a public-scoping session, with the Planning Board and public and we created a scoping document, which is an outline of the Generic Environmental Impact Statement, which was adopted on April 2nd. And here are the table of contents of the environmental-impact statement. It is over fourteen hundred pages long and these are the topics -- the subjects that are going to be discussed in detail at a later date.

Everything you see here, is the technical reports that were made part of the Environmental Impact Statement. So, we can see that there -- we'll call it a survey prepared, a geotechnical report prepared, a dredging reported, endangered species, a wetland-contamination report, traffic studies, sonar report, the water, natural

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resources, visual impact, economic and fiscal impact and the alternatives I just described, all of which are appendices to the D.G.I.S.

And with that, I'll turn it over to Ashley.

MS. ERDMANN: My name is Ashley Erdmann. I'm with McFarland Johnson. I'm a Professional Engineer, with experience in civil and environmental engineering.

The first section I helped author, is the historic, cultural and archaeological resources section. The project has been reviewed with the Office of Parks, Recreation and Historic Preservation, or SHPO, as we alternatively refer to it as. Multiple studies were completed for SHPO and as of March of this year, SHPO had provided a no adverse effect to the project, determining that the project would not affect the cultural and historical resources of the area.

We have recently been working with SHPO, regarding the view shed from Pabst City Island, which is a historically-sensitive area. You can see here we completed a visual simulation of the project site, from Pabst City Island, looking towards our

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site. So specifically, this photo was taken from American Oil Road and back here is our building that is eighty-five feet tall, simulated into the photo. You can see directly to the south is the P.S.A.G. site. From this photo simulation we have determined that the project does not have adverse effect for the view shed.

All documents regarding the cultural and archaeological documents, are located in Appendix L and in the land use and zoning section, we determined that the project is in compliance with the town's comprehensive plan, as well as the Zoning Code. The area, yard and bulk regulations are all met, except for the building height. Currently the building height has a maximum height of eighty-five -- or sixty feet -- excuse me. And we're proposing eighty-five feet, but the project is in compliance with the surrounding facilities, of which the neighboring property to the south, has buildings that range from ninety to two hundred feet. So, this project would still be in conformance, with its neighboring properties.

You can see this is the town of Bethlehem zoning map, showing that the whole area

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around the project site is zoned as I, or heavy industrial and the project will remain heavy industrial. The community character and compatibility with the comprehensive plan, the comprehensive plan is quoted as saying, development with any industrial areas, provide a much needed tax base for the town. So, the town is actively wanting to develop this area, as well as in the local waterfront-revitalization plans, they also discuss this project. The project is in conformance with those two documents from the town of Bethlehem, as well as the project will encourage the tenants of the facility, to use renewable and alternative energy sources and build the building, with lead standards.

For the emergency services, we have been in correspondence with all emergency agencies, including the local police department, fire department and the emergency services or paramedic's departments and we will make sure -- the mitigation will be that the building is built using all local codes, including the Uniform Fire Protection Building Codes, sprinkler and standpipes, as well as the road will be developed to meet the requirements of the emergency vehicles.

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We have analyzed all of the parks, within a one-mile radius of the project, between the recreation and open-space section, the SHPO section, as well as the visual-assessment section and it has been determined that there is no impact on the recreation and open spaces, within the one-mile radius of the project.

We have a map here, showing the town of Bethlehem parks.

And the last section that I helped compose, was the climate and air section. So, the New York State Ambient Air Quality Report, as well as the Albany South end Neighborhood Air Quality Screening and Study Reports, were reviewed in correspondence to this project. They're -- at the loud -- nearest monitoring station in Loudonville, there have been no non-compliance ratings, within the last five years and regarding the Albany South end Neighborhood Air Quality Screening and Study, there have been air toxics measured at average concentrations, that are similar to the averages measured throughout the state of New York and they've done qualitative analysis to determine that the effects of human health in this area, have been

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ranked -- determined to be low to moderate.

They've also done a specific study for the odors, for the Port of Albany and less than point two two percent of those readings, came up as even measurable by the equipment used by the D.E.C. and it is unlikely that our project will increase the odors. The project will also not increase the greenhouse-gas emissions, but the -- the project will encourage the future users to implement green practices to minimum -- minimize greenhouse actions, as well as during construction, there will dust suppression and a camp implemented.

So, with that, I will introduce Tom Wirickx.

MR. WIRICKX: Good evening.

I'm Tom Wirickx with McFarland Johnson. I'm a Senior Environmentalist.

I'll start off with the studies of geology on the site -- the site -- the portions of the site, were historically used for coal ash --.

CHAIRMAN SMOLINSKY: Could you hold the mic a little closer, please?

MR. WIRICKX: Is that better?

CHAIRMAN SMOLINSKY: Yeah.

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MR. WIRICKX: Portions of the site were historically used for coal-ash disposal, as well as the landfill and operations to create land in and around the island. As a result, even though soil conditions, dynamic compaction is proposed, collectively handling and engineering of institutional controls, implementation by the D.E.C. to avoid potential effects to the environment and to human health.

Typically what's done in these situations, is they -- a cover is placed over the site, which would be -- consist of one or two feet of soil, covered with pavement, concrete, or a building slab, with a demarcation layer, overlying the coal ash, such that any future excavation will know that there is a demarcation layer, which material below that requires further investigation and evaluation by the D.E.C.

Standard erosion and sediment controls, will be implemented to mitigate potential surface-water quality impacts on Normans Kill and the Hudson River, during and post-construction. Due to the potential presence of the state and federally-listed threatened bird and migrant bats, all trees on

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the site, will be cut between November 1st and March 31st, in order to -- to avoid potential impacts to Shortnose and Atlantic Sturgeon, dredging will be conducted between September 1st and November 30th, so also further mitigating the potential impacts to the water -- the fisheries of the Normans Kill and the Hudson River. According to the D.E.C., there has been historic record set of greater freshwater mussels in the vicinity of the project area, in the Hudson River. As a result, our -- in dredging, where we're creating disturbances, the freshwater-mussels area will be -- based on the most-recent D.E.C. vegetation survey, which was conducted in 2016, a small area was picked out. You can kind of see, it's the small -- small area, right about the center of the site, right near the Hudson River. The project as designed, the worst case scenario would not impact this area.

In addition, a rate plant survey was conducted. All rare plant species were protected, within the vicinity of the project impacts. McFarland Johnson conducted a wetland survey, as far as -- in the spring of 2019. Eight federally-regulated wetlands were identified in the project

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vicinity, two out -- two surface water actually, both federal and state-regulated, were identified and that's the Hudson River and Normans Kill.

Obviously, mitigation for -- for impacts on the surface waters of the wetlands, will involve the coordination of the D.E.C. and the Army Corps of Engineers, in any mitigation that it may require. Worst-case scenario, as designed, will impact, approximately four-thousandths of an acre, of federally-regulated wetland located along the Normans Kill. At this level of impact, the project should qualify for Army Corps of Engineers Agreement.

The majority of the project area, is located on a flood-zone area. We have a map of the flood zone area. The baseline elevation was determined to be eighteen feet by FEMA.

As a result, we'll take into consideration potential climate-related sea-level rise, through to the year 2100, under the low projection, we could add about nineteen feet. As a result, in terms of FEMA guidelines, building to finished elevations, will be at twenty -- twenty point three feet to provide a minimum of one point three feet above the low-projected sea-level rise

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elevation level.

So, just to clarify, the low projection, this is the elevation that is very likely to occur within that timeframe, through 2100. Again, to -- some of -- other evaluations were conducted by the D.E.C.

As previously mentioned, the project will involve system water and sediment controls, to comply with SPEDES, to control for standards for ground water and surface water during and post-construction. There shouldn't be any potential ground-water impacts in the areas serviced by public water-supply service. So, it should not become a problem for a domestic water, to supply to residents in the project area.

We found that -- it -- it should say the county's landfills have -- currently have the capacity to handle the waste from the project, this includes the City of Albany Landfill -- Landfill, as well as the Town of Colonie Landfill. The Town of Bethlehem, has a -- a recycling policy. As a result, the port will encourage all tenants to comply with that recycling policy, to reduce potential landfill waste, as a result of the project.

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MR. BRADFORD: Thank you, Tom.

My name is Turner Bradford. I'm with McFarland Johnson, as well. I'm a Professional Engineer. I also have a Masters in water resources. So, I'll go through the drainage, the water supply, the sewer and the visual assessment.

Well, we'll start here with the drainage. So, we analyzed the project, in accordance with the New York State D.E.C. stormwater manual and the SPDES Permit. And there were four items that you need to go through, to make sure that you're mitigating. Water quality, water quantity and erosion and sediment control, largely during construction and then any permanent -- any permanent things that need to stay in place, to ensure that those mitigations stay in place over the life of the project. So, I'll go through each of these in turn.

The first thing we do is we analyze the water shed. So, this is actually the entire lower Hudson River basin. We're way up on the north, where that circle is. So, were are the Normans Kill sub-catchment of the lower Hudson River basin. This sub-catchment is monitored by the D.E.C. and is not

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listed in the -- in the SPDES Appendix to -- to monitor phosphorous for construction. Nor is it listed in the SPDES Appendix, to monitor construction as -- activity and all of that, is just a fancy way of saying beyond what is required in the manual, there are no extra requirements placed upon the project.

So, this is the existing site, as Tom and Steve just described it. It is largely undeveloped and in it drains, although rather slowly because it's -- it's mostly flat, to the Hudson and Normans Kill. So, in -- in this graphic, north is to the right. The Hudson River's on the bottom of the page, to the east of the site and then Normans Kill cut thru -- that's the Norman's Kill, cutting through the north of the site. This is the Hudson River here. So, the P.S.&G power lines are over here. And then this is the alternative, as Steve described, our worst-case scenario. The building, the parking, the water flow and the river here, the entrance to the site, the connection back to River Road.

So, to address water quality, there are two items that the manual requires. Water-quality line and run-off production lines. The run-

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off production line is essentially the green infrastructure to attempt to recreate the natural-evapo transpiration of stormwater back into the environment, through the ground and through the air. This project, we designed three bio-retention basins, to provide the required amount of production line, per the manual. And then the remaining water-quality line, is provided in two stormwater plants. So, there are closed drainage systems, that would collect the run off, direct them to these five practices, providing the water quality and discharge into the Hudson River.

The water quantity, in this case because this project discharges directly into the Hudson River and the Hudson River, at this point, is titled, the stormwater manual does not require water quantity to be mitigated. So, we are not proposing to mitigate water quantity because it's not -- it's not required for this project.

For the erosion and sediment control, as Tom mentioned, there would be standard erosion sediment mitigation. This project is within the town of Bethlehem. The town of Bethlehem is in M.S. four. So, any project is going to need to complete a full-

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SWPPP report and that will include the full erosion-sediment control during construction, in accordance with the manual.

And then finally, that'll also include the permanent record of the operational and maintenance plans for the stormwater features. So, there'll be -- any easements, they'll be codified. The -- the maintenance of those features will be responsibility of the Board, or -- or whoever occupies the site, however that gets worked out. But all that's going to be codified with the SWPPP anyway.

So, based upon these four items, we believe that the project has no adverse impact associated with this drainage and that's just a summary report. You can go ahead and take that out.

Appendix J, was the full stormwater report. It goes through all that, in -- in much-greater detail.

The next thing we looked at, was the water service for the site. Now, there are two types of water service. The -- the -- the domestic demand, essentially the potable water that the users of the site will drink. We have a -- a sink, water

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fountain, bathroom and then the -- the fire protection.

So, the town of Bethlehem actually has a water line, within River Road -- on the west side of River Road, here and here. This is a sixteen-inch water main, this is an eight-inch water main.

It's actually the same water system. They're on separate pressure zones. So I think the conversation here will be to essentially consider them separate systems.

We provided our site to the D.P.W. and the town ran their town wide water model. And what they told us, was that from the south, they can provide one thousand three hundred gallons per minute, of water. And from the North, a thousand gallons per minute.

Based upon the size of building and the number of anticipated employees, we're estimating one thousand -- oh. No. Sorry. That's for new employees. One thousand one hundred and thirty employees, which comes out to an average-daily demand for water, of twelve gallons per minute, with a peak hour of forty seven gallons minute. So, the domestic demand's not an issue, provided our connection is

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developed.

The fire flow, based on the size of the building, similar buildings and fire-protection systems, is estimated at two thousand three hundred gallons per minute. So, that is greater than either system can handle.

So, the project has analyzed three alternatives to meet, essentially, the -- the ultimate water demand, being driven by the fire protection. The first one will be a single connection from a sixteen-inch water main with a water tank that would store enough water to handle the flow and the pressure, to run a fire system.

The second one is a loop through the site, that would connect to both the sixteen and the eight-inch water mains. In this case, the domestic demand would come off the sixteen-inch main and then, if needed, it could pull water off of both water mains.

And the third alternative is a connection through the right of way, in to River Road, that essentially does the same thing and it connects the -- both systems here, into the site connecting both of them. It would, again, draw

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domestic water off of the sixteen-inch main, could draw from both systems, if needed, for a fire.

But based upon these three alternatives, we're confident that the projects water demand can be met and that it doesn't have an adverse impact.

The next section that I helped look at, is the project sewer demand main. So here, we looked at three alternates for connecting to -- actually, not connecting to the -- to systems. We looked at two -- two alternatives for connecting to public systems and one alternate for on-site.

We look at connecting to the town system, but in talking with the town and local knowledge, the connection would have to go up Glenmont Road and the belief, is that that's largely -- and that's a tough connection to make, and that's a tough connection to make.

In the connection, the existing town system from that connection point and the treatment plan, has capacity issues, specifically at a station that runs a force main across -- so knowing all that, we actually did not analyze that for this report.

We analyzed a connection to the Albany

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County Water Purification District. So Albany County runs a sewage-treatment plant, the South Wastewater Treatment Plant, which is in a -- in the existing port. So, a force main would be run, at -- it's somewhere, to the existing plant within the port. It would be a private force main, which is the system that the port has now. The existing users within the port -- port, excuse me, would make private connections to the plant, so there are no other users on that plant. So, it would be a dedicated force main for this facility, to the plant.

The other alternative that we analyzed, was an on -- was on untreatment system. Now, we first looked at, sort of a conventional septic system, raised type system. As Tom mentioned with the historical use of the site, coal ash, the ground water, we discarded that as an option.

But we did look at a package treatment plate, which is, essentially, a manufactured small treatment plant and we reached out to some manufacturers and it is a very realistic option to consider purchasing a small treatment plant, that can handle -- that can handle the flows from this facility and discharge directly into the Hudson

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River.

So, again, based upon the same users that were driving water demand, essentially there's the same waste-water demand. It's given in different units. So, the same one thousand one hundred and thirty employees, it's given gallons per day. Sixteen thousand nine hundred and fifty gallons per day. The treatment plant in the port is permitted to operate at twenty-nine million gallons per day and it currently operates just over twenty-three. So, there's just over five million gallons per day, that we will certainly be well beyond what this project will produce. And similarly, in talking to the manufacturers of package treatment plants, we know that there are package treatment plants that can operate, you know, at or above twenty thousand gallons per day, for this type of facility, with tertiary treatment, that would be acceptable for discharge.

So based upon those two scenarios, we're comfortable saying that the -- the sanitary-sewer aspects of this project, have no adverse impact on the -- on the project.

So, the last section that I helped

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prepare is the aesthetic and visual report. These are some design elements we used, in considering the project.

And to help to minimize anything, we -- we maintained a vegetative buffer, along the western border of the project, which is the -- essentially, the only border that isn't either P.S.E.G. on the south, or the existing port on the north, or the Hudson.

The buildings' colors will be muted, to try and blend in with the surrounding area. All lighting will be cut off and I think as -- as Ashley mentioned, the project is in keeping with the -- with the surrounding visual aesthetic.

So actually, appendix M, in the report, is a detailed visual-impact assessment. And what that does, is that goes through a constrictive process of analyzing the project, in conformance with the Federal Highways Guidelines. Basically, what you do, is you describe the existing visual character of the area, you identify the view shed for the project. So in this case, it's really along River Road, South Port Road and the Hudson River. You identify any sensitive receptors to the project and that's

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actually what this map is.

So, using the state G.I.S. Clearing House, essentially any culturally-important facility within a one-mile radius, so I believe that's a church, I believe that's a cemetery, here and here and that's Pabst Main Island there, to make sure that any sensitive-visual receptors aren't impacted. We went to those sites, we analyzed the view shed from there and the project cannot be seen.

So, what we were let with, was five areas that we could see the project from. So, those five spots and we went to those five spots and analyzed the view shed and essentially, took pictures, took the G.I.S. look -- or sorry. The -- yeah. The -- the -- the G.I.S. coordinates of those pictures, placed them into a free-rendered model, we had made of the site and then superimposed the pictures on there.

So, this is the first location, which is South Port Road, looking south, into the site. Obviously, you can see the project here. But based upon your location, which is largely industrial and this being a rarely -- seldom-used road, we felt that there was really no mitigation required at this

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location, as we're essentially -- the only people who were probably driving there, are probably driving to -- to the -- to the site.

This was the second location which is the northwest property line. Now, this is actually not on River Road. You've actually come in, the -- the access easement, along the north of the property and you crossed a railroad -- the railroad tracks are behind you and you sort of see, you're underneath the P.S.E.G. power lines. So, this is the -- the access easement into the north edge of the site.

So, you can see, the existing vegetation gets thin here. This is why we analyze this location, while we're maintaining as much vegetation as we can, based upon the P.S.E.G. power lines, the railroad. We are not recommending any additional mitigation, of this side.

This was the third location, which is the southwest of the project, along River Road, where the southern access to the project, will be built. This is what is called a dynamic view shed. So, this isn't something that -- something you'd likely stand here and see. They would be traveling in a car and so, you would pass quite quickly. It's a small

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opening, so we are not recommending any additional mitigation of this side, either.

This was the fourth location, which is up Glenmont road. As Glenmont travels up the hill, you gain elevation and there is a clearing in the vegetation, where you can see the project site and so, that is the building there. That's the site. However, it's only the top of the building that you can see and so, we are not recommending anything on this side either.

And then, lastly, the view from the Hudson. So, this is middle of the Hudson, looking back at the project, obviously. You see the project.

However, based upon the -- the comments we made before, that essentially, we have the Port to the north, we have P.S.E.G. to the -- to the south, behind you, there are bulk oil-storage facilities, it is in keeping with the -- the visual aesthetic of the -- of the area and so, we're not recommending any mitigation of this side either.

So, based upon all these and the visual assessment in Appendix M, we feel that the project has no negative impact on the aesthetic or visual resources.

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Those are the topics that I went through and so, I'll turn it over to Adam, who will discuss traffic.

MR. FROSINO: Good evening.

My name is Adam Frosino. I'm also from McFarland Johnson. I am a Project Manager for McFarland Johnson, P.E. and I've got thirteen years' experience of specifically doing traffic-impact studies and traffic-related studies.

This study is similar to other traffic-impact studies, but it and also had some other aspects of it. So, I'll try to go relatively quickly through some of the -- the cookie-cutter stuff and focus a little more on some of the project-related --

CHAIRMAN SMOLINSKY: Adam --

MR. FROSINO: -- items.

CHAIRMAN SMOLINSKY: -- can you hold the mic a little closer.

MR. FROSINO: Sorry.

So first, I want to start by saying that we did complete a traffic-impact study, that was an appendix to the D.G.E.I.S. and that was submitted in draft form. It was reviewed by the town and then

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revised and submitted as -- in final form.

And also, there's been coordination throughout the whole process, whether it be scoping, or development of the traffic-impact study. There's been coordination with the town, to town's engineer, New York State D.O.T. and the public, during the scoping process.

So, I wanted to first start off, by just showing you the study area for the traffic-impact study. There's ten intersections -- existing intersections shown, plus one proposed. It goes all the way as far south as the Exit 22 ramps to I-87 and as far north as the Church and Broadway Street. The -- essentially the north exit from the existing Port.

And at each one of these locations, data was collected, count data. Not just vehicles, but pedestrians and bicycles data, as well. Similar timings, insert intersections, we did gap analysis and we've got geometries for all the intersections, as well. All that information, I'll talk about, goes into a traffic-analysis model.

So, after we collected all that data, the next step was figuring out, okay, when is this project going to be completed. We went with the

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build date of 2029, assuming a ten-year build out.

With that, we used a background growth rate, based on how traffic's been going out there, over the last few years and we applied that. That was at half percent per year.

And then we also incorporated, as applicable, a bunch of other potential projects down the road, that we received information for, from the town.

From there, we looked at what trips would be generated by outpost site. We add gross-scoring network, we distributed them and then we came up with a build by of 2029, as well.

I'll go through each one these steps, relatively quickly, but that's kind of a -- a -- out process, from a capacity standpoint. So, we're looking at what would happen if the project was not built at all, in 2029 and then comparing it to what the traffic conditions would be, with the project there.

So, for trip generation -- so this is a little bit of a unique site. We did look at the I.T.E., The Institute of Transportation Engineers, Trip Generation Manual. That's kind of the

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nationwide manual used and accepted to generate traffic, from a -- a virgin site that has nothing on it. So, we looked at that.

We looked at the potential uses and then we also compared that, with the volumes that are currently being generated by the Port of Albany. Given that this is an expansion of the Port of Albany, the I.T.E. Trip Generation Manual actually recommends, if you can find a similar use in close proximity, that is a much-more accurate way to generate traffic, in regard to how many trip you will be generating.

So, that is what we use, but that is a gut check. We did go back and compare what we calculated with the industrial park Houston I.T.E., which was actually very similar in numbers. And we also compared it to warehousing, which our numbers we used, were actually significantly higher. And then, we also looked at it -- this -- all this one -- over one million square feet, was manufacturing and we were looking at lower than that. So, we're kind of right in the middle and that's our that's our best guess, at this point. It's a -- a fairly-conservative assumption, at this point.

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So, when all is said and done, after -- we also broke this up into three phases, at the request of the town, just so we could see when the -- will be needed at the site, especially if you look at one of the alternatives that Steve will be multi-tenant, it is possible that this could have one tenant and then a couple years down the road, there'll be a separate tenant. So, we wanted to look at looked at whether that got -- that phasing made sense, as well.

So, the end result though, is we're looking at over -- roughly five-hundred cars entering during the morning-peak hours and five hundred cars exiting during the evening-peak hour, for the full-build scenario of the one point one three million square feet option.

Again, that's the -- well, the -- that's the most-conservative option, largest square footage, with most employees. Most employees needed, most traffic on the road generated.

So, we did distribute the traffic and we distributed all the traffic, based on the traffic distribution from the existing Port. We did that and then also took into consideration the -- the new

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driveway to the South and how it some employees would want to use that -- that driveway to continue to go south. So, there is some modifications to what the existing employees, how they go to and from work at the Port, but it's -- it's very similar.

So, as I explained before, we put all this information together.

We have the existing conditions, which is this count. I know the numbers are small, but I'll generalize. Everything is all in the report. But we have here, existing count and that's what we counted.

Then you have your background. That's that 2029 model, that we developed. And then we looked at phase one, two and three and then we look at -- okay, were there impacts? If there were impacts, how do we fix the roadway to mitigate those. So, then we have a mitigated count.

So, each level of service -- I won't go -- again, I won't go in to detail, but each movement at the intersection, has a level of service associated. An A, being great. An F, being failing, or close to failing. And when you're designing roads, you typically want to see a level of service

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C, or D, or better, during the peak hours because you've got to remember, this is during the peak hours. If -- you're going for A-level of service during peak hours, it means you're designing an express to -- just to serve that fifteen, twenty, thirty-minutes of the peak hour.

So, we'll see the -- the letters associated with -- with the build and you can compare them with the background. That's what we did in our report and we figured out how we -- how we can fix it and mitigate, for any of the -- any of the impact issues.

So, this was the -- the level of service table, for the morning-peak hour and then the next slide's the same exact thing, but it's the P.M.-peak hour.

So, I'll go in to what the mitigation was, to get to all those updated levels of service, after I talk a little bit more about trucks.

Given the nature of the site, we really dug in to the -- the truck volumes and truck distribution a little further, to see what -- what potential impacts the truck traffic would have.

So, for the heavy vehicles, with the

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truck generation, we did the same process that we went through for the overall-traffic generation for the site. We looked at the volumes of trucks, which actually don't peak during a.m. and p.m. It makes sense. They peak more midday. Anywhere from roughly nine a.m. to one p.m., is the typical-peak for trucks.

So, we used data that was collected for the May 2018 traffic study, that was specific for trucks and we utilized those volumes and determined what the road was generating, from truck traffic and then interpreted that and extracted that out and determined how much peak-hour truck traffic we could expect, from the expansion to the Port.

So, as a result, you'll see, we looked at various segments of roadways, within the corridor. Again, we looked at the segments of

Roadways, not specifically at each one of the intersections because during these times, capacity is not really the concern. At those times, volumes are low because there's not a lot of commuter traffic. So here, we're just looking at, what are the changes in trucks, from a safety perspective, from a visual perspective, from the noise.

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So, you could see, based out of proposed expansion, along these different roadway segments, we're looking at increases of anywhere from no increase at all, up to about twenty-fiveish percent increase in truck traffic, is what we're anticipating. Again, that's during that -- the peak-hour timeframe, which is between nine a -- or nine a.m. to one p.m.

So, once we've figured out, again, where these trucks -- how many trucks we can anticipate, we distribute them in that. So, we did use a different truck-distribution percentage. This percentage that we used, in the -- I'll call it the base scenario, used a similar truck distribution, to what was being distributed currently, at the Port of Albany.

So, the trucks are distributed in various -- on various roadways within that -- I won't go through all those percentages, but they do, currently, today, branch out and use most of the roadway infrastructure, to go where they have to go.

So, there were other studies completed, regarding truck traffic in this scenario and there were -- there was mitigation proposed and

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how to minimize that and we -- our team was on -- was in line, with all those recommendations. So, we listed those and we included those within our study, as well.

But I can't take all the credit for it, you know. There were -- there were other more-detailed traffic studies that looked at the whole southern part of the city of Albany and came up with these conclusions, but some of these things were signage, restricting use of compression brakes, signage clarifying that -- which trucks should be using and not using certain roadways.

The requirements for oversized loads, need to have a plan approved by the D.O.T., before they can be allowed on the roadway. And super load, same -- same thing as the intended route and to ensure that the route was safe and acceptable and be approved by the town and New York State D.O.T.

Excuse me.

So, again, as part of this study, we knew that trucks were of high priority, I'll say, to -- to understanding their impacts. We did look, as requested by the town, to say if all the trucks that would come in from one -- one source, or use one road

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way coming in and you dump all that truck traffic that we did just recently distribute earlier in the report, as the Port is doing it today, but look at, what if it was -- all those trucks went on one route from the south, one route from the north and one route from the west. So, that's what the green and red and blue routes represent.

So, we essentially left all of the employee traffic, as is, during the peak hour. But the truck traffic will be redistributed and put it on one of these routes, as a worst-case scenario. And we went through the assessment. We also provided recommendations, as to if this was the scenario, if the green scenario occurred, what other improvements would be needed Broadway Avenue. If the blue scenario occurred, what other improvements would be needed on that network. And again, if the red scenario occurred, what other improvement would be needed?

Based on this kind of sensitivity analysis, assuming this worst-case scenario, we -- our recommendation is to use the red path shown, as the path of least impact to the environment and no mitigation is actually required, above and beyond

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what was already recommended in the -- in the study, that all the trucks went that routes. So, that's our recommended path for all trucks.

So, that route is -- if you're coming north or south, on -- on 87, if you get off and go in through Broadway and Church Street. And if you're coming off of the I-87, you can come off at Exit 23, you proceed along the I-787, with -- unrestricted again and you exit off on the slip ramps, right here, again and then make one turn, to get out of Church Street.

So, that's the -- that's the route and obviously, there's -- there's no signals during that approach. That's the reason we're -- we recommend that, as our preferred -- preferred alternative.

So, just to quickly summarize some of the other arguments within the traffic-impact study, that were completed, I won’t go into too much detail. We did do a gap analysis because -- for the unsignalized intersections at State Route 144, in Glenmont, we did a signal -- signal-warrant analysis for all the unsignalized intersections within study area and determined whether or not the signal should be considered or not. And when I go to

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recommendations, you'll see that the signals are considered, that should be considered at a couple of the intersections.

We did look at a site-distance analysis, at the proposed driveway, on 144. And we did do a volume assessment at the ramps on 187, at the ramps that go on Exit 23, that direct traffic. These are two signalized intersections at U.S. 9W.

So, to explain that little further because I know there was a lot of confusion before, this is the interchange. A recommended truck route -- here's the toll plaza, coming off of here, getting off I-87. A recommended truck route is to proceed under these signalized ramps, and go and proceed to the slip ramps and then make a -- make a right turn and head towards the Port of Albany.

So, we did look at these two intersections and the volume of traffic that we were proposing to enter those intersections, which was employing traffic and compared them -- they are very-busy intersections today and we compared them with the amount of traffic that's on there today and we're looking at an increase of about two point two percent of traffic at that intersection -- at the in -- at

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this interchange, I should say, as a result of the site.

And if you look at historic data, the actual volume that enters at that intersection, fluctuates roughly between five percent, to thirteen percent, on a daily basis. So, if you're there on Tuesday, you might get a certain volume. If you're there on that very-next day, on a Wednesday, you may actually get ten-percent more.

So, our traffic is only fluctuating at that -- is only proposing two point two percent, which is a fraction of what the daily fluctuation is, at that intersection.

So, here are our conclusions, as it relates to the capacity analysis and our recommendations. So, I just wanted to start, that all of these conclusions, are based on the worst-case scenario, given one point one three million square foot of two-story man -- distribution warehouse and -- type facility.

So, as we go down here, we recommend some signal-timing changes. Those are fairly simply applied. But at Route 32 and South Port Road, we're talking about adding some turn lanes, upgrading the

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signal to allow some more movements at that intersection. The turn lanes would be more of a -- for phase 3. And so are the -- so are the signal improvements. But also, a real help would be to be coordinated with the other signal, which we are proposing at 144 and 32, after phase two, or around phase two.

So, after implementing all of the proposed recommended - or I should say recommended improvements within the roadway corridor, the traffic should not have any adverse impact to the environment. And as far as the truck traffic goes, the truck traffic currently in the area, is Port-related, to a certain degree -- a fraction we should say is Port-related. And then the proposed traffic added, would add a portion of more trucks on that roadway network and it's only a fraction of what's currently out there. As I mentioned earlier, anywhere from no increase, to roughly twenty-five percent increase, during that midday timeframe.

And based on the sensitivity analysis, future truck traffic going through the -- the -- Church Street and through the existing Port of Albany, is our recommended path to minimize any truck

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impacts to the roadway network.

So, the next kind of portion of our traffic and truck impact study, was looking at the maritime and currently, the Port receives roughly a hundred ships or barges, per year. It's expected to grow, as Steve mentioned at the start. Business is -- - is anticipated to grow, by the 2 -- 2029 timeframe. They're anticipating about two hundred and ten ships, or barges per year, or approximately four ships per week.

Based on the proposed expansion, worst-case scenario, we're looking at about twenty-one more ships, or barges per year. So, we're talking about roughly ten-percent increase in traffic, as far as barges and ships.

We also took a look at what are the facilities along Hudson River. So, we had the various number of slips, number of activity that can occur in that area. But based on this minor increase in, you know, less than -- or roughly, we're talking on average, one ship for every two weeks. We determined that the impact was minimal to -- to negligible for the maritime traffic.

Okay. For the rail, we did a similar

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-- a similar review. We looked at what traffic currently is on the rail. It's actually a significant amount. Most of it is passing through.

I won't go through all the numbers but the proposed scenario, you're looking at four to five more cars on the daily train. So you're not talking about a new train. You're talking about just more cars attached to the train that already goes to the Port, on a daily basis.

And there was this unit-trained items. We're talking about adding maybe one, or two unit trains, per month, in addition to what they're doing today. Again, a very minimal/negligible amount of increase.

For the public-transportation aspect, upped the transportation. The number-seven line does currently have a -- provide service to the Port of Albany. The Port of Albany estimates that maybe five to seven percent of the employees use other means of traffic, other than pedestrian, just driving themselves, whether that be public transportation, biking, or walking.

So, based on this, there's plenty of capacity on -- on that number-seven line, to account

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for any of of the increase associated with expansion to the Port.

On that same note, we did count pedestrian and bicycle traffic in the area -- within the study area and found in that area of the Port, there was really no Pedestrian-Bicycle traffic out there and the Port has confirmed that the amount of people that bike and walk to work, are -- are -- but it's not -- there's none doing it on a regular basis.

So, based on that, the impacts from the expansion to the Port, would not have any impact on the -- the pedestrian and bicycle capacities, or -- or the need for any -- any enhancements.

So, that being said, I'm going to pass it off to Dan, who's going to go through some of the financial aspects.

MR. STEVENS: Good evening.

My name is Dan Stevens. I'm an Economic Development Specialist. Our firm does only economic development.

Our role in this effort has been to look specifically at the economic and fiscal impacts, that are expected with this project. And so, as you can see here, we've looked specifically at the school

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district.

For each of the concepts, we've estimated what the future assessed value of each of these developments may be. We're anticipating that any new buildings facilities built in this property, be subject to local property taxes.

And so you see here a school district, property-tax revenues, could range fairly widely, from about three hundred and ten thousand, up to about one point six million, annually, having a lot to do with the size and nature of the facility developed on the site.

It should be noted with this analysis, we're assuming that there's full taxation and that is there's no potential property-tax incentives, or abatements model in here. This is strictly applying a -- property-tax rates, to what we think the assessed value of these concepts will be in the future.

The first table, you'll see that we looked at a variety of different fiscal-revenue streams that we would be expected of a project of this nature. County sales-tax revenue would be generated. You know, new workers on a site,

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receiving new pay checks, are spending a portion of that money in the local economy, in the town and the county, generated sales-tax revenue. County property-tax revenue, from the property itself and the evaluation that's there, as well as from some of the economic impacts about the county, will always generate new property-tax revenues.

We just looked at the central -- Bethlehem Central School District, and then we see the town of Bethlehem and other local property-tax revenues. And again, you know, the potential-revenue streams, in terms of property-tax revenues on an annual basis, vary pretty widely, again, going back to the nature of each concept and -- and what the value of that will be expected -- will be expected to be.

So, we're looking at, on an annual basis, anywhere from about four point seven million, to just over fourteen million combined property-tax and sales-tax revenues.

By the bottom table, we look at what we think will be the economic impact of each of these concepts. With the economic-impact analysis, we looked at jobs, earnings, and sales.

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The jobs include both those that would be directly onsite, so those working at a new facility and also, those that are generated in the local economy, you know, as there's new-business activity. That activity has what we usually just call a ripple effect -- an economic-ripple effect, that spreads throughout the economy. You might know it as the multiplier effect, but it's essentially that there's economic benefit beyond that directly at the site, as new businesses on the property make purchases, as workers make purchases in the local economy. All of that starts to circulate and generate add -- additional economic benefits.

And so, what you're seeing in the chart, it is the summary of both those direct impacts, the onsite impacts, the -- the secondary ripple-effect impacts. And so, what we see would be a job-creation figure of roughly five hundred and twenty two jobs, up to over sixteen hundred new jobs. And that is specific to Albany County geography as our analysis area for this exercise.

Those would be associated with -- from forty-eight million to one hundred and fifty-three million, in annual earnings, associated with those

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jobs. And a total-sales impact of a hundred forty-five million to four hundred and fifty-nine million, depending on the concept. And that's each year. So, we would be talking, nearly a half billion annual economic impact, on an annual basis, to Albany County.

We did also look at some of the potential costs that may be experienced locally, new fiscal cost, with a focus on emergency-service providers. As Ashley mentioned, we've reached out to all of those. They were -- representatives were interviewed as part of this process, to understand how costs might go up, as a result of this project. So, representatives from the Bethlehem Police Departments, Suffolk Fire Department, Delmar-Bethlehem E.M.S.

The results of those conversations indicate that no substantial new cost would be incurred, as a result of this project. No new personnel would have to be hired directly as a result of this project. No new equipment. And what you see up there, are very nominal, incremental revenues associated with things like increases in traffic, you know, marginal increases in call volumes for

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emergency services and that type of thing.

So, with that, I think I will turn it back over to Steve.

MR. BOISVERT: Thank you.

Before I do a quick wrap up on the threshold, I just would like to recap Adam's discussion, regarding the truck traffic, to and from the Port. I just want to emphasize that we are recommending trucks enter and exit their Port, from either Exit 23, travel through the toll booth, stay on the slip ramp of 787, immediately get on 787 and then there's an exit specifically from the Port. Then traverse through Broadway, Church Street, traverse through the existing Port Property to exit or enter the site.

We are not proposing any truck traffic, to enter or exit from the south driveway that's currently proposed. Exiting the site for trucks will continue on the same route, through the existing Port, down Church Street, through Broadway and then if they're going northbound, there's a ramp immediately off of Broadway, on 787. Or if they're heading southbound, you cross underneath 787 and there's slip ramps to immediately get back on 787 and

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right directly through the toll booth.

I just wanted to make that clear, that that's what we're proposing and we do have the opportunity to enforce that, by way of leases, that the Port will enter into with any particular user proposed on the site.

So with that, the Generic Environmental Impact Statement, as I mentioned, is a hypothetical project, which we evaluate and the result is that it establishes thresholds for the various environmental components of the project, from which all future projects will be tested against. Then all future projects have to fall under these thresholds, in order for the Planning Board to approve.

So, the maximum building area, as we mentioned, is one point one three million square feet. The total area of disturbance, is sixty seven acres. The maximum wetland impact, one point four acres. The maximum trips, in the morning is four hundred and sixty-five. Evening, five twenty-nine.

As Adam mentioned, we anticipate twenty-one shipments, or barges per year. Rail cars, four to five cars. Not actually engines, but

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certainly cars with the cargo in it. Surface, which includes building and -- and parking, is fifty acres.

As Turner mentioned, the water demand, water in, water out, is the same. Sixteen thousand nine hundred and fifty gallons per per day.

And then these are the current heavy-industrial town bulk regulations. Minimum lot size, front and rear setbacks, etcetera. We exceed, or satisfy all the those requirements, except the sixty-foot building height, which we discussed before and we're proposing an eighty-five foot high building. Any future project will fall and meet the -- these criteria.

With that, that concludes our presentation and we -- we'd be happy to listen to any public comments.

CHAIRMAN SMOLINSKY: Thank you, Steve.

Thanks to your team for summarizing fourteen-hundred pages of a generic environmental-impact statement. That's quite a chore.

I'd like to open the floor to public comment and I'd like to start with ask -- asking for any Federal, State or Local representatives here, that would like to make a comment on this project.

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I see none.

Is there anyone who would like to make a comment on this project?

All right. Come up to the mic. Let us know who you are and give us your comment.

MR. CARREIRA: Good evening.

Jim Carreira, from Somerset Drive (phonetic spelling).

I guess my concerns are really centered around two places. The -- the construction phase, where we're going to be potentially disturbing the ash -- the coal ash that is there, which has a high content of mercury and it's a very dangerous by-product of this -- this sediment. So, you know, are there going to be sufficient protections, to protect our water supply because we're drawing from the Hudson, not too far from this location.

So, I bring to the Board's attention that the construction phase has to be viewed differently than the ongoing operation of it and I'm deeply concerned, that the remediation that is being recommended maybe sufficient, but I want you to go into much-more depth about, what is the protection that if there -- if this remediation doesn't work,

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or in the construction phase, there's some disaster, where this is leaching into the Hudson River and this is going in to our water supply, that's devastating.

So, what are the protections going to be, to the town's water supply?

The second part is the ongoing remediation. Are we going to be able to monitor what is coming out of this because once you disturb these fields, will we have the ability to maintain monitoring and make sure that it, again, doesn't get into our water supply?

Imagine the disaster that would occur, if there were to be a mistake and do we have a sufficient protection, with an insurance, to make sure that our community's water supply is not significantly tainted.

So, those are my concerns. Jobs, wonderful. The throughway was going to handle traffic. We -- we're lucky to have a port. But let's make sure that we protect our natural resources and don't have a devastating effect on our community.

Thank you.

CHAIRMAN SMOLINSKY: Thanks, Jim.

And don't forget to sign the sign-out

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sheet. I don't think I could spell your name correctly. So --.

MR. CARREIRA: You will soon enough.

CHAIRMAN SMOLINSKY: Okay. Anyone else?

MR. BEAL: Good evening.

My name is Jeffery Beal. I live in Glenmont and I have three separate points I'd like to make.

In reviewing the appendices, in regards to the traffic, I think it's noted and the one gentleman discussed the turn lanes, at the intersection of -- of -- the main intersection in to the port, where right now, there's no turn lanes. I think it's like 144 and South Port Road.

And I wonder if a traffic circle had been discussed there, or had been looked at.

I know, you know, living in Glenmont, the town is looking in installing the circle there, at the -- kind of intersection of all development and so, I wonder if a circle will be more appropriate at that intersection, rather than a light and a turn lane because that facilitates the greater flow of traffic and might be a little bit easier to traverse,

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especially now, there's going to be more traffic.

Secondly, I think that this -- the new proposed entrance from the south, is very tricky. I'm driving that road every day, multiple times get from work, and back up to Albany. It's a very-busy road.

And when you're travelling Southbound on 144, or River Road, that is already a relatively blind turn. You're crossing over the railroad tracks, you're going downhill. You know, the speed limit is fifty-five miles an hour, so you're kind of -- the road does like a zigzag, you're going downhill around the Port. It's already a blind turn and now, there will be a new unsignalized-type intersection that's there.

So, I can foresee you fly down the street, you're trying to get home, and someone's trying to make that left turn onto the new site and you're just going to fly in to the back of them. And also, for people to come out, to make a right turn out of the new intersection, it's going to be a challenge to see the traffic that's coming around.

The third point I'd like to make, is for the -- the -- the intersections that were studied

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in the traffic study, along that corridor. I think at -- the most-south intersection, is that of 144 and Exit 22. The next up from there is Clapper Road and then it goes all the way up to Glenmont.

And the missed intersection there, is the intersection of 144 and Wemple Road (phonetic spelling), which is already a very-tricky intersection. The town, on multiple occasions, has commented on the uniqueness of that intersection and I think in this scenario, with a, you know and hundreds of additional workers that would potentially be coming along 144, that the fact that you are missing the traffic-impact study at the intersection of Wemple and 144, is absolutely critical, be that it is already coming up that road. It makes a wide split and connects to Wemple, hang a -- a -- there's two sections there. It's one -- there's a house there at corner.

It's already not wide enough. And every year in the town budget, that is one of the items that's noted in the traffic -- or in the budget section that's kind of postponed, that we don’t have the money to deal with this, with that intersection.

So now, this potential development in

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the town, the town has known that that's a concern and this intersection was not part of the study. I think it's an absolutely critical failure because it is already -- living and travelling on that, it's very challenging to make a left, or a right out of there.

There is a storage location that's up a hill and even when you're making -- you're travelling northbound on 144, making a left onto Wemple there, you know, it's a -- like drop off. You can't even see it.

You know, that intersection, I think, you know, would -- I would propose would be more utilized than Clapper Road because Clapper is much less developed and is a curvier-road connection over to 9W, whereas Wemple is much faster. There's already an existing warehouse facility on Wemple and there's another one currently in construction, that this Board gave a zoning variance to. So that street is seeing increased development and it should -- this Board should require that that intersection is also part of this traffic study.

CHAIRMAN SMOLINSKY: Thank you.

MR. BEAL: Thank you.

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See you next time.

MS. BEELER: Good evening.

Patti Beeler, 30 Delaware Drive.

Traffic continues to be a concern, on a number of the issues in development matters, that we often come and speak to you about. Thank you for allowing us the opportunity, as always, to speak.

Something that I feel strongly about, in addition to the points that the gentleman who spoke just before me made, is the amount of traffic on the 9W North merge, on to 787, where if the truck drivers listen to the instructions to stay on 787, to get on to the Port of Albany, that -- if you're driving in that area, which I do almost every single day at high-traffic times, you're driving north, you get on the ramp to get on to 787. The traffic is flying out from the thruway and the Port merge is just to the right.

Every day, there are tremendous numbers of close calls and it's not that I want the trucks directed to go on to 9W, or the other routes, but I think you've some pretty serious traffic issues there. And I didn't see or hear anything mentioned, on how that particular area, if the traffic study was

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done there. If it hasn't been, I think it needs to be.

Thank you very much.

CHAIRMAN SMOLINSKY: Thank you, Patti.

Anyone else?

Board members. Brian?

MR. GYORY: What exactly are you asking?

CHAIRMAN SMOLINSKY: Your comments to the Applicant.

MR. GYORY: Okay. First of all, will this presentation -- this has not been seen before. Will this be made public and will this be submitted to Board members?

MR. BOISVERT: Yes.

It is public. It's part of the public record.

MR. GYORY: Okay. It just hasn’t -- has it been upload -- I don’t --.

MR. BOISVERT: No.

Mr. GYORY: Okay.

MR. SWEENEY: We can -- we can upload it.

MR. GYORY: Can it be uploaded?

MR. SWEENEY: Yeah.

We have the -- the agenda and everything.

MS. AIEZZA: Well, I think a couple of the tables --.

MR. SWEENEY: We can upload it to the agenda and --.

MS. AIEZZA: Yeah.

I think the -- those tables weren't in the report, right?

MR. GYORY: The threshold tables, like these are new to us, I believe.

MR. SWEENEY: This --.

MS. AIEZZA: Right. Right.

MR. GYORY: See, I never really saw it

CHAIRMAN SMOLINSKY: Steve, could you use the mic, please?

MR. BOISVERT: I'm sorry.

Steve Boisvert from McFarland Johnson.

You're correct. These proposed project thresholds, are not on the recorder, simply because we haven't going to show you the entire process. Something could change, which could change

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this. These are the current proposed thresholds.

The final thresholds will be appended to the F.E.I.S. data report --

MS. AIEZZA: Yeah.

It's just --

MR. BOISVERT: -- minus these.

MS. AIEZZA: -- a helpful summary, that would --

MR. BOISVERT: Sure.

MS. AIEZZA: -- help with the --

MR. BOISVERT: Yeah.

MS. AIEZZA: -- report.

MR. GYORY: Yeah.

Great. Thank you.

So, other kind of thoughts, going down the list, I've mentioned this at every meeting, previous, but we talked about great infrastructure and I don’t -- Turner, I don't know if it's your topic of expertise here.

It was also mentioned, in terms of the environmental impacts that you have the fly ash and capping off the site, potentially. So, is -- I assume these are in blind system that will have no surface infiltration. Can you confirm that and step

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to the mic?

MR. BRADFORD: Yeah.

That is correct, sir.

There is no proposed infiltration. In this case, the bio-retention will filter through media, essentially, that is constructed. And then there will be an underdrain that it will take it back out. So, the goal is to separate those two things, the fly ash with the -- and what we'll do, being on site.

MR. GYORY: But will there be some sort of liner -- would -- would there need to be some sort of liner proposed between the two layers, or would it just be the underdrain, that you're separating it?

MR. SWEENEY: Potentially. Yeah. Yes?

MR. BRADFORD: Yes.

MR. SWEENEY: Yes.

MR. BRADFORD: There will be a liner underneath what we are doing, to keep what we're doing from getting down into --

MR. GYORY: Right.

MR. BRADFORD: -- the coal ash.

MR. GYORY: So, that might helpful, in the next iteration of the report, just to kind of identify how that would work and just mention that that is what had happened.

MS. AIEZZA: Sure.

MR. GYORY: I know we talk about sewer service and the capacity. I think that's very helpful. That's new information, I think, since last night, so thank you for bringing that up.

In terms of traffic, I'm a bit confused, in terms of -- I think that, you know, a member of the public mentioned a new intersection. I think that's exactly why these public hearings are so important because this obviously is something we had overlooked. So, I think that that will be very helpful to have additional information about that intersection because the gentleman made a great point, that Clapper Road is not as easy to navigate, from 144 to 9W, whereas Wemple Road would be a lot easier, to get from one point to the other.

So, I think that -- I'm not sure if -- I think the more important question, how do we get that intersection added in to be looked at? The -- and that's not the purpose of this meeting this

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evening, so what -- what is the -- kind of the next step, to make sure that it gets added?

CHAIRMAN SMOLINSKY: Your -- your comment is now part of the public record, regarding that, just as the gentleman's comment was regarding that intersection and the need for it to be analyzed.

It's a substantive comment that they'll have to review, respond to in a comment response and if further study's warranted, for that -- to answer that comment, that will be appended to the F.G.E.I.S., as a -- as a report and then that will be evaluated by the Board, when it's submitted. And that it's been done appropriately.

MR. GYORY: Yeah.

Perfect. Thank you.

So, thank you for comment. I think that would be very helpful to hear more information about that.

You know what? In terms of the other information about the truck traffic, can you at least explain, sort of how -- I know you said there's leasing agreements. Like how -- how will the truck traffic actually go that route and how -- how will that be enforced, other than just, you know, legal

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document?

MR. BOISVERT: Other than a legal document?

So, during the lease negotiations, just like -- I've had a lot of past experience over thirty years, building shopping centers, particularly for Wal-Mart, and there are designated truck routes, from which those drivers have to drive, in order to get from the highway system to the stores. And if there's a violation of that, by way of a common way from the resident to the town, then that driver is again, corrective action is taken, to make sure that they take the prescribed truck route.

So, in the lease -- we would offer and recommend that the prescribed truck route that we are recommending now, get built in to the lease and those companies that reside at this property, will tell their truck drivers, this is the way you enter and exit the property.

MR. GYORY: And that would be for truck traffic -- and -- that would be every amount of traffic, except for cars? Like in terms of --

MR. BOISVERT: Correct.

MR. GYORY: -- deliveries of

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machinery, through deliveries of parts, deliveries of food for -- if they went cafeteria, everything --

MR. BOISVERT: Every --

MR. GYORY: -- other than --

MR. BOISVERT: -- semi tractor-trailer, is considered a -- a truck, would use those routes that we are prescribing.

MR. GYORY: What about like the -- box truck that's made a delivery --

MR. BOISVERT: A single --

MR. GYORY: -- right to the site --

MR. BOISVERT: -- single axle --

MR. GYORY: -- of the --?

MR. BOISVERT: -- or dual axle and FedEx, or U.P.S.?

MR. GYORY: Correct.

Is that considered truck traffic?

MR. BOISVERT: It -- it's not.

It's considered as part of the -- the car traffic.

MS. AIEZZA: So -- so if -- and I want -- Brian, first of all, we're on the same topic. You're asked -- asked everything on the same --

CHAIRMAN SMOLINSKY: Stay right on

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that plane.

MS. AIEZZA: -- topic. And then revisit the topic. Okay.

MR. GYORY: Okay. So, I can -- that's interesting. I haven't heard of this before.

So, is that also how the current Port operates, in terms of their current traffic?

And that may be more of a question for the Court to answer.

MR. BOISVERT: I'm not aware of that. We will research that and get back to you on that.

MR. GYORY: Okay. I would be curious, you know, for some more information about how -- how the Port currently operates, if this would be a new way of dealing with trucks, or this is the -- the -- the current way that it's being done.

MR. BOISVERT: It's -- the proposed way is going to be done for this expansion project, on the eighty acres.

MR. GYORY: Right.

And I was looking for more documentation or information, about how it's currently being done and if this is the same route, or different -- different than --?

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BY MR. BOISVERT: I'll have to get back to you on that.

MR. GYORY: Yeah. Perfect.

Another point that just came up this evening, in my opinion, is the -- the bike network. So, there were -- it looked like some charts that -- kind of how no pedestrians, or bikes, were using the facilities.

But has this project, or have your -- has your team looked at the south-end connector, which is connecting the current trail along the Hudson River, with the rail trail that goes from the city of Albany, to Voorheesville?

I know there's a proposed connector, that literally goes in the same exact route, as your truck route. So, I'm just curious, if you've -- if -- if that's known and if you evaluated that because that is the proposed route that the city is looking at, I believe, to connect those two systems.

MR. BOISVERT: Okay. So, we -- we can further expand upon, in the F.E.I.S., regarding the bike route, but we are saying that this particular project will not generate any bicycle, or pedestrian traffic. The folks that are going to work on the

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eighty acres, will not commute there, by walking, or bike. They will use either their own vehicle, or public transportation.

MR. GYORY: Right.

MR. BOISVERT: So --.

MR. GYORY: But what I'm saying, is there's a proposed connector from the city of Albany to the north, through this -- the truck route and through the -- this -- the exit, whatever you're calling it there, along 787, to along Route 32, to the end of the -- along the river -- Hudson rail trail.

So, it's not necessarily that these -- the people coming and going to your site, but there's an existing traffic flow of bikes and pedestrians, that your truck route is directly next to and I think we need to kind of evaluate that.

MR. BOISVERT: Okay. We will do that.

MR. GYORY: Yeah.

And then the study you mentioned as the -- thank you. This was really helpful to go through. I really appreciate it.

You mentioned in here, about the fire department and it should be noted, that the

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department has an existing truck, but depending on the exact height and footprint of future development, a new larger truck may be necessary.

Do you know -- I'm not sure if you've talked to them or not, but at that time, did you know about the eighty-five foot building height, or -- and is the fire department aware of what the proposed maximum threshold of eighty-five foot building height is?

MR. BOISVERT: So I --

MR. GYORY: And can they handle that?

STEVEN BOISVERT: -- I can answer the second part.

Yes, they are aware of it and we are currently trying to confirm that they can handle the proposed project at one point point million square feet--.

MR. GYORY: Great.

MR. BOISVERT: So, they -- they are aware of it. They're waiting for documentation, that they can service the project.

MR. GYORY: And that update of information would -- would be in the final document?

MR. BOISVERT: Yes. Correct.

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MR. GYORY: Great.

All right. And than I think the other question I had on traffic, was just kind of reiterating something that a member of public raised, about the onramp to 787 from 9W and if the majority of truck traffic -- or truck route is 787, then specifically looking at that onramp from 9W. Obviously, it's important and how do we kind of document, I guess, what the capacity of that truck route is, if you had additional trucks going -- I know you indicated that it would potentially be a different time, but it would be interesting to kind of see some more information about how -- how that interaction works.

So, I think before, we were looking just at the intersection. But that intersection, I think, specifically, if that's the truck route, we need further details on how all aspects of that intersection will work, not just the concept of it.

MR. BOISVERT: And -- and the merging --

MR. GYORY: Correct.

The merging --

MR. BOISVERT: -- with --

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MR. GYORY: -- from --

MR. BOISVERT: -- the --

MR. GYORY: -- 9W.

MR. BOISVERT: -- the traffic there?

MR. GYORY: Yeah.

MR. BOISVERT: Okay.

MR. GYORY: To -- to get onto 787.

STEVE BOISVERT: Okay. We'll take a look at that.

MR. GYORY: And I think that is all I have today.

I know I mentioned some in an email that had gone to you and there may be some follow-up, after --.

MR. BOISVERT: Thank you.

MS. LOMBARDO: Okay. All right. I'll start with the traffic.

Just from the truck -- I understand you recommended a route, but I have a couple of questions to ask.

One, is there any upgrades to the Port roads recommended? I mean, that's not an easy route to -- to leave through the Port, from one end to the other, to get to Church Street. It doesn't seem

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realistic of, you know, for trucks wanting to go that way.

MR. BOISVERT: We can certainly address that.

And if you ask -- the Port currently has a fifteen, or sixteen million dollar improvement project, which includes upgrading their roads --

MS. AIEZZA: New side roads.

MR. BOISVERT: -- on the existing --

MS. AIEZZA: Okay.

MR. BOISVERT: -- site.

MS. AIEZZA: Okay. If we could definitely address that because I think that makes that more realistic because I think the current condition doesn't really --

MR. BOISVERT: Yes.

Their -- the project --

MS. AIEZZA: -- that -- those --.

MR. BOISVERT: -- is currently in design phase. Yeah.

MS. AIEZZA: Okay.

MR. BOISVERT: Uh-huh.

MS. AIEZZA: And then you keep saying recommending, that you're going to recommend that

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route.

I would ask and I don't know if this is -- I mean, how we don't just recommend, but we ensure because otherwise, there's a huge increase for -- well, it's potential twenty percent that could go by and that's a neighborhood, you know, where I -- I would think has already been impacted by a lot of trucks and I think they're on the table, from what I can tell, would be heavily-impacted, if we didn't make sure that that traffic was routed to the Port.

So, I understand through leases, but I'm wondering, from us and if it's a recommendation in the lease --.

CHAIRMAN SMOLINSKY: We can certainly impose a condition, as part of the findings, if we adopt, that will require that -- leases to be to -- be handled accordingly, or the --

MS. AIEZZA: Yeah.

CHAIRMAN SMOLINSKY: -- trucks to be routed accordingly. And we can also look at other options --

MS. AIEZZA: Okay.

CHAIRMAN SMOLINSKY: -- that might be available to us, as we go through the process.

MS. AIEZZA: Okay. And I'd also be interested in some kind of enforcement. I know we rely on people to call, but some other proactive way of ensuring people are following the leases, as opposed to exact -- people may not know where those trucks come from. There's a lot of trucks that go down that road. So, people aren't going to know where they're coming from, or who to call, to know that lease is like that.

So, some other proactive way of enforcing that, I'd be interested in.

MR. BOISVERT: Okay. We'll -- we'll put some thought to that.

MS. AIEZZA: Okay.

MR. BOISVERT: Okay.

MS. AIEZZA: Let's see.

Also, on the rail, I was wondering if there is a rail-staging area of tracks behind that as well and I was wondering what this rail increase would have, in impact there. I believe it's a shared track. I think it's C.P. and C.S.X. I'm not sure.

I know the Port owns it, but I'm not sure if it's the Port’s staging area. But I'd like those tracks specifically addressed and any impacts

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of those just because they are behind the housing development. It's a -- they're --

CHAIRMAN SMOLINSKY: So, the --?

MS. AIEZZA: -- they build and --

CHAIRMAN SMOLINSKY: Not -- the Port --

MS. AIEZZA: -- take down the cars.

CHAIRMAN SMOLINSKY: -- does own the yard.

Are you referring to, I guess the western-most tracks, that are C.S.X.?

MS. AIEZZA: They're -- it's a combined --.

UNIDENTIFIED SPEAKER: It's not even a --.

MS. AIEZZA: I thought you owned the land that the tracks are on. UNIDENTIFIED SPEAKER: No. No.

CHAIRMAN SMOLINSKY: Okay. I was corrected.

The -- I think what you're talking about is western-most tracks. The Port does not own those.

MS. AIEZZA: Okay. The tracks?

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Right.

UNIDENTIFIED SPEAKER: They're --.

MS. AIEZZA: Okay. Because my understanding, if there was the -- okay. You must land -- own the land right past it, if there was some way to move it or expand it, then it would have to be on Port property.

Okay. So, you would have no impact on those tracks? If that can just be pointed out, specifically, just because those trucks are an area of concern, also, just because they're --

MR. BOISVERT: Sure.

MS. AIEZZA: -- behind the housing development.

MR. BOISVERT: Okay.

MS. AIEZZA: So, you could say that you're increase in the amount of traffic isn't going to impact those tracks --

MR. BOISVERT: Correct.

MS. AIEZZA: -- at that staging area.

Okay. For the -- and actually, along those lines, I don't know that the D.E.C. has provided comments yet, but I'm not sure if they have said anything about -- I think you're outside,

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technically, environmental-just area, but if they've actually asked about following that, or involving that neighborhood in the public-outreach program. Have hey commented on that, or has any --

MR. BOISVERT: So, they have provided their comments and I actually just actually received them, I think Friday, so I haven't read them --

MS. AIEZZA: Okay.

MR. BOISVERT: -- thoroughly, but -- do you recall?

MS. AIEZZA: I'd be interested in addressing that. I know it's maybe right outside the zone, but because that's a potentially-interested area and they do have a pretty-well organized neighborhood group, in the City Council, to look at the -- the environmental justice policy because you know, I don't know that we have to follow it, but to address it in someway, to -- for public notice in that area and in that housing development.

MR. BOISVERT: Okay.

MS. AIEZZA: All right. Then you know, that table would be helpful because I think -- although your concept plan is a worse-case area for certain things, actually a smaller building could

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actually be a worse case for a truck, if that became a truck staging, or a warehouse facility. A smaller footprint could be a worst-case scenario, potentially for trucks, if you had more way of, you know, storage areas, and lay-down areas and so forth.

So, I think it's important it has a separate haul out, for the truck.

MR. BOISVERT: Sure.

MS. AIEZZA: So, I think that that's covered that.

MR. BOISVERT: Okay.

MS. AIEZZA: But I don't necessarily think, you know, that concept could not be worst case, potentially, for trucking. If it was a, you know, materials import and export area, that's -- that --.

MR. BOISVERT: Okay. Well, we'll --.

MS. AIEZZA: But that's why I think the table's important because it calls out the truck assumption separately --

MR. BOISVERT: Correct. Okay.

MS. AIEZZA: -- from -- from the -- it's separate than a foot -- the square footage of a warehouse.

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I just want to reiterate to at -- Wemple, that was a miss on our part, when we were looking at the intersections. That's an important intersection we looked at, 144 and Wemple and also, the intersection that ran to 787 because there's no yielding and that definitely there. So, that's my way, too, from there.

And then the fly ash, are you guys working with D.E.C.? Have you involved D.E.C.? Are you doing -- I mean, that would have to be handled under -- it's Part 375 D.E.C. Program. So, what's the status of that?

MR. BOISVERT: So, we are working with the D.E.C. and they --

MS. AIEZZA: Okay.

MR. BOISVERT: -- have commented on it, but the actual permitting and soil-management plan, will not be implemented until there's a specific -- a specific project.

MS. AIEZZA: So, that's a --.

MR. BOISVERT: There's no need for that.

MS. AIEZZA: Right.

But who's going to be a responsible

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party with the D.E.C.? The person doing the project, or the Port?

MR. BOISVERT: So, the Port right now, is anticipating that most likely, they will own the land. So, they will --

MS. AIEZZA: Right.

MR. BOISVERT: -- handle that. In concert with any potential tenant and tenants' specific-project needs.

MS. AIEZZA: Okay.

MR. BOISVERT: So, I don't know, right now, who will actually be the Permittee, whether it'll be either the end user -- probably, most-likely the end user.

MS. AIEZZA: And you'll have to go through the R.I. --

MR. BOISVERT: Sure.

MS. AIEZZA: -- then you'll have to do the whole -- yeah. Okay.

MR. BOISVERT: Oh. Sure.

MS. AIEZZA: So, I just want to make sure -- that should be spelled out because you guys talk about handling it, but I think it would be better, if it's in the document that's under a -- a

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program with the D.E.C. and it would be D.E.C. oversight approval, under the 375 or -- or the remedial program.

MR. BOISVERT: We'll expand on what you said --

MS. AIEZZA: Okay.

MR. BOISVERT: -- when you asked --.

MS. AIEZZA: Because I think that's important and the -- and groundwater impacts and lining, all that would be handled under that program and --

MR. BOISVERT: Correct.

MS. AIEZZA: -- I think that would take care of the whole fly ash.

MR. BOISVERT: We'll expand on that.

CHAIRMAN SMOLINSKY: The reference to the D.E.C. regs and -- and --

MS. AIEZZA: Yeah.

CHAIRMAN SMOLINSKY: -- and --

MS. AIEZZA: That was the --.

CHAIRMAN SMOLINSKY: -- is really important --

MS. AIEZZA: -- 375 --

CHAIRMAN SMOLINSKY: -- that --.

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MS. AIEZZA: -- was the approved document of the oversight. It doesn't necessarily need to be. I mean, I think they'd get a ground filter, if it's with a program.

MR. BOISVERT: Okay.

MS. AIEZZA: And I think that might be it for this.

I mean, I have some other comments that I'll send along, but I think these -- this kind of covers the major issues, just from your presentation.

Oh. One other question.

I know that the Port is technically tax exempt, when they own the property and I guess this is a common -- I -- and I did see that you talked about that in your report.

How does that work? So, only the impacted area would be subject to property tax from the lease -- the person leasing, not the property as a whole? Or how does that relationship work, since the Port's exempt, like the person leasing?

MR. BOISVERT: We -- we can expand on that, but right now, the Port is anticipating entering in to ground lease with --

MS. AIEZZA: Okay.

MR. BOISVERT: -- any perspective tenant. So, any vertical construction --

MS. AIEZZA: Okay.

MR. BOISVERT: -- would be subject to tax.

MS. AIEZZA: But that's it, right? Just the vertical construction building? It's not like a whole -- the property tax, or it would depend on what's constructed at the end?

MR. BOISVERT: Correct.

MS. AIEZZA: Yeah. Okay.

CHAIRMAN SMOLINSKY: The value of the buildings.

MS. AIEZZA: Right.

And then is that -- so, there's other options for leases, that would not have that because they could -- there are properties in the Port, that could, essentially, not be subject to the same kinds of taxes, right? There are different type -- types of those agreements?

MR. BOISVERT: We have to get back to you on that.

MS. AIEZZA: Okay.

MR. BOISVERT: I -- I didn't alter --

MS. AIEZZA: Because again --

MR. BOISVERT: -- this --.

MS. AIEZZA: -- this would be another thing, as far as our approval, if we're approving it based upon the assumption of a certain type of lease, that that gets guaranteed because I think there's different types of leases, potentially, that have tax implications, when that properties are --?

CHAIRMAN SMOLINSKY: Yeah.

MS. AIEZZA: So, if this --.

CHAIRMAN SMOLINSKY: I -- I think that -- the -- the assumption's underlined, that the analysis showing the tax revenue should be dated and specified and any impacts that -- that if there's a different scenario that's --

MS. AIEZZA: Right.

CHAIRMAN SMOLINSKY: -- implemented, that would affect that tax revenue, that should be addressed.

MS. AIEZZA: Right.

Or potential different scenario.

MR. BOISVERT: Are you suggesting that now, or when a specific project comes forward?

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MS. AIEZZA: I would say --.

CHAIRMAN SMOLINSKY: I think we're --.

MS. AIEZZA: Yeah.

CHAIRMAN SMOLINSKY: My recommendation to the Board would be now --

MS. AIEZZA: Yeah.

CHAIRMAN SMOLINSKY: -- so that --

MS. AIEZZA: Yeah.

CHAIRMAN SMOLINSKY: -- the -- you can evaluated the veracity of the -- the -- the --

MS. AIEZZA: Right.

CHAIRMAN SMOLINSKY: -- fiscal impacts -- positive fiscal impacts that are --

MS. AIEZZA: Uh-huh.

CHAIRMAN SMOLINSKY: -- going to be implemented.

GIANNA AIEZZA: Right.

Versus the most-conservative, non, you know, worst-case impacts, depending on different types of agreements. So, just to cover the gambit of possibilities and what kind of agreements they can enter in to, in the tax applications.

MR. BOISVERT: Okay.

MS. AIEZZA: Okay. Thanks.

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CHAIRMAN SMOLINSKY: Scott?

MR. LEWENDON: I may have some comments, as a result of the presentation, but I'll put them in writing and get it to you before September 14th.

Great. Thank you.

CHAIRMAN SMOLINSKY: Thank you, Scott.

I also have provided comments on a dozen or so sections, earlier. I think I heard some things tonight that would cause me to go back and take a look at certain sections, again.

Comment period is open till September 14th. So anyone, including Board members, has an opportunity to add to the comments.

At this point, I'm --.

MR. GYORY: Sorry.

Can I just have one other question?

Is the Port, the existing Port Road, a city -- or a -- like a city -- a municipally-owned road, or right of way, or is it the -- the -- the cut route is through the -- that Port Road?

MR. BOISVERT: So, South Port Road is a town road.

The remainder of the truck route

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through the Port, is actually city roads.

MR. GYORY: Okay.

MR. BOISVERT: City-owned roads.

MR. GYORY: So, it's normal right of way?

I didn't know --

MR. BOISVERT: Correct.

MR. GYORY: -- if the Port was physically owned by us.

MR. BOISVERT: It's all -=-

MR. GYORY: Thank you.

MR. BOISVERT: -- public access. Yeah.

CHAIRMAN SMOLINSKY: Okay. Can I have a motion to close the public hearing.

MR. SWEENY: So moved.

MR. LEWENDON: Second.

CHAIRMAN SMOLINSKY: All in Favor?

BOARD: Aye.

CHAIRMAN SMOLINSKY: Aye.

A couple of next steps, I'll go through very quickly.

Common period is open till September 14th, as I said. The Applicant has heard -- has

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gotten written comments, heard the verbal comments. Their job is to now evaluate those comments, make adjustments, or changes to the analysis that the -- they've done.

And Planning Department and our T.D.E. will review the next draft that they put together and ultimately provide an F.G.I.S. to this Board for our consideration, somewhere further down the line.

The -- the tentative schedule -- SEQRA would say that the F.G.I.S. is considered forty-five days after the public hearing. It's also a time period that can be waived, depending on the circumstance. We heard some fairly-complicated comments tonight, that may take time to respond to. We don't know yet. But at some point, we'll be asking the Applicant what the schedule looks like, considering the comments that they've heard and the responses that they need to -- to make.

On that note, can I have a motion to table the Port Expansion Project.

MS. AIEZZA: So moved.

MR. SWEENEY: Second.

CHAIRMAN SMOLINSKY: All in favor?

BOARD: Aye.

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CHAIRMAN SMOLINSKY: Thank you very much.

(The meeting adjourned.)

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STATE OF NEW YORK

I, KATHERINE WOLLEBEN, do hereby certify that the foregoing was reported by me, in the cause, at the time and place, as stated in the caption hereto, at Page 1 hereof; that the foregoing typewritten transcription consisting of pages 1 through 110, is a true record of all proceedings had at the hearing.

IN WITNESS WHEREOF, I have hereunto subscribed my name, this the 26th day of September 2019.

KATHERINE WOLLEBEN, Reporter

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CITY OF ALBANY COUNTY OF ALBANY

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ALBANY PORT DISTRICT COMMISSION'S PORT
PROPOSED EXPANSION PROJECT

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THE STENOGRAPHIC MINUTES of the above entitled Public Meeting by NANCY L. STRANG, a Shorthand Reporter commencing on January 6, 2020 at 5:30 p.m. at Albany Housing Authority, 200 South Pearl Street, Albany, New York

PRESENT:

Steven M. Boisvert, PE, McFarland Johnson
Ashley A. Erdmann, PE, McFarland Johnson
Richard Hendrick, CEO, Port of Albany
Aaron Mair
Aoelene Smith
Megan Daly, Director of Economic Development and Procurement, Port of Albany
Jim Freeman
Jesenia Alcantar
Wendy Dwyer
Tom McPheeters
Willie White
Eaaiyah Haggray

MR. HENDRICK: Good evening, ladies and gentlemen. My name is Rich Hendrick. I'm the CEO of the Port of Albany.

Before we get started, I would like to first give a thank you to Steve Longo in the Albany County Housing Authority for assisting us in setting up this public meeting to brief you on our future expansion plans.

As we begin tonight with our presentation of our plan for future growth, tonight is an informational meeting where we are making or seeking your comments on our project. You may have heard some of the information that has been going around about the project. It is an expansion of the Port in the Town of Bethlehem on 80 acres of land along the river.

We want to present our plans tonight to you and hear directly from you any comments that you have about the project. What we hope to accomplish tonight is to set aside any fears that this project is going to majorly impact your health or your quality of life here in the south end. We want to establish an open and transparent communication with you and your neighbors – our neighbors. We seek input on this expansion project and you will hear tonight that this is the first of two or three public meetings that will

follow this as we go along with the expansion.

The Town of Bethlehem Planning Board is in the process of reviewing our generic environmental impact statement. From the generic impact statement, we hope to move forward with a positive project at which time once we have identified the project, we would come back to the neighbors and present that to them. As I said, this is a generic presentation.

Some of you may have heard about in the past, but we want to brief you again on what we are doing in our presentation to the Town of Bethlehem. We have made a best case environmental impact and a potential worst-case so that we didn't pull any bait and switch with the Town Planning Board as to what our actual projects were going to be.

Once we have a generic approval, as I said, we will be able to identify – which we do not have anyone currently under contract. We are very aware of how valuable your time is in attending public hearings. We want you to go away with something that is solid as to the outcome of the meeting. The one thing that you will come away with tonight is that this project is not going to negatively impact your way of life and your health. We are 100% behind you with that. We have a great working relationship with

the representatives from the city and making sure that everybody is included.

You will find ultimately in this meeting tonight the potential for well-paying jobs moving forward in the future.

We have members of the Town of Bethlehem Planning Board here tonight. We have Planning Board staff and we have your new representative to the City Council, Sonia Frederick here.

Sonia, thank you very much for attending.

This is, I think, our first public meeting and you'll have to excuse her because she gets to go to her second public meeting in about an hour as the Common Council meets tonight.

Moving forward, we have Megan Daly who is the Director of Economic Development for the Port. Megan will give you a little bit of an overview and about how we brought our Engineering Director from McFarland Johnson; Steve Boisvert and Ashley Erdmann.

You will hear from Steve as to where the project is and what the project means. For those of you who don't want to publicly comment, we are affording business cards for you so you can address a question on a business card that will then be answered and considered in your final environmental impact.

MR. MAIR: I see a stenographer here and I take it you are representing in good faith.

There are no handouts for the community. Are there handouts or documentation for this meeting? In order for people to meaningfully participate, do we have something beyond what we have heard?

MR. HENDRICK: Everything that we have presented to the Town of Bethlehem Planning Board is on their website. We can give you the information as to where to go on that website. That will give you all of the information. The two books upfront on the table here with volumes of paper refer to each study that was done and are available. I believe the whole thing is completely on the website.

MR. MAIR: But for the record, for this meeting, we have a stenographer here and granted it is in Bethlehem.

But in terms of the environment, air does not stay in the same place. We have an estuary that moves from place to place.

For the record for tonight, residents here in Albany north of the project do not have any documents and we will have to go to website in order to be informed to comment at this meeting.

MS. DALY: The binders have been made available

here as well as under physical locations and it will remain here.

MR. MAIR: What I'm saying is that as a person who has developed outreach, I am a founder of the Environmental Injustice movement and one of the things I work on is meeting participation. One of the problems with low income communities – – this is a problem and an issue with regards to information – – this is not being available for communities that do not have information desks. While there may be physically a document here, the due diligence and outreach is also abundant in the environmental injustice area. This information should be readily available and made available especially in these impact communities such as this. I'm just saying for the record that I want to make sure the for the record it's there. I am assuming that this is part of when the DEC reviews this they're going to say yes, you checked the box on a number of community meetings but we want to make sure the community meeting here and folks here understand for the record that nothing is available physically for folks.

MS. BOISVERT: I just want to verify that the notice that went out to inform everybody of this meeting informed everybody that those two documents – those two rePorts were here.

MR. MAIR: That's diminimous. I hear you. That's diminimous. That's the minimum that any corporate entity would have to do. You're dealing with an environmental injustice community and DEC gives good guidance of how to do community engagement involvement – – absolutely, sending out legal notices to various publications, media forum, etcetera, but that is absolutely diminimous. As folks know, vigorous outreach should be done to make sure folks in these impacted communities have access to information. All I am saying is that there is a deficiency.

MS. DALY: This is what I would say. I hear you and I think that's important. If you wouldn't mind, as we go through this and the presentation and take a look at this, maybe we can revisit this as a comment –

MR. MAIR: I'm going to say it on the front end because speak or forever hold your peace. I want to make sure that the public and the record has it.

MS. DALY: What I was just going to say, to finish, is that I would love it at the end if you would say: what I wish that I had – was it this PowerPoint or was it the goal to have it in other locations because we would like to do that.

MR. MAIR: I wish that you would have read the EEC'S EJ impact area –

MR. HENDRICK: The normal process for DEC is not during the generic, but an actual project and we are trying to meet the public here to just bring them up to speed on a generic application that we have to the Town Planning Board and that we intend, as we move forward, have two or three more meetings where we will identify projects and then fully engage the community on what that project will be so that we can again get their input.

MS. SMITH: I think the issue is that you continue to act as if you don't understand what the concern is. To say that this is just a generic piece or whatever - the bottom line is people that will be affected need to be in it from day one. It's not fair that you bring us something after the fact and say oh, we have done this, this and this and this is what we are proposing. That's the issue. You can go back and forth all night as to what you plan on doing, but the issue wasn't done from the jump. It's just out of respect. People are asking to always be conscious and cognitive of the fact that – look in the room. Are they all here? Are the people that live in this community, people that are present in this room – how are they going to get the information other than when you feel like it? I think you should just keep that in mind as you go forward.

MR. HENDRICK: This is a brief agenda of what we plan tonight. There will be an introduction by the Port of Albany and many people know what the Port is and as I said, we are expanding into the Town of Bethlehem so that we can bring more economy to the region. We have had studies done; opPortunities for job development, workforce development. With the footprint that we had and the size of the Port – it has not changed since 1929 when it was developed under New York State Law.

We have seen an opPortunity to purchase 80 acres of land so that we can build for the future.

The project presentation – as I said, Steve Boisvert is from McFarlane Johnson who will brief you on what the project is and is intended. From there we will have public comments. As I said, if somebody doesn't want to ask a question tonight, we're more than happy to have the questions written down where they will get addressed and brought to the attention of the Town of Bethlehem Planning Board.

MS. DALY: So, I am Megan Daly and I am the Director of Economic Development and Procurement for the Port of Albany.

Before we get into the specifics of the project, I just wanted to take the opPortunity to give a little bit more information about the Port of Albany

itself, its background and some of the activities that are going on right now.

Just to give a little bit of context, the Port of Albany is a year-round Port facility. It is currently consists of 400 acres in three municipalities. It dates back to the 1920's when it was authorized by legislation of the State of New York. That being said, it is an independent organization that is governed by the Albany Port District Commission that is led by a board.

One of the main missions of the Port of Albany is actually to contribute to the economic development and the economy of the capital region of upstate New York and beyond. So, that is part of the role that plays in what we do every day, but it also is a part of the driving force of the Port project that we're going to talk about and the intention that is here. The intention is to provide positive economic contributions by providing jobs, services and the commerce that happens at the Port. That is the goal here.

The most recent economic impact assessment that was done for the Port – – it is about 400 acres. It includes roughly 25 business tenants. About 25% of the land area is for maritime activities, so it is

facing water and it has 60 to 100 trips per year with cargo including molasses and paper pulp. The last assessment was that among the local activities, there is roughly 1,400 jobs in the district and that it contributes to 45 new jobs statewide. The goal of the expansion is to grow upon that. It is to create more jobs and more economic opPortunity.

MR. FREEMAN: How many of those jobs will be on the south end?

MR. DALY: That an excellent question. Quite frankly, I can't answer the specific number. We do know that there are a number of jobs among different businesses among the Port administration, but the exact number I don't have. What I am hoping that you will ask and I'm hoping that we will work on together moving forward is how many new job opPortunities could be facing the south end of the City of Albany and Albany County.

So, everything that's highlighted in yellow is the Albany Port District Commission. The reason that we indicate this is to show not only the Port holdings and where the jurisdiction of the Port is, but to be aware that in the district there is other commerce activities that are not even highlighted. So, we've highlighted them here. They are not the

jurisdiction of the Port. They are contributors or partners or activities that happen nearby. So, we want it to be aware that the context of some of these things that may come up or some of the activities we can answer – some of them are simply neighbors. *Currently at the Port in the maritime area we have been undertaking a major maritime infrastructure investment plan for the last 2 to 3 years. We have been investing in up to $50 million in new maritime infrastructure investments. That overall plan is intended to last another two years. That has six project components. It includes a brand-new warehouse for big lifting activity that has been constructed and is in use; the wharf reconstruction and another maritime shed will be constructed starting next year and then other security maritime improvements. Some of these improvements are upgrading facilities that have not been approved since the Port was first constructed in the 20's and 30's. This is to point out just the current activity that is going on and this will go on top of that.

At the inside of the new warehouse that was recently constructed there are deliveries of paper pulp for big lift project activities that happens in there. That's one of the projects that I mentioned.

This is a visual of what the new projects could be (Indicating). Again, I want to stress, as Rich had mentioned, this is a possibility. This is not a plan but this was to get a visual to people that may say what are we talking about here? We're talking about the concepts that have been proposed and what it could be. The zoning allows for different commercial activity. The goal is to attract a brand-new industry that quite frankly is new to the United States with offshore rent. What that means is: the manufacturing assembly component parts related to offshore wind supply chains. So, you're not going to see an offshore wind turbine in the water. You would see commerce activity related to the supply chain that would happen in the ocean off the coast of the United States. This is a major economic opportunity right now that's facing all of the Northeast of the United States. We want to capture this for the region and for the state.

So again, it is a visual.

As part of the process that we have been undertaking so far, we are required to do a number of different feasibility impact assessments. Steve and the team will talk about the specifics when I turn that over. One of the biggest opportunities is the economic impact that could be possible if a project

here is realized. How it was assessed was based on the different concepts that you will see; from basic warehouse distribution, basic commerce activity which is in the range of concept C, all the way to the right which is concept D and D1 which is in the offshore wind activity. So, what it did was assess how much the new construction could afford in terms of new jobs, how much investment, how many construction jobs versus permanent jobs; what is the potential for this?

Going back to it, that gentlemen had said about the jobs – I'm hoping this is a pivoting point of how can we face this in the south end, in the city, in the county region. If it is in fact focused on offshore wind, the job potential at its greatest is over 1,600.jobs. The annual economic impact is in the hundreds of millions of dollars on an annual basis. You'll see below what is related to construction on top of the business activity jobs that could be there. These are estimates based on the potential construction that could happen there. This, to me, is exciting in terms of an opportunity. We would like to make sure that the project, as it could be developed and as it could be approved, would be positive in working well with its surroundings and upstate New York to help achieve these numbers. That's the goal of

what talking about the specifics are.

At this point, I'm going to turn it to Steve and his team. I just wanted to reiterate and you have heard from Rich – – this will be part of our conversation – our contact information is here. There is an avenue to comment on this here tonight. They will be marked possibilities for this in the future. This is a generic. After this, if we get through this process and it is approved, we need to do more processes. We need to come back again. So, this is only the start.

With that, I will turn it over to Steve.

MR. BOISVERT: Thank you, Megan.

I'm Steve Boisvert with McFarlane Johnson. We are the consulting engineers for this project.

What I would like to start with is a locational idea of where the project is. You can see on the graphic that it is roughly 1.7 miles north and west – your community is north and west of the project.

The property comprises approximately 80 acres. Primarily, 77 acres or so reside south of the Normanskill. You can see traveling west to the National Grid power lines.

As we discussed to this point, this project

has a generic environmental impact statement and that the Port has not identified a specific tenant or specific building at this time.

The project is being proposed instead with five different concept plans relating from an offshore wind potential assembly manufacturing plant up to a two-story 1.1 million square-foot distribution center. SEQRA allows the process to create a generic environmental impact statement in conceptual terms in addressing that generic project on its cumulative impact on the community. So, what that means is we talked about already that this is just the very first step in several steps that will occur before a project is deemed to begin to be in construction. After we get through this generic environmental impact statement process, the Port will identify a specific project and building and then we'll come back in front of this community and discuss the specifics of that project and solicit questions and input as that project is being developed and approved to the Town of Bethlehem. Again, this is just the first of several meetings that we intend on having in this community on this project.

So, I will walk through the five different concepts. We will start with the smallest to the largest. But the largest project being the actual

project that is a combination of all the small project impacts created – it is called a worst-case scenario.

So, the smallest project is considered a light assembly facility of roughly about 160,000 square feet that will have a 1,280 foot wharf and a large area specifically for offshore wind. All the concepts you will notice will have access from the north with a vehicle and a rail bridge crossing the Normanskill and an access to the south portion of the project tying in River Road.

There is also the utility easement that has been granted to the Port for connection to the Town of Bethlehem water main. It is roughly in this area on the property (Indicating). So, this is the smallest concept. I will walk you through all four.

This is a larger one of about a 580,000 square feet facility that will be earmarked more for offshore wind manufacturing, as well as the associated parking and lay-down area.

The next concept veers away from offshore wind and focuses on the property being developed in its current way that the Port operates which is several properties; several tenants in a warehouse distribution community. So, this particular scenario has roughly four buildings ranging in size from

160,000 square feet up to 240,000 square feet, roughly 800,000 square feet of total warehouse distribution. The difference here is that there will be 3 to 4 different buildings on two or three separate parcels.

The next concept is a single tenant with roughly 800,000 square feet, again, of warehouse distribution. So, instead of having multitenant buildings and multitenant facilities, it will be a single tenant occupying the entire site.

What we did is we took all of the impacts from almost four different concepts and took the worst-case scenario and created what we are calling Concept A which is the concept that contains the 1.1 million square feet of distribution, the wharf, the associated access points for both vehicle and rail. That is the concept plan that we are studying and detail to determine what the environmental impacts would be on the entire community.

This is just a summary of all the various concepts. You can see that concept 2A is a two-story all the way down to concept D1 which is the smallest of 160,000.

So, this is the project that we went forward with the draft environmental impact statement and the subsequent supplemental generic environmental impact

statement that specifically addressed all the impacts of this project on your community.

So, what we will do now is walk through all of the various documents which we discussed that are sitting on the table.

The very first document, the larger one, is a full draft generic environmental impact statement that addressed everything from traffic, to drainage to wetlands. Then, we prepared a supplemental impact statement specifically how the project impacts your community. Both documents have been made available at various locations, including here at the Housing Authority.

The reports, especially the supplemental, is detailed and what was evaluated is shown on the table of contents on the screen. We touched upon everything from the alternatives considered to traffic, drainage and every environmental impact that was discussed that would potentially create an issue.

With the Town Planning Board and their consultant, they determined that the following topics on the screen do not affect this community. So, I will walk through them very quickly.

The water service for the project will be provided by the Town of Bethlehem. Therefore, it will

not have an impact in your community.

Sanitary sewer will be provided on-site with a private sanitary sewer treatment plant. Historical or cultural resources were evaluated on the 80 acres and it was determined that there is no impact. Therefore, there is no impact to your community.

Aesthetic and visual resources were studied and a very detailed visual impact analysis was prepared and determined that the project cannot be seen from your community and therefore there is no impact.

Land use and zoning – the Town is currently zoned as heavy industrial. The proposed use is in concert with that zoning. Therefore, there is no impact.

Community character – as I mentioned, the Town zoned this as heavy industrial use and they planned on industrial use on this property as part of the comprehensive plan.

Emergency services will be provided by the Town of Bethlehem personnel. Therefore, it will not impact of this community's emergency services that are provided by the city.

School district – the project is located in the Town of Bethlehem school district and it has no

impact to recreational space.

With that, it was determined that the potential impact to air could be an impact to air quality. You are very much familiar with air quality studies in this area for some time now. Their latest report issued in October of last year identified 10 actions from which should be implemented as to how to reduce the impact of air quality. Out of those 10, the Port will be an active participant in implementing the following annexed items that they have control over for this expansion project.

The first action item is coordinating with the voluntary rerouting of personal entities in the south end. You will hear in a few minutes that we are committing that no new truck traffic will enter on South Pearl Street as a result of this project.

One of the items that is identified in bold is: working with the New York State DOT to reclassify the roads within the Port, to create a specific truck route through the Port to again avoid having trucks travel through South Pearl Street, through your neighborhood.

With that, I will specifically go through the truck routes that are being proposed as part of this project. *The first route cuts through all the Port

roads. Trucks entering and exiting the facility travel down Normanskill which is a Town road and enter Bradt Street and continue down Smith Boulevard and then out Church Street which ties into 787 going west or north.

Another truck route would allow trucks to enter that want to travel south and make a left on South Port Road and make a left onto River Road. They will pivot by way of signage and no trucks will be allowed to make a right onto South Pearl Street.

The proposed project may add one or two train engines and four or five cars per month. However, if the project develops as we hope with offshore wind, both truck traffic and rail traffic will significantly reduce.

MS. ALCANTAR: To your last point saying that trucks and rail would be decreased – is that as of now or what is currently happening, or is that a worst-case scenario?

MR. BOISVERT: For the worst-case scenario in our traffic impact study for that specific 1.1 million square-foot project, if the project property is developed for an offshore wind tenant, the numbers that are in our report will be significantly lower because the need for trucks is not there if the property is for an offshore wind supply chain company.

MR. MAIR: What about air monitoring? Trucks are basically a proxy for HiP 2.5 diesel particulate emissions. So, while you may alter your route, the emissions are still within this area and they may rise.

Air, as a medium - it doesn't stay on any street. It goes up and it can spread and adds to the air shed and it has already burned HiP 2.5. So, has there been an analysis of on one of your worst-case scenarios you have for tenants and they are having an increased volume traffic and you may alleviate the road burden and the risk of kids being hit by traffic, but you still have added to the poor quality – poor air quality obtained in one area etcetera. Has that been modeled in your analysis? Transportation road hazards and safety are one issue. The other trucks in additional train traffic is idling diesel engines and that a mission is going to add to the already polluted air cloud that already sits over the south end during peak ozone days during the summer which will make it significantly worse. So, you're actually doing a lot of pm 2.5 loading as well as sulfur dioxide as well as aromatic hydrocarbons that will be emitted from these tracks. Has that been added to your modeling, in essence, of air pollution contaminants?

MR. BOISVERT: What we can say is the existing

scenario will be a future in punitive effort to reduce. What we are saying here is the specific expansion project will not add to impacting your quality. Having trucks run out and around -

MR. MAIER: That's a driving problem. This is a science of physics. And again thermodynamics of heat during the summer with self rising particulates and polyaromatic hydrocarbons are known as a contributor. That's why they have the laws that regard buses and what have you. So, even though the trucks are off-site, they are. The point of the matter is what is the wind direction for southerly winds? What does that mean? That means the wins come out of the south and they blow north. So, if you've got a wind pattern that's going south and blowing north – peak emissions where kids are off during the summer. Their playgrounds are right here. So, what you have is increasing the potential for again pm 2.5 that will increase, irrespective of the fact that more trucks, irregardless of their route, are still adding to the pm 2.5 particulates right now. So, the issue you're having is cumulative and it can add to impacts. Even though the traffic may be mitigated, the point of the matter is you're still loading significant air pollutants which is a huge issue. It's a huge issue with the trains. The issue is pollution loading through

the air. So, that study is an impact and that's a question that the community needs to have taken into consideration.

MR. BOISVERT: That's a great question and we will record your comment and address it.

MS. SMITH: How many jobs did you say earlier you are hoping to create with this?

MR. BOISVERT: Roughly 1,600

MS. SMITH: So, if you are creating 1,600 jobs, how do you only have four or five cars coming in?

MR. BOISVERT: Train cars – those are trains.

MS. SMITH: So, you may have 1,600 passenger cars in regards to 1,600 extra jobs being created.

MR. BOISVERT: So, the job creation number was generated by industry standards. It has no relation whatsoever to the traffic impact study that we have prepared. The traffic impact study analyzes the peak hour which equates to be commuter time in the morning and commuter time in the evening. It is nowhere near 1,600 vehicle trips.

MS. SMITH: I don't think I understand that. I don't always understand this stuff. If 1,600 people come to work -

MR. BOISVERT: But they're working different shifts.

MS. SMITH: If there are 1,600 people coming to work in there are 1,600 people going home during peak hours -

MR. BOISVERT: So, 1,600 jobs would be over a 24-hour period. Most of these types of manufacturers have three shifts. There are three 8-hour shifts. So, 1,600 jobs are not all coming in at once at 7 o'clock in the morning. A shift that starts at 8 o'clock or there may be a shift that starts at 5 o'clock.

MS. SMITH: So, in other words there could be 1,600 extra vehicles in a 24-hour period going one way which in a 24-hour period could mean 32-something extra cars in a 24-hour period passing. It would be 3,200 extra vehicles going through South Pearl Street every day because it is shiftwork.

MR. BOISVERT: It's not 3,200. It is 1,600 potentially.

MS. SMITH: But it's in a 24-hour period.

MS. MAIER: She's talking bidirectional trips, which makes sense. It's not that there are 1,600 jobs but they come and go. So, each car is basically a trip – that's times two. So the load within a 24-hour period -

MR. BOISVERT: Again, that's what we analyzed. All of the vehicles will not all be on South Pearl Street. Vehicles are distributed throughout the whole

network.

So, you can see on the screen now the 11 intersections that we studied. You can see how it surrounds the project site which is highlighted in yellow. So, what will happen is for employees – they will get distributed to exit and enter the property either to the south driveway that I mentioned and these will take care of all of the employees that will travel to the site from the south. We will also have an access point here (Indicating) on Church Street to enter the Port. So, any folks that work north or west will travel 787 and will exit at the Port -

MS. FREDERICK: So, you're saying people that are employed there – since they won't be coming by -

MR. BOISVERT: The employees will be coming in throughout the roadway system.

I just want to clarify one thing. The traffic impact study was analyzed as pursuant to New York State DOT industry standards which address just the peak hours. That is the morning commute from 6:00 a.m to 8:00 a.m.in the morning and the evening commute would be 4 o'clock to 6 o'clock. Those are the two time periods the traffic impact study studied at the 11 intersections surrounding the property. So, the employees that work on the property will travel to and

from the property from their homes and will be distributed all throughout the roadway network and various cars will travel down South Pearl Street except for the folks that may live here - it will travel a different way to the property (Indicating).

MS. DWYER: I do have a question. Is this going to be on some type of bus route?

That leads into my second question because – how are you going to be reaching out to different organizations to help people get employment? I think there should be a study to go through your ledgers to figure out who lives where and how many people are already employed from the south end in the City of Albany. How is this going to be properly distributed – the community that is being impacted.

MR. BOISVERT: It's a very good question about the bus route. So, we will take that comment to heart and work with CDTC and see if we can extend a bus route to this property.

The other question with regard to advertising for potential jobs on the property. As I mentioned, once a project is identified with a specific company that wants to build the project on this land, we will be back in front of you prior to that project being built and will be able to share that particular

company's employment initiatives.

MS. DWYER: So, is there some type of requisite for them in order for them to obtain that job to employ the people from the community?

So let's say there's a construction company and in order for us to give you this job, you have to have an X-amount of people from the community to build. Afterwards, what's going to be the standard? Are you then going to reach out? What type of job training will you be providing? What type of professional development can actually happen within the community? Will you be reaching out to the community colleges, the high schools and things of that sort?

MS. DALY: I honestly love that question. I love this topic. I'm hoping that we focus on this because I think there are huge opportunities.

We have already talked with some of the employment centers. We've had conversations with community colleges. We have looked at other models that say for example industrial development agencies will use in terms of hiring for jobs that are posted at a workforce investment board or job center or locations in the south end that includes training and other things like that. We are currently looking at

that. It's the right time to be looking at it too, because as we do this type of studying, we are starting to get to where actual business developments would be in the next couple of years. So, that is a goal and that is something that we would like to include and help as to how to include that outreach.

Some of it would be Port work that would either be construction or some of it may be work in terms of maritime incentives that would be a part of the Port. Some of it may be direct private activity that would be a tenant and that would be something that will be part of developing this project.

MS. BOISVERT: So, as I previously mentioned, we are committing that no trucks will travel on South Pearl Street. So, this is the recommended truck route that I described earlier (Indicating). Trucks leaving the site will have the ability to stay on and basically travel on the existing city streets through the Port property or make a left at South Port Road and make a left on River Road and therefore eliminating any truck traffic on South Pearl. So, we do want you to take away the information on this slide, regardless of what project moves forward. We are committed tonight that we will eliminate any new trucks generated from this project that would travel on South Pearl Street.

How we going to enforce that?

The Port has committed that all leases with companies that will reside in this property to have a clause in such that they will require their delivery trucks to travel on the two routes that I just explained. There will be a written description of the route as well as a map that will he clearly shown that will require the trucks to travel to and from the property. In their lease there will be a provision such that if there are six violations, they will be in breach of contract. If a breach in contract occurs, we will move forward with action.

We are going to add to the extensive surveillance cameras that are tied to the Ports security system by adding a new camera at the intersection of Normanskill Street and South Pearl Street. Those cameras are tied to the Port security system and personnel and also the Police Department. There are cameras that exist at the intersection of South Pearl and South Port Road. In addition to the leases, we will install extensive truck route signage that you're probably very familiar with.

This is a blow-up of what will occur (Indicating). You can see that a new camera will be installed here (Indicating) that will monitor trucks

making this left and there is already an existing camera here to make sure the trucks for this project will travel south on River Road.

In addition, the Port has committed to comply with the four strategies that CDTC outlined in their 2018 study of following long-term strategies to reduce the amount of trucks on South Pearl Street.

The very first was determined by the ownership of the roadways throughout the Port. That has been done.

The next stop was to designate the roads throughout the corridor as federal aid eligible and the Port will work with the DEC and the city to accomplish that. These roads are designated as federal aid eligible which allows for the Port to apply in concert with the city to improve the roads throughout the Port and actually make it more attractive for trucks to use that route than any other route.

Strategy three was to seek funding to design and construct the roads throughout the Port and make them more accessible and more inviting for trucks. That is an ongoing process.

The Port very recently received a grant to improve Smith Boulevard and we are constructing this plan for later this year or early next year.*The last

strategy was once all of the roads are improved throughout the truck routes, it is to solicit FHWA to consider the route as a federal freight priority network.

This is just an overview of the road improvement that will occur, as I just mentioned. This is Smith Boulevard. There was a little S-curve in this section of Smith Boulevard and it was in the way of a building. The building has since been demolished and it is designed to straighten out that road and improve it for truck access in that is currently in their design.

This section of Normanskill Street is a Town road in this will be extended in concert with the project where a new bridge crosses over Normanskill. So, two sections of the Port on-site roadway truck route will be improved within the next year or year and a half.

As Meghan mentioned, there is a huge economic impact as a result of this project. This particular slide just outlines the total impact for County and all the taxing jurisdictions that you're going to see impact to the community. The total ranges from $13 million to $14.2 million.

This is impact to the county (Indicating) and

it's anywhere from $6.5 million to $10.2 million.

Meghan touched upon jobs already. You can see that the total economic impact ranges from $295 million to $459 million for the offshore wind component. So, there are a lot of reasons for sustainable and renewable – there's a huge economic impact to attract the offshore wind company.

This is just a summary of all of the information with regard to the project and the proposed mitigation and what we're doing for the climate and air that we already talked about. It just recaps that other parts of the project will have no impact upon your community and they are related to the Town of Bethlehem.

With that we would like to open up for questions. As has been previously mentioned, if you're not comfortable asking a question in you want to write it down, we do have cards in the back in a box. Please ask your question and put it in the box on the way out or you can email questions to the email address on the screen.

This is part of a public review process. This is not the end. You still have the opportunity to submit written comments by mailing them to the address on the screen or emailing them by the January 17 date.

This is just the first of three. We have to come back before we even put a shovel into the ground, once we identify a project.

With that, I would just ask you for the stenographer to state your name before you ask a question and then we will just go from there.

MR. MCPHEETERS: My name is Tom McPheeters; M-C-P-H-E-E-T-E-R-S.

First of all I just want to clarify one thing. This hearing is the direct results of the New York State Attorney General's office objecting to the Town of Bethlehem's Planning Board's approval of the SEQRA process early on. The Attorney General's office said that you have not considered the fact that this is an Environmental Injustice community and you need to go back and reconsider. That is why we are here. This process is the one where decisions are made about whether this project can go forward or not.

I'm glad that there will be more opportunities to have dialogue. I think we need that. This is the one that counts. So, let's be clear about that.

Secondly, I think it's really an exciting development that lot of potential jobs are potentially coming to the south end. This is one of the best

opportunities that we've seen in a long time here.

I am sure that there are also people here from the unions who think the new jobs will be great as well. I want to say for the record that I think when you can't breach a faith in the south end, if the Port of Albany were to negatively impact the neighborhood with the unions and either begin the construction of these new buildings and more importantly for the jobs without first having a strong driven community in the South and which is well-prepared to negotiate jobs. So, that needs to come first. I think it's important to do that and get that out of the way so others understand were we're coming from.

I'm a resident of the south end. I've been working with a village for five years to help discern the health issues that people were complaining about. I'm so glad the people here came out.

I'm acutely aware that this is an ongoing health issue or a health crisis who live in the south end. The question is going to be: is the mitigation enough?

The major decision has been made and pursued and that's to reroute the truck traffic through the Port of Albany and I have some specific questions on

that.

Will the trucks go through the Port and pick up 787 to the Thruway. They are about 500 feet from the people who live on the hillside and Ezra Prentice. It's not as if you are far away.

Aaron Maier, I think, laid this case out very clearly. The information that I read, we are still dealing with, at its peak, the additional truck traffic which is something like 100 trucks per hour going to those core roads. That's in addition to the 1,000 trucks a day they go through South Pearl and they would also be going to that Port. That's going to be a really busy road. Also, it's going to be a slow road because there are a dozen or so railroad crossings.

I just want to second what Mr. Maier said that this is something that needs more studying. Even if all of these mitigations take place and in so far all we have is the promise to reduce the trucks and that is a promise at this point because we don't know where the money is coming from. I would like to hear more about that.

We have a promise to put air conditioning in a few of the buildings. Not all of them.

We have a promise for the Health Department

to do an outreach to help people with their ongoing health issues, as well as other respiratory diseases and so on. We have those promises.

The playground needs to be moved up the hill or someplace else so kids are not playing next to that road or next to the railroad tracks or next to the sewage treatment plant or next to where all those trucks are going to go. More trees could be planted. Barriers could be considered.

The question is: will all of those potential mitigation measures - is that enough? We don't have the answer to that.

One thing we don't know is what the cost of all of the mitigation measures are. At some point, this community needs to be thinking about moving Ezra Prentice somewhere safe. That is not impossible. That takes a lot of political will. DEC did a study. The State Health Department did a study. The city did their part and the county has weighed in and said we will help with the health issues and so on. We haven't heard from the governor. He is my neighbor now. I think that needs to be at least on the table.

We need to consider the real alternative that would make a difference to people's lives at Ezra Prentice and that is to move Ezra Prentice and there

are options available and the community is ready to talk about it. So, I just want to leave that on the table.

I do have a couple of quick questions. What is the anticipated cost of connecting the Beacon island and fixing all the roads up? Where's the funding coming from for that? Where's the timeline on that? What do you do about all those railroad crossings? How does that work? Are some of the trucks going to stop? These are all questions that I would like to see inserted in the response. You don't necessarily have to do it now. Thank you.

MR. FREEMAN: Jim Freeman again.

Nowhere in this have I seen staying ahead of the curve and greening the Port of Albany. All these buildings – will there be solar panels on these buildings? Will there be alternative energy with a much cleaner process? The Port is completely antiquated and there are all these opportunities that I am not seeing addressed at all. So, can you explain that at all?

MR. BOISVERT: Is your question related to the existing Port buildings?

MR. FREEMAN: That too, but mostly the new construction. No place in these conceptual drawings are

there solar panels. Seriously, the whole place is antiquated. You have an opportunity here in the Port of Albany to really modernize it and make a big difference including possibly electrifying the south end with renewable energy. Instead of the pollution you're putting out daily that kills people, you can have state-of-the-art and have a model for the whole United States. You have that opportunity.

MR. BOISVERT: That's a very good point and you're absolutely correct. In our draft environmental impact statement we say that we will encourage the companies that want to build here to consider renewable energy such as solar on the roof, or what have you.

We also will encourage facilities to build with a LEED certification for all renewable products and material used during the construction process. So, your point is very well taken and you're absolutely correct. When we get a specific tenant, we will have more detailed discussions. Again, we will bring that back in front of you to discuss the specifics of that project.

MR. FREEMAN: Thank you.

MR. WHITE: Hi, my name is Willie White and I just want to talk about some things that I have observed over the years. In Ezra - I have family members who have

lived there. They are back with me today.

I sit here and hear some brilliant minds. I think there are brilliant minds in here. We are talking about how do we keep human habitation in an industrial area. Those two don't go together. Have we considered – – I know that you guys know all this stuff but there are 200 children down at Ezra Prentice who have to breathe this air every single day. So, what I'm hearing – take it out of their front yard and put in their backyard and everything is okay. It's not okay. We have families that live down there. There is a history of cancer at Ezra Prentice - of people dying.

Dr. King talked about gradualism. There are small incremental steps being made, but it never happens. It's a promise. That's what it is.

This is a community of color. They are people of color that live at Ezra Prentice. I guarantee you that if there was a different community there would be more of an urgency to move the people from Ezra Prentice. Ultimately, you can put all the Band-Aids you want on Ezra Prentice. It's not going to fix your problem. It is an industrial area. It's not going to fix the problem. It's not fit for human habitation. We need to do better.

I see some smirks on some faces around here who are saying oh, forget about that. You know what? You don't live down there. There are people down there that are sick. We have to do better. We have to stop putting a Band-Aid on this problem and fix the problem. Move Ezra Prentice. Thank you.

MS. HAGGRAY: My name is Eaaiyah Haggray. As a former committee member, I don't live down at Ezra Prentice but I know folks who still lives there. I'm not sure what Albany Housing is doing. I'm not sure what HUD is doing, but they haven't done what they were supposed to do. They knew this was an industrial area. It was formerly an Irish area before it was transformed into a community for Afro-Americans.

As community members, we took our time and came up with solutions to this problem. Instead of coming up with an alternative plan that diverts traffic away from this community, we came up together as a community and said all right, we are removing these people regardless.

We've got access to new home buyers program. We've got access to trades. We have access to all of these things that you guys can come together with us and help us remove these people from this area. They don't have places to go, but they have homes that can

be redeveloped within this community with the home buyer programs where these families can go. So, instead of coming up with money to fix roads and divert traffic, use that money to help these families get out of there. They are not supposed to be there, period. So, it's not just advocating, we are moving people who live down there. The whole community has to be involved because they're not supposed to be living on top of that and they are living on top of the landfill. Nobody knows that.

There used to be gas stations right where those houses are. There are still gas tanks underneath those complexes. The water lines for those complexes are old. These are issues. Asbestos was found in the buildings when they were removing that property. That still exists.

There are more things than traffic. The houses are not developed in a way where dust in the air quality – they can escape it. These issues are derived from a whole list of problems that is outside of just air quality in traffic.

You have to come together with us in removing these people and you don't have to do all of this diverting and repaving. You can go forward with your plan and leave that area as an industrial area as it

once was and eliminate the whole problem in solving the issues of Ezra Prentice at the same time.

So, I'm not sure what Albany Housing is doing. I'm not sure what HUD is doing. I'm not sure they came up with a plan to remove these people but we as members of the community – we did it ourselves and we came up with this plan and as a community we are cooperating with one another to remove these families, regardless. We are not waiting on Albany Housing. We are not waiting on the City of Albany. Were not waiting on the Mayor. Were not waiting on anybody. We went over and started doing it. So, if you could help us with that, I think that should be more of the focus so you can move forward with your plans without all of that lash and all of the comments coming back about expanding this project that you're going to do. I'm not sure if that's the goal or the focus of the project but renewable energy – that's great. We need to help these families get out. They do not belong there. They have to be removed.

MS. MAIER: Again I want to add some additional comments. I think they have long known that the community has been walled and put in the back of the bus.

In short, yes, this is a result of the

Attorney General. It is always the pressure and power of folks who are above and not an Attorney General of color but these issues are being flagged because in these types of meetings people are speaking up and saying these things need to be looked at because they have been long neglected or papered over.

In the case of relocating, there are opportunities. We talked about this with the oil firms and the bomb threats.

There are 23 acres that are sitting up there by the Harriman Campus owned by the city. This project by the Port authority can arrange a bond to buy out the land at the Port and use the revenue to basically purchase that land and rebuild that 20+ acres that is right up on the Harriman Campus and solve a number of problems. It puts the community in close access to Hannaford, Price Chopper and actually better access to better food and better quality. The best recreation in the city is Westland Hills and some of the best schools will be removed from the unequal treatment of the community.

This is an issue of justice. We talked about environmental injustice. Specifically we talked about people protection under the law. As the sister said, when it comes to people of color, we'rer the wrong

complexion for protection. We want equal protection under the law.

White folks did not have to run up and do what they had to do in Hoosick Falls. They rang the alarm. They rang the bell. The national government all the way down to the state went up there to preserve their property values and make sure that they had water piped at to their homes and made infiltrations. They are testing the population. They didn't have to have volunteers to come in. They do it ad hoc. Basically when there's a white community at risk, they bring all the emergency dollars and come in as gangbusters.

When it is a community of color, it's like a scene from the movie Blazing Saddles. The one black man who circles the whole wagon to defend itself.

The long and short of it is this: This is a specific project and what needs to happen is south end NGO's and community organizations need to be at the table. It's not only just about what the community needs but even if this project is the best use for this land, this is a public authority. It's supposed to operate in the interest – not of the private sector, but a whole community. It should be bringing jobs to not one sector of the population, but give

opportunity to all.

Yes, I'm a union worker and a very big on project labor agreements, but the unions in the capital region have to be some of the most restrictive and most racist with regard to a community of color. People who are even in the trades – minority contractors – – many of them are still without union cards. That's a damn shame. I know people who are the son of the son of their wife. They get their trade card and there in the union. So, the issues are privilege and access. In fact, there should be no project labor agreement unless there is a dialogue with the contractors so they are fast tracked and added to the list for jobs. It's enough to talk about jobs and opportunity when you don't provide a job and opportunity, but you are providing the risk and exposure.

All I'm saying is yes, we're going to respond here. Yes, some of us will send notes to the Attorney General. This process is woefully inadequate. It's lacking. For the community to understand and say well, the housing department – – you have to understand each of these government agencies and their authorities and their roll.

But the Housing Authority can ask for and

what the members appointed to that board – sit down and negotiate a good faith decision for a dollar amount for that land up on the Harriman Campus and do the just and deserved thing. Care about the people. Don't listen to those folks uptown that say well, don't put the poor people in my backyard. Listen, we've been dealing with Pitney for a long time. Pitney was put in the black people's backyards. We got the bomb trains. We've got the most risk and the most exposure and right now it's about justice.

We talked about the diverse equity inclusion. You now must include the people of the south end and the actions and the treatments must be just. I ask the Town of Bethlehem and I asked the Port authority to be just. Reach out to those of us who you know. Reach out and bring us all to the table to say how to resolve this? Thank you.

MR. BOISVERT: Anyone else?

(There was no response.)

Thank you very much. Again, if you have additional questions, please send an email or letter with the contact information on the screen. Also if you prefer, right your question on the index card in the back and drop it in the box. Thank you and we will inform you of our next meeting.

(Whereas the above entitled matter was concluded at 7:15 p.m.)

CERTIFICATION

I, NANCY L. STRANG, Shorthand Reporter and Notary Public in and for the State of New York, hereby CERTIFY that the record taken by me at the time and place noted in the heading hereof is a true and accurate transcript of same, to the best of my ability and belief.

Dated: 1.17.20

NANCY L. STRANG

LEGAL TRANSCRIPTION

2420 TROY SCHENECTADY RD.

NISKAYUNA, NY 12309

APPENDIX L

SUPPLEMENTAL TRAFFIC ATTACHMENTS

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

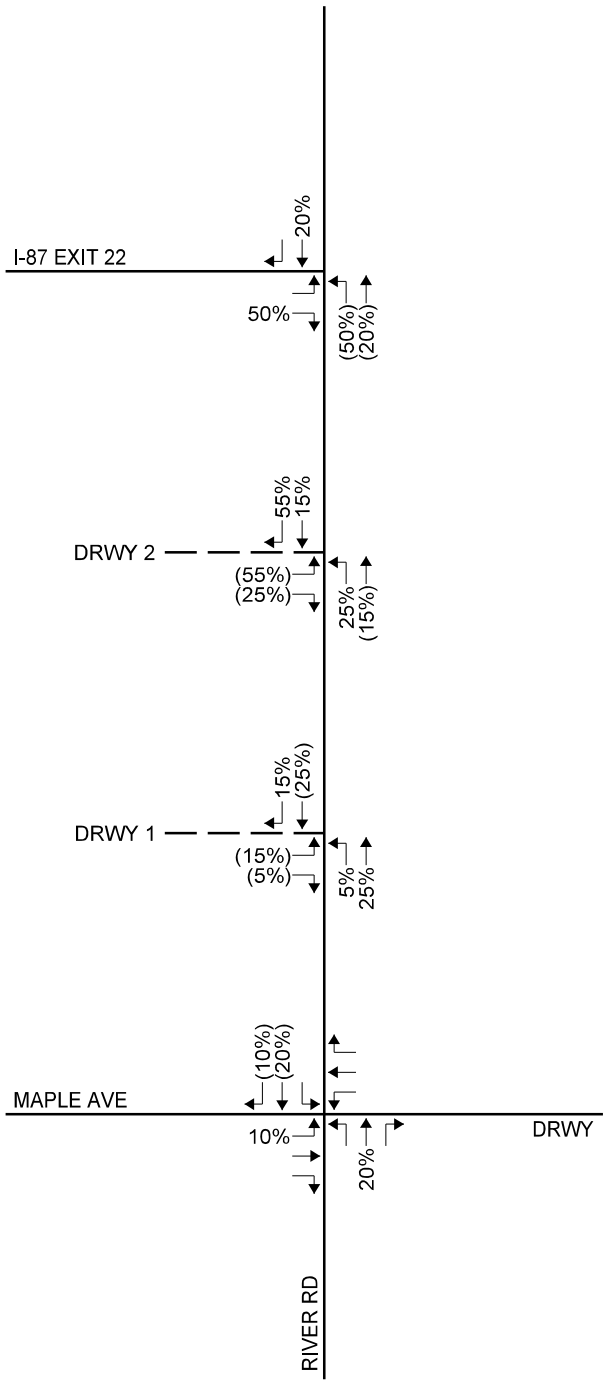
Table 2 shows that the site will generate 110 new vehicle trips during the AM peak hour (97 entering and 13 exiting) and 84 new vehicle trips during the PM peak hour (10 entering and 74 exiting). It is noted that the new trips generated by the site are less than the NYSDOT and ITE threshold of 100 site 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.

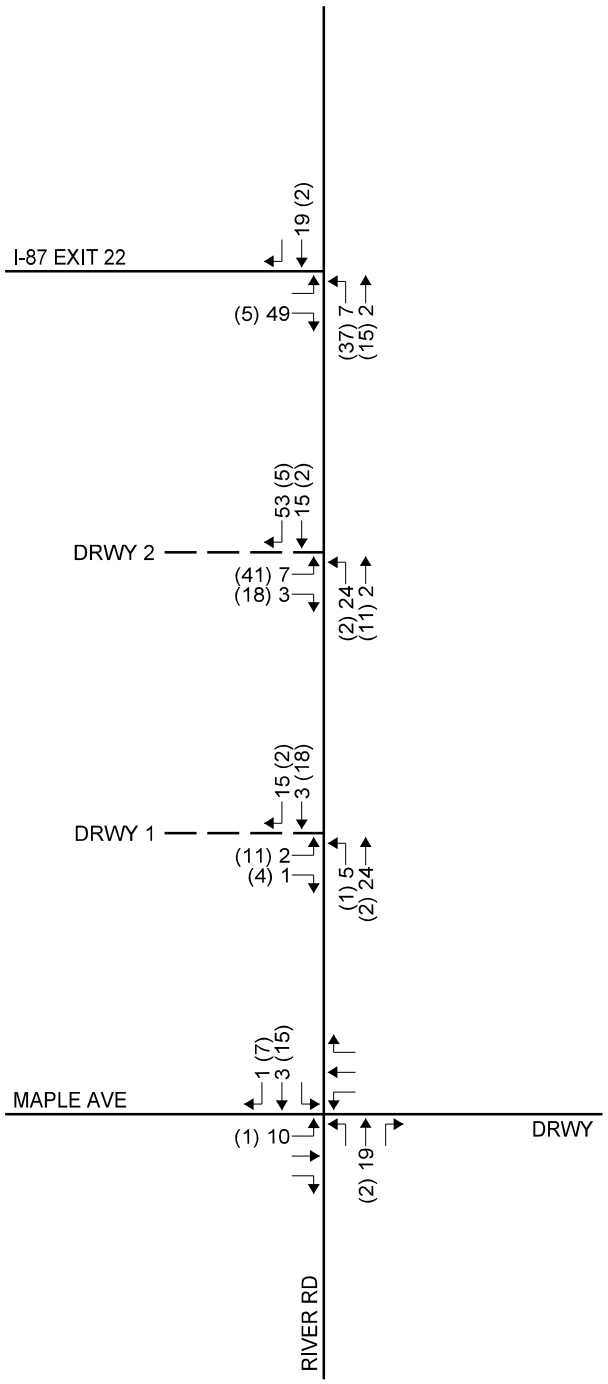
Trips associated with the proposed project were distributed at the study area intersections based on existing and anticipated travel patterns. It is expected that 20% of the site generated traffic will travel to and from the north, 50% will travel to and from the site via I-87 Exit 22, 20% will travel 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

TRIP GENERATION CALCULATIONS

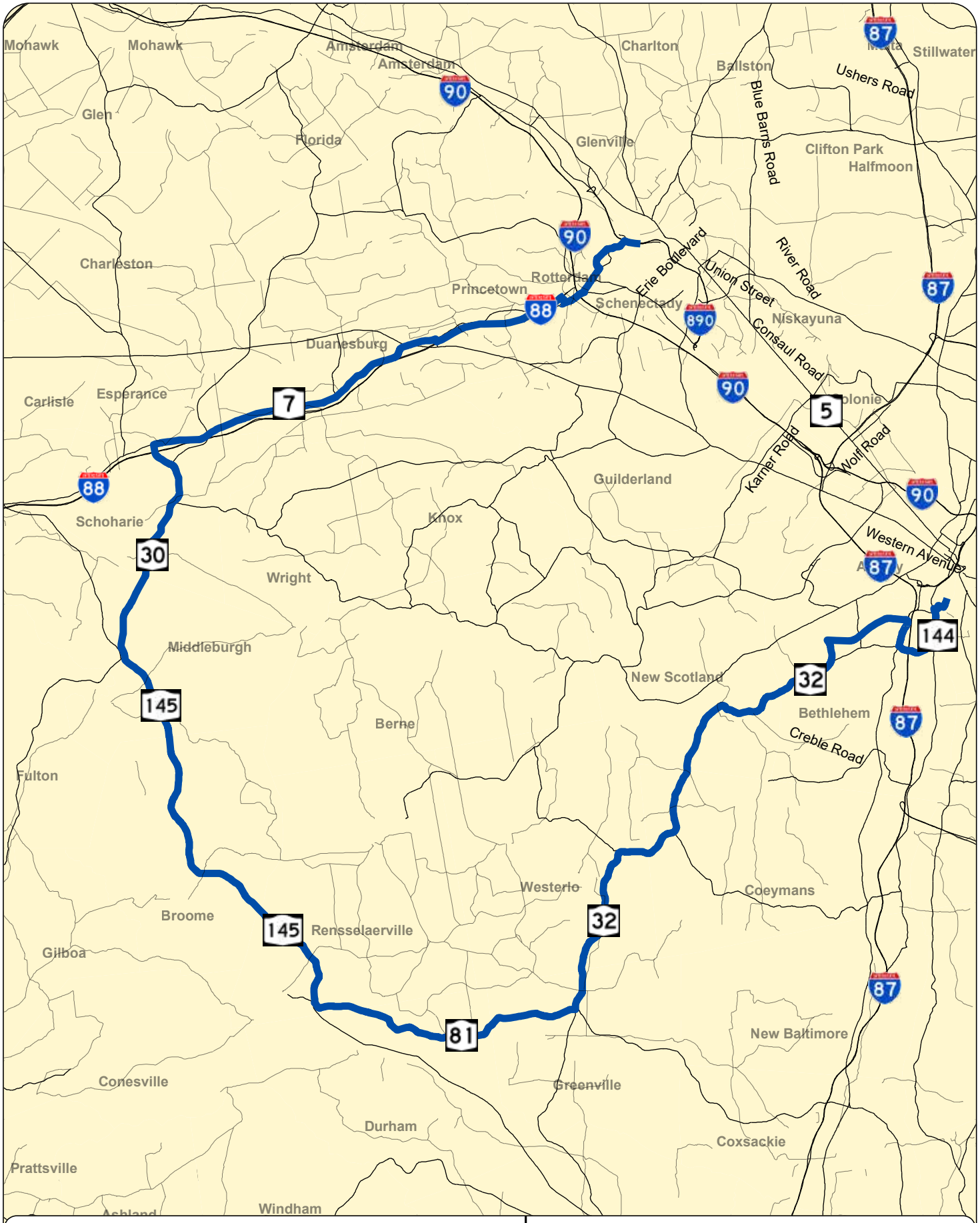
Type of Land Use	ITE Code	Unit	Weekday Morning Peak			Weekday Evening Peak		
			Enter	Exit	Total	Enter	Exit	Total
Existing Port of Albany (2009 Volumes)	NA	925 1000 SF	Generation Rate =		0.57	Generation Rate =		0.47
			59%	41%	100%	33%	67%	100%
			310	215	525	143	293	436
Total Projected Trips			**310**	**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.



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.

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

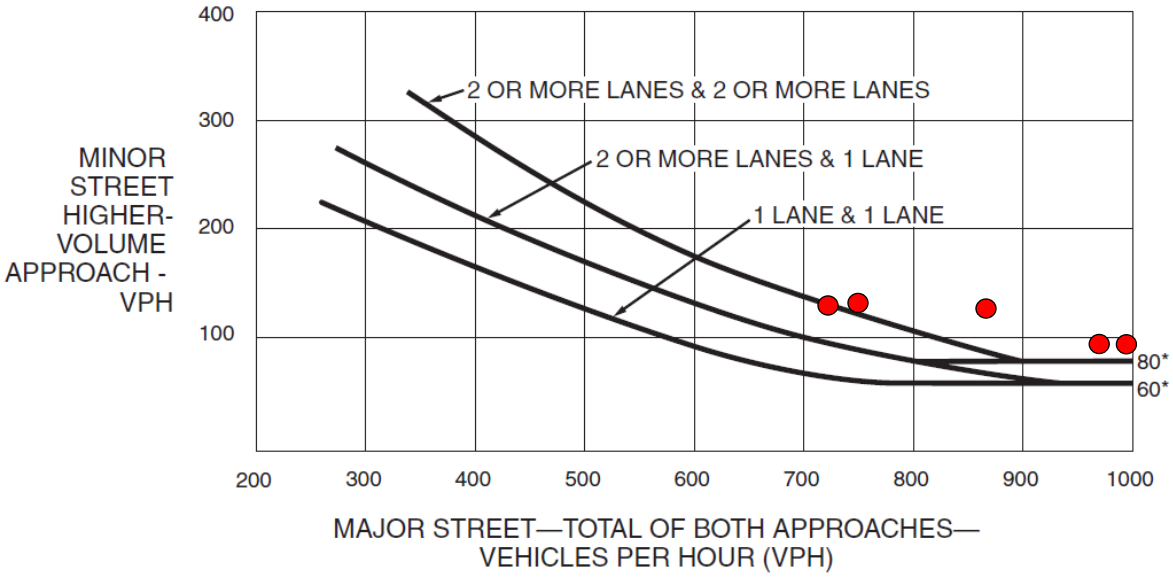
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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.

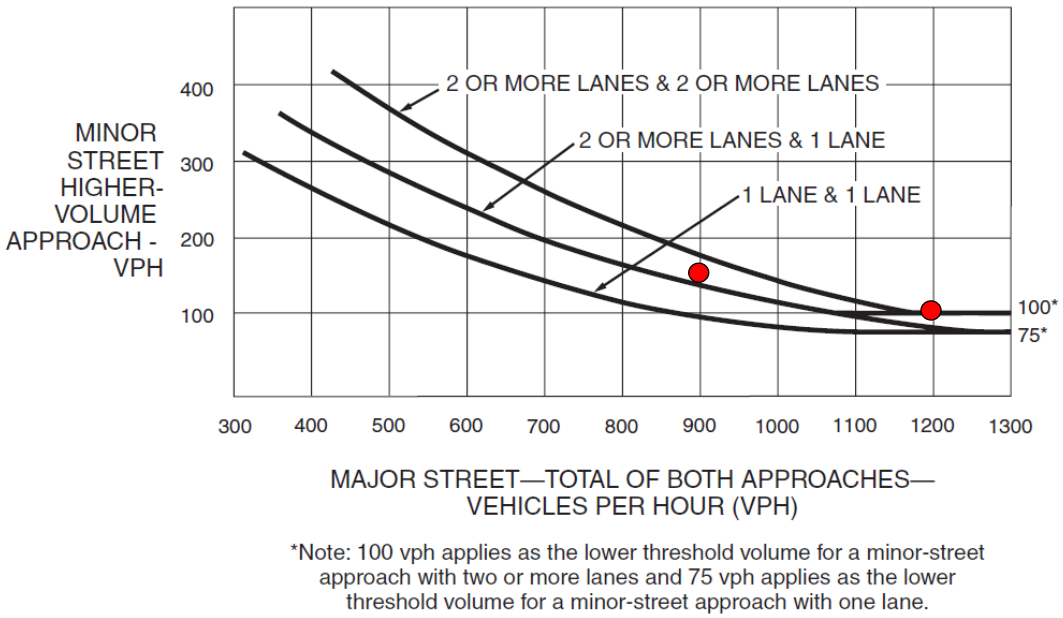
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

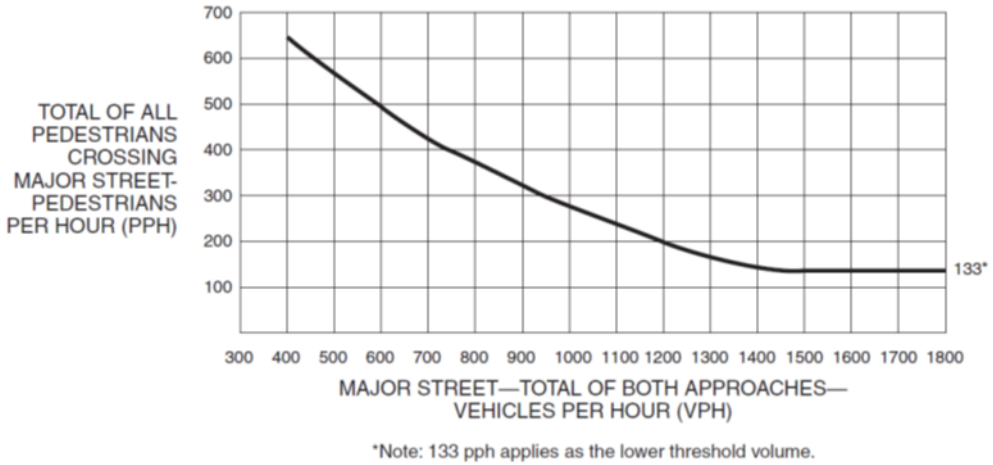
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

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.

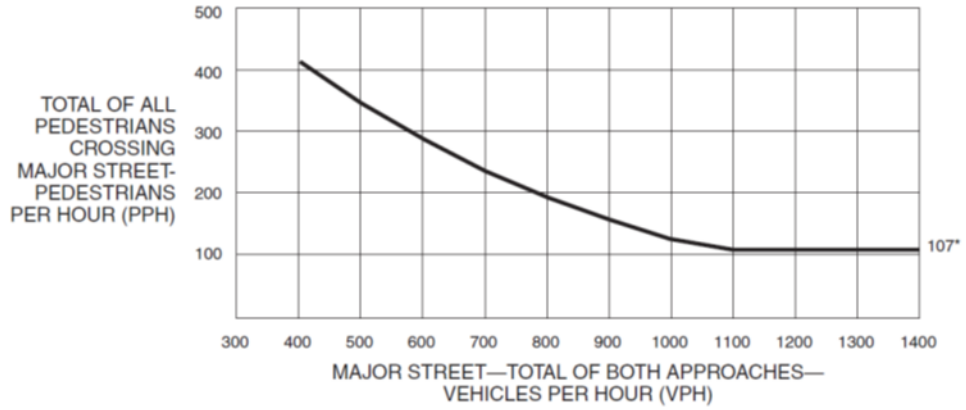
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

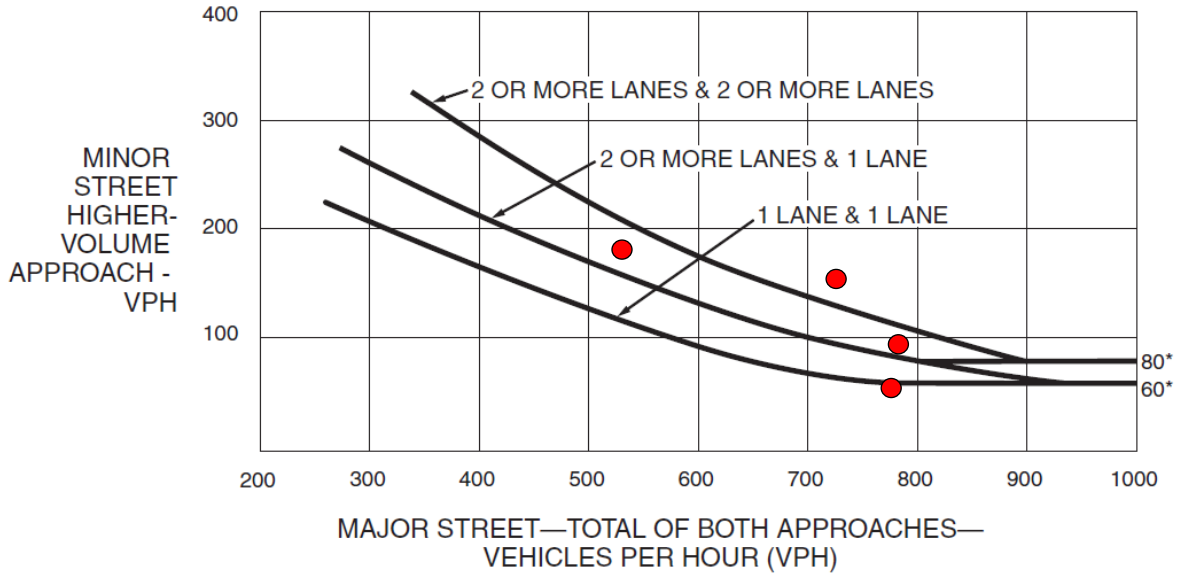
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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).

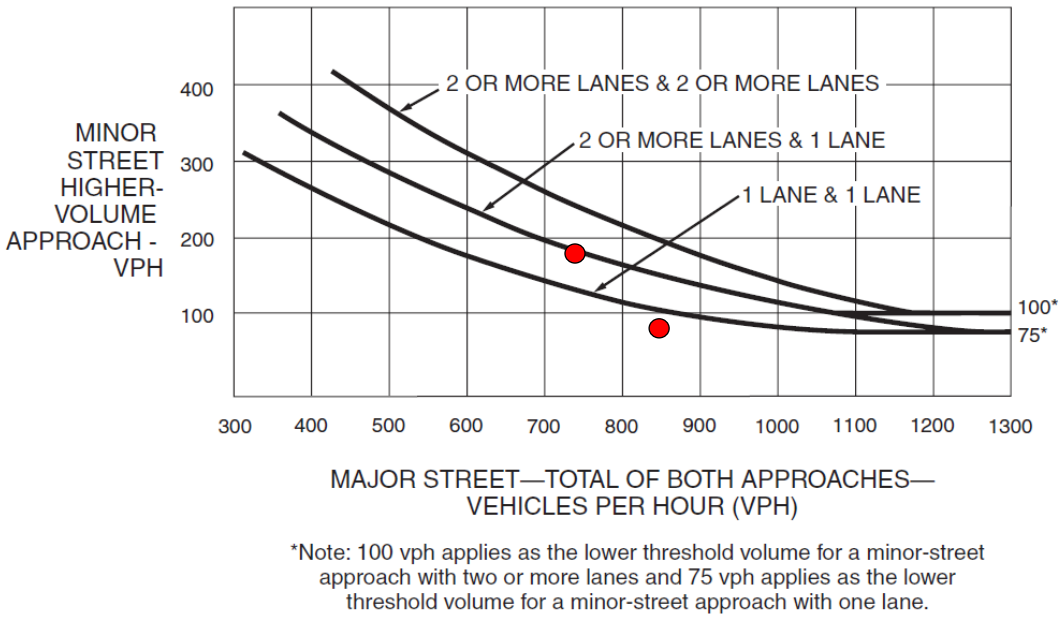
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

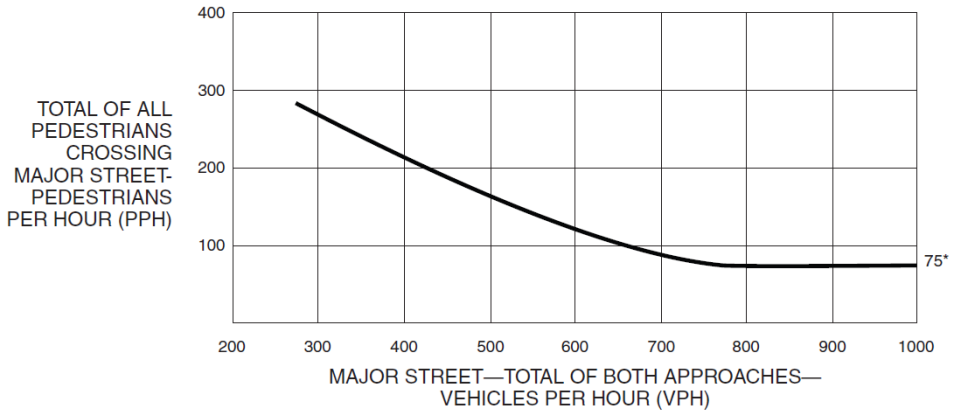
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

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.

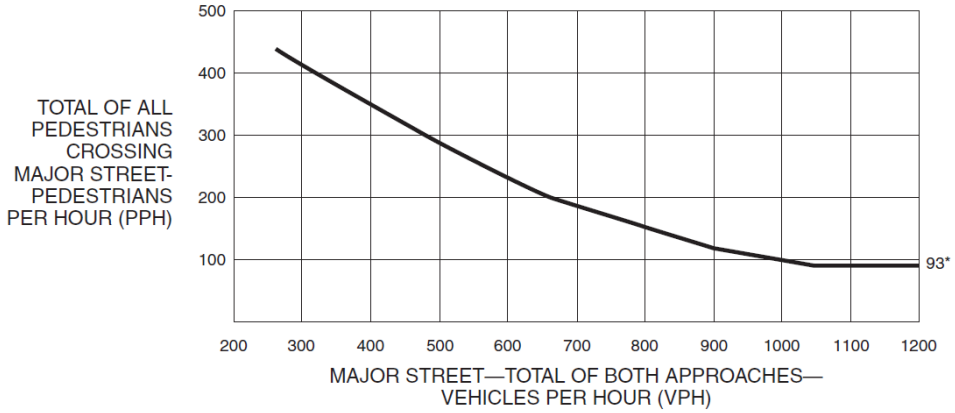
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

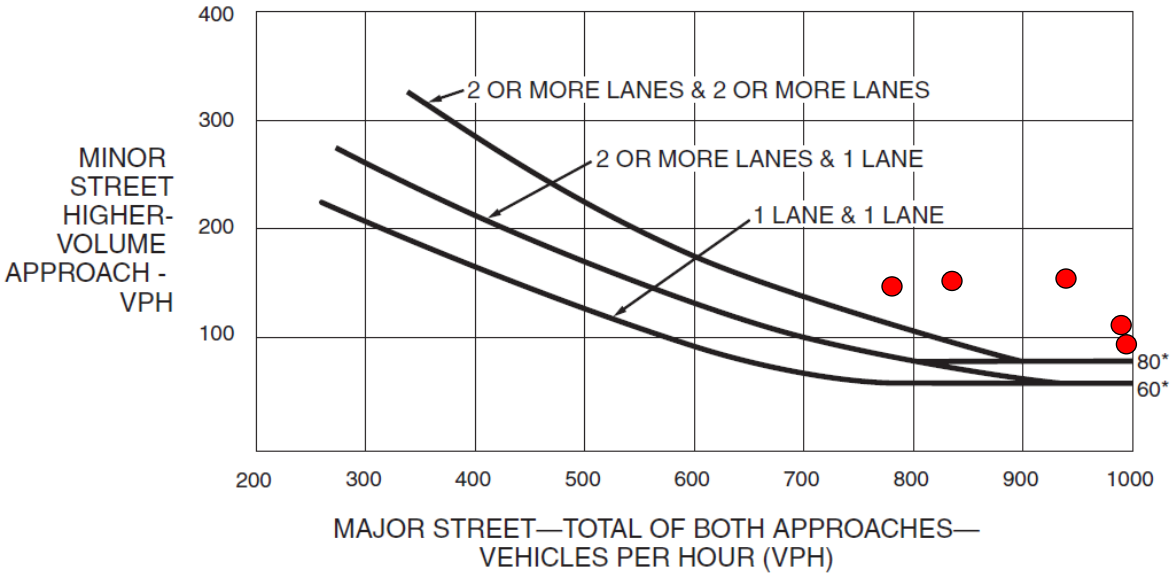
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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.

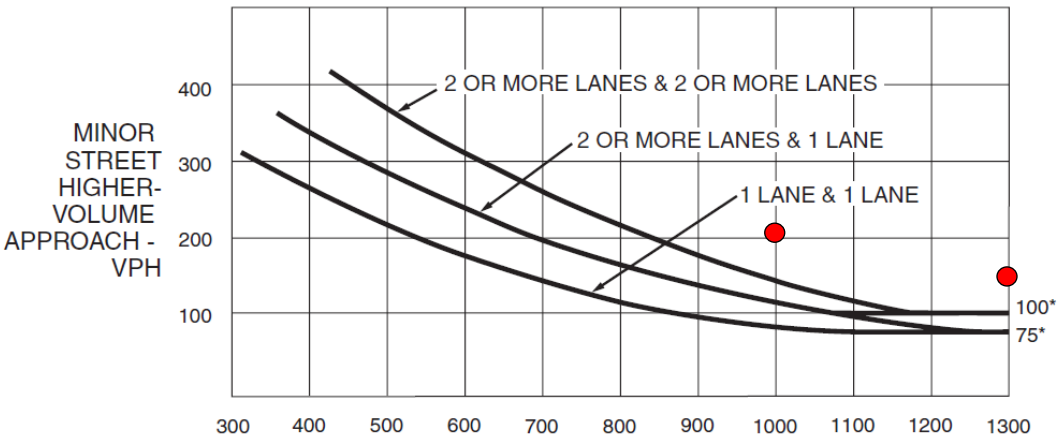
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

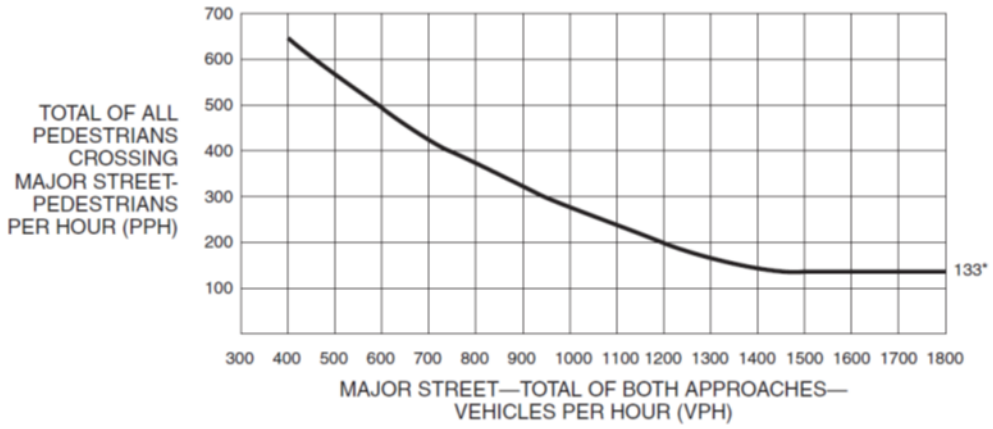
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

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.

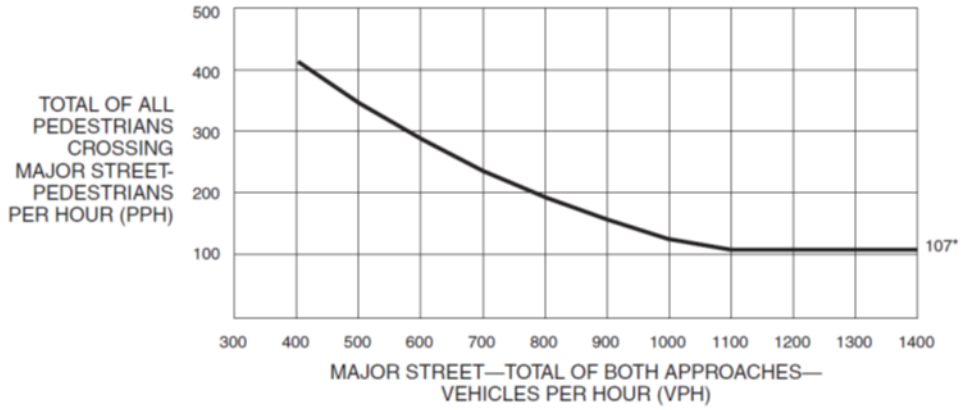
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

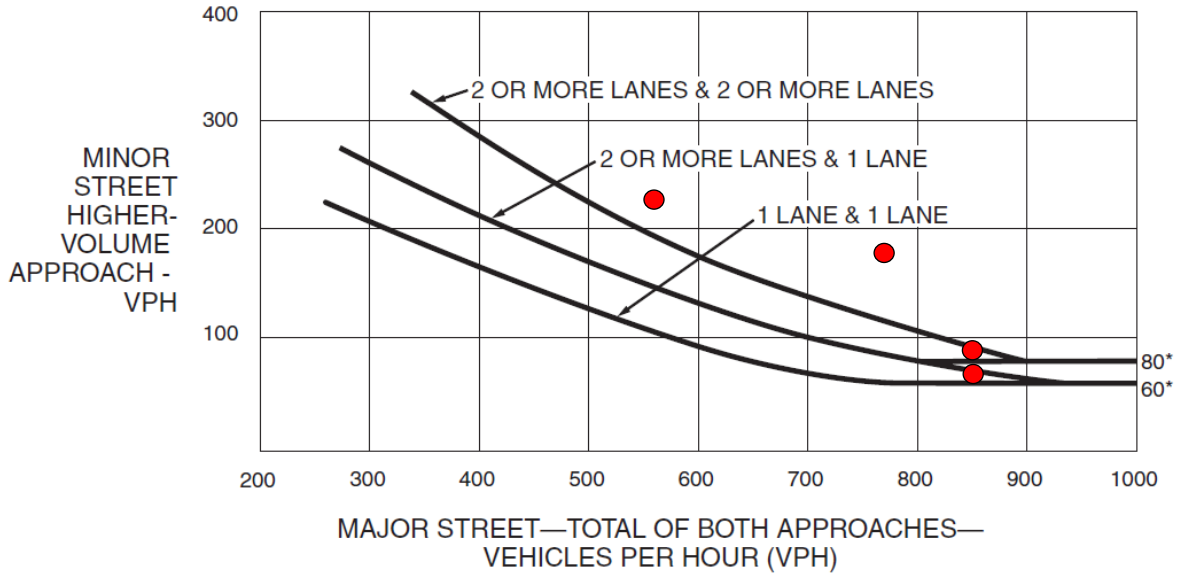
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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).

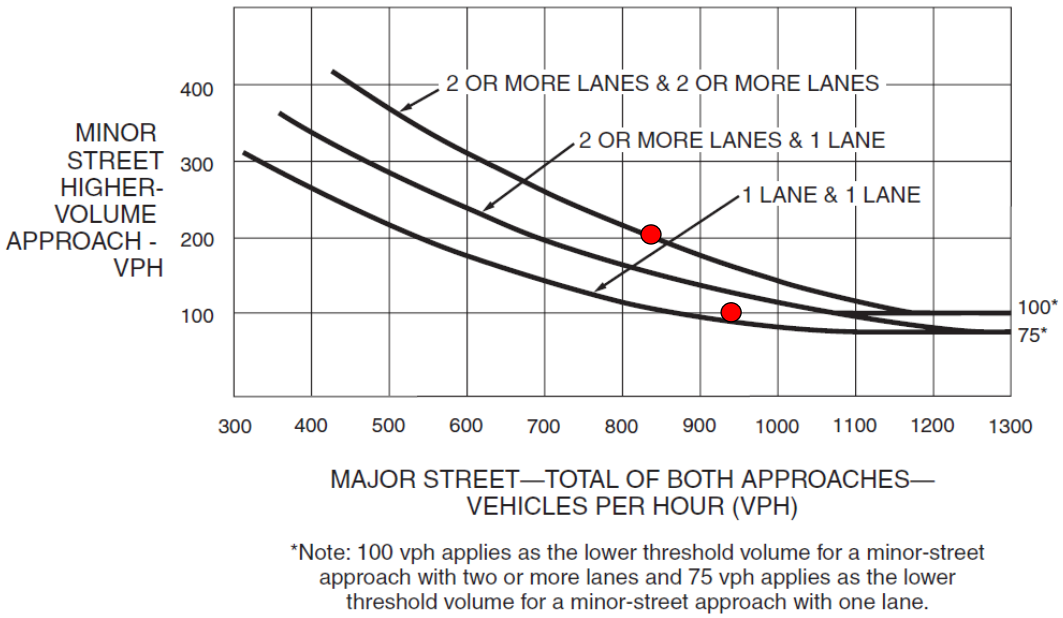
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

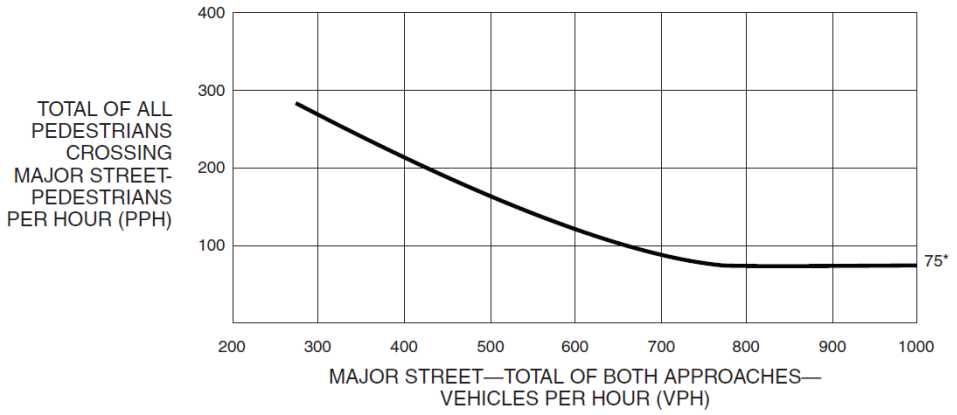
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

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.

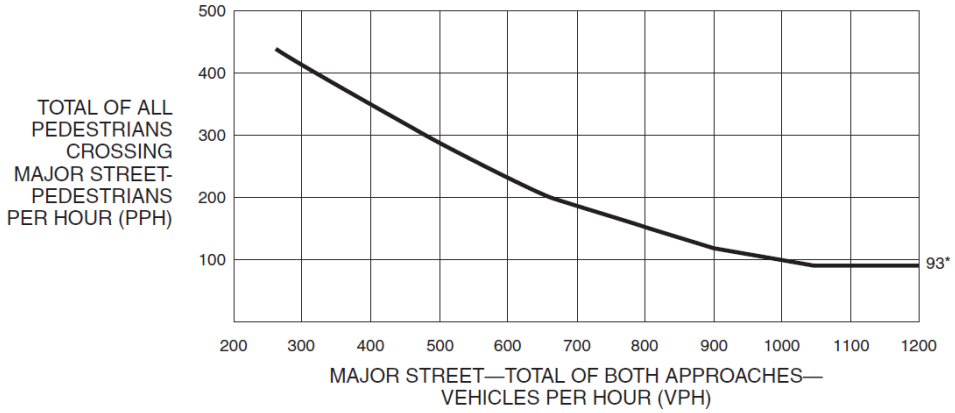
Warrant Not Met, no pedestrians were observed during the traffic counts.

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

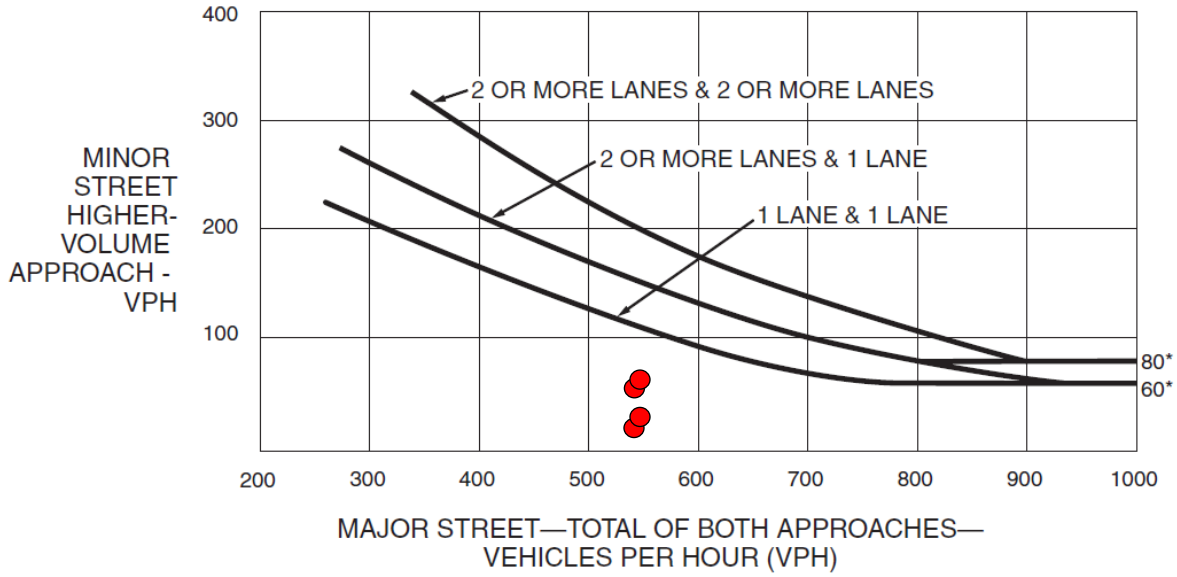
[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and 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.

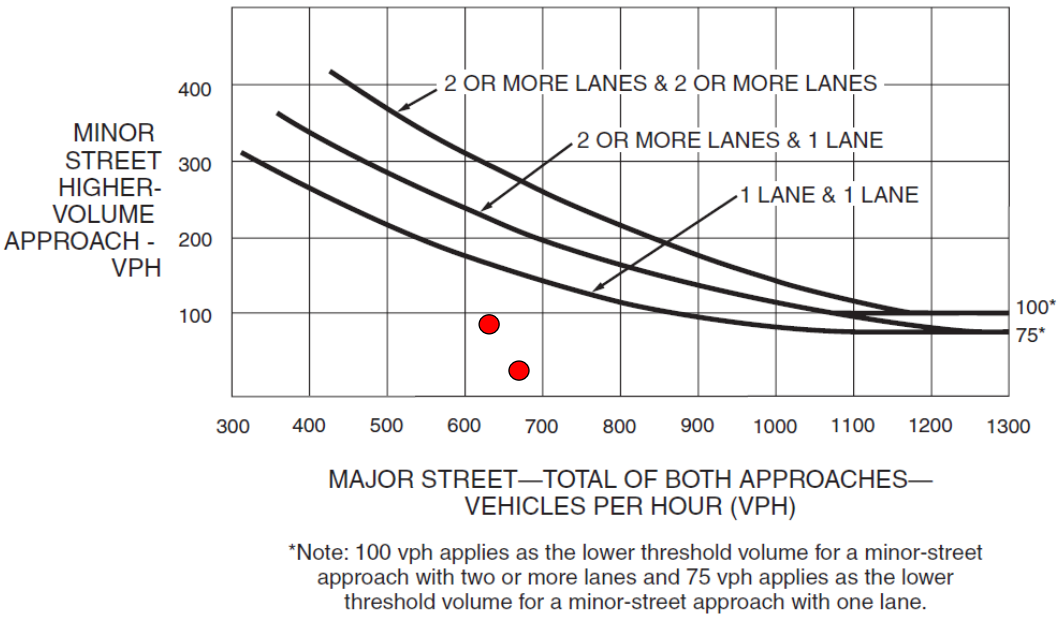
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable 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:

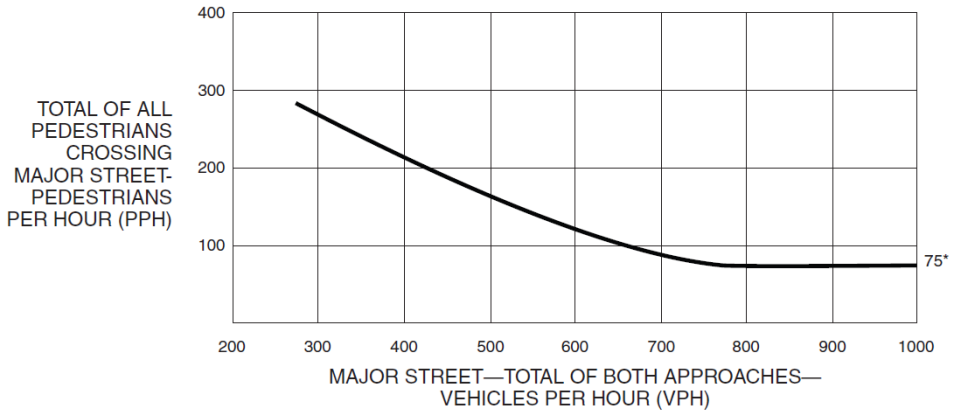
A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6; or

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.

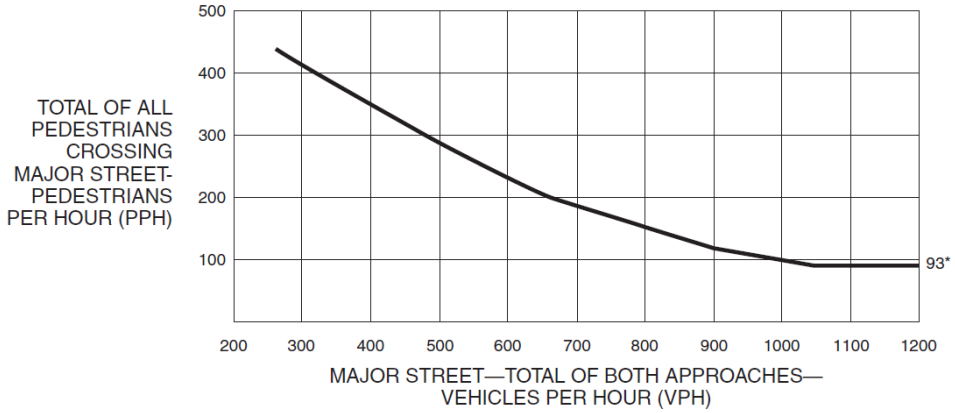
Warrant Not Met, no pedestrians were observed during the traffic counts.

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.

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		

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

PROJECT:
PORT OF ALBANY EXPANSION
BETHLEHEM, NEW YORK

DRAWN	NSO
DESIGNED	NSO
CHECKED	TCB
SCALE	1"=100'
DATE	SEPTEMBER 2019
PROJECT	18437.00

DRAWING TITLE
SIGHT DISTANCE PLAN

DRAWING NUMBER
SD-01

LEGEND

PROPOSED LANE

PHASE III FULL BUILDOUT INTERSECTION IMPROVEMENTS @ SOUTH PORT ROAD & SOUTH PEARL STREET/ NYS ROUTE 32

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

TRAFFIC ANALYSIS

NO.	DATE	DESCRIPTION

CLIENT: ALBANY PORT DISTRICT COMMISSION
BETHLEHEM, NEW YORK

PROJECT: PORT OF ALBANY EXPANSION

DRAWN	TCH
DESIGNED	AJF
CHECKED	AJF
SCALE	1"=40'
DATE	JANUARY 2020
PROJECT	18437.00

DRAWING TITLE

PROPOSED IMPROVEMENTS

DRAWING NUMBER

IMP-01

Planned Road Improvements

McFarland Johnson

CITY OF ALBANY
OFFICE OF THE MAYOR
24 EAGLE STREET
ALBANY, NEW YORK 12207
TELEPHONE (518) 434-5100
WWW.ALBANYNY.GOV

KATHY SHEEHAN
MAYOR

March 11, 2020

Mr. John Smolinsky
Chairman, Town of Bethlehem Planning Board
Town Hall
445 Delaware Avenue
Delmar, NY 129054

Re: Port of Albany Expansion

Dear Chairman Smolinsky,

I write to you regarding the proposed Port of Albany expansion project currently before your board. I am aware of representations made during your most recent board meeting regarding residents at Ezra Prentice in Albany. The individual who made those statements is not a resident of Ezra Prentice, nor is he active in the work we continue to undertake alongside the Albany Housing Authority and the residents of Ezra Prentice.

The City and Housing Authority have worked closely with the New York State Department of Environmental Conservation and New York State Department of Transportation to complete an air quality study and traffic study along South Pearl Street, including adjacent to the Ezra Prentice community. During the initial phase of those studies, it was clear that localized truck traffic was increasing the level of particulates found in the air near Ezra Prentice. Based on that information, the City worked closely with local businesses to voluntarily reroute truck traffic through the Port of Albany along the interior port road – thus reducing truck traffic along South Pearl Street adjacent to the Ezra Prentice community by more than 30%.

While many activists from outside Ezra Prentice have suggested (and even demanded) we displace Ezra Prentice residents from their homes, the City and the Housing Authority continue to work closely with the residents of Ezra Prentice and their tenant's association President to determine what the residents want. To that end, a group of Ezra residents are developing a survey for their fellow residents to ensure their voices are heard. This survey is intended to be a tool for residents to express what they believe should be the next steps for the future of their community. It is initiatives like this that we believe are so important to ensuring we are obtaining residents' input and protecting their interests.

We have also worked with the Port of Albany to ensure their proposed expansion has a positive effect on the Ezra Prentice community and Albany's South End. This project will accelerate the creation of an improved interior port road that would allow the City, State Department of Transportation, and Capital District Transportation Committee to de-designate South Pearl Street as a truck route – putting the City in a position to be able to ban through truck traffic along the corridor adjacent to Ezra Prentice. This project would also create an estimated 700 to 1,600 jobs that would be available to the residents of Ezra Prentice and Albany's South End.

With the elimination of truck traffic on South Pearl Street and the creation of hundreds of jobs, the Port expansion would provide the very stimulus the South End of Albany needs to attract residents and amenities that would benefit the entire community. Because of these factors, I support the proposed expansion to the Port of Albany.

We will continue to work with the Housing Authority, State Agencies, Port, and most importantly, the residents of Ezra Prentice to ensure we are protecting our residents' interests. Please do not hesitate to reach out to me should you have any additional questions.

Sincerely,

Kathy M. Sheehan
Mayor, City of Albany

Cc. Hon. Neil Breslin, New York State Senator
Hon. Patricia Fahy, New York State Assemblymember
Hon. John McDonald, New York State Assemblymember
Hon. Daniel McCoy, Albany County Executive
Hon. Dorcey Applyrs, City of Albany Chief City Auditor
Hon. Sonia Frederick, City of Albany Common Council Member
Hon. Derek Johnson, City of Albany Common Council Member
Steve Longo, Executive Director, Albany Housing Authority
Richard Hendrick, Executive Director, Port of Albany

PAVEMENT EVALUATION REPORT

FOR THE

PORT OF ALBANY
EXISTING ROADWAYS

RAFT STREET AND PORT STREET / NORMANSKILL STREET

March 2020

PREPARED FOR:

Albany Port District Commission

PREPARED BY:

60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NY 12866
PH: (518) 580-9380
FX: (518) 580-9383

Methodology

A pavement condition inventory was performed on the following City of Albany roads within the Port of Albany District:

Raft Street,
Port Street/Normanskill Street,
South Port Road

See Figure G-01 for the sections of roadway that are scheduled to be upgraded as part of with the Port expansion project (Port Street/Normanskill Street) or the capital improvement project funded by the Federal TIGER Grant (Smith Boulevard).

The roads were inspected in accordance with the New York State Department of Transportation (NYSDOT) Comprehensive Pavement Design Manual – Evaluation of Existing Pavements; Pavement Distress Condition Survey. Following these procedures, the information collected included distress type, distress severity, and distress amount. The section of roadway to be surveyed was broken into lengths approximately 500 feet long and evaluated for distress type, distress severity, and distress amount. The resulting pavement condition was based on the following visual inspection analysis:

Excellent - No surface distress
Good – Surface distress beginning to show
Fair – Surface distress is clearly visible
Poor – Distress is frequent and severe

Based on the length of roadways, the roadway being surveyed was broken into 12 separate sections. Sections 1 through 9 are on the portion of Port Street/Normanskill Street, Sections 10 and 11 are the portion of Raft Street, and Section 12 is the length of South Port Road.

Inspection Results

Each of the 12 sections were inspected for distress type, severity and amount, as well as features such as curbs, guard rails, railroad crossings, and road width. All section stations as well as existing roadway widths are detailed on Figure G-02. See Appendix A for photographs of each section pavement and field notes.

Section	Curb	Guardrail	Railroad Crossing	Pavement Condition
1	N	N	N	Poor
2	N	N	N	Fair
3	N	N	N	Fair
4	N	N	Y	Poor-Fair
5	Y	N	N	Poor
6	N	Y	Y	Poor
7	N	Y	N	Poor
8	N	N	N	Poor

9	N	N	Y	Fair
10	N	N	Y	Poor
11	N	Y	Y	Poor
12	N	Y	Y	Fair

It was noted at the time of inspection that all railroad crossings were in fair condition and all trucks were able to complete turns within the existing travel lanes. Therefore, all turning maneuvers are adequate.

Recommendations

Based on the inspected sections and the current and proposed use of the roadway system, Sections 1,8,10, and 11 are the highest priority to be restored based on their condition and the frequency of existing and future truck traffic.

All new roadways should be designed to meet at a minimum the typical sections shown on attached Figure G-03. We recommend that all improved roadway sections meet the NYSDOT Design Manual criteria including proper drainage pavement thickness, 12 foot travel lanes with 2 foot shoulders, turning radii to accommodate a WB 67 truck, striping, signage, and installation of DOT standard railroad crossing gates.

LEGEND

SECTION OF ROADWAY TO BE RECONSTRUCTED AS PART OF PORT EXPANSION PROJECT

SECTION OF ROADWAY RECOMMENDED TO BE RECONSTRUCTED PER CURRENT PAVEMENT CONDITION EVALUATION. SEE SHEET G-03 FOR TYPICAL SECTIONS.

SECTION OF ROADWAY TO BE RECONSTRUCTED W/ CONSTRUCTION BEGINNING FALL 2020 / SPRING 2021

SCALE

0 500 1000

FEET

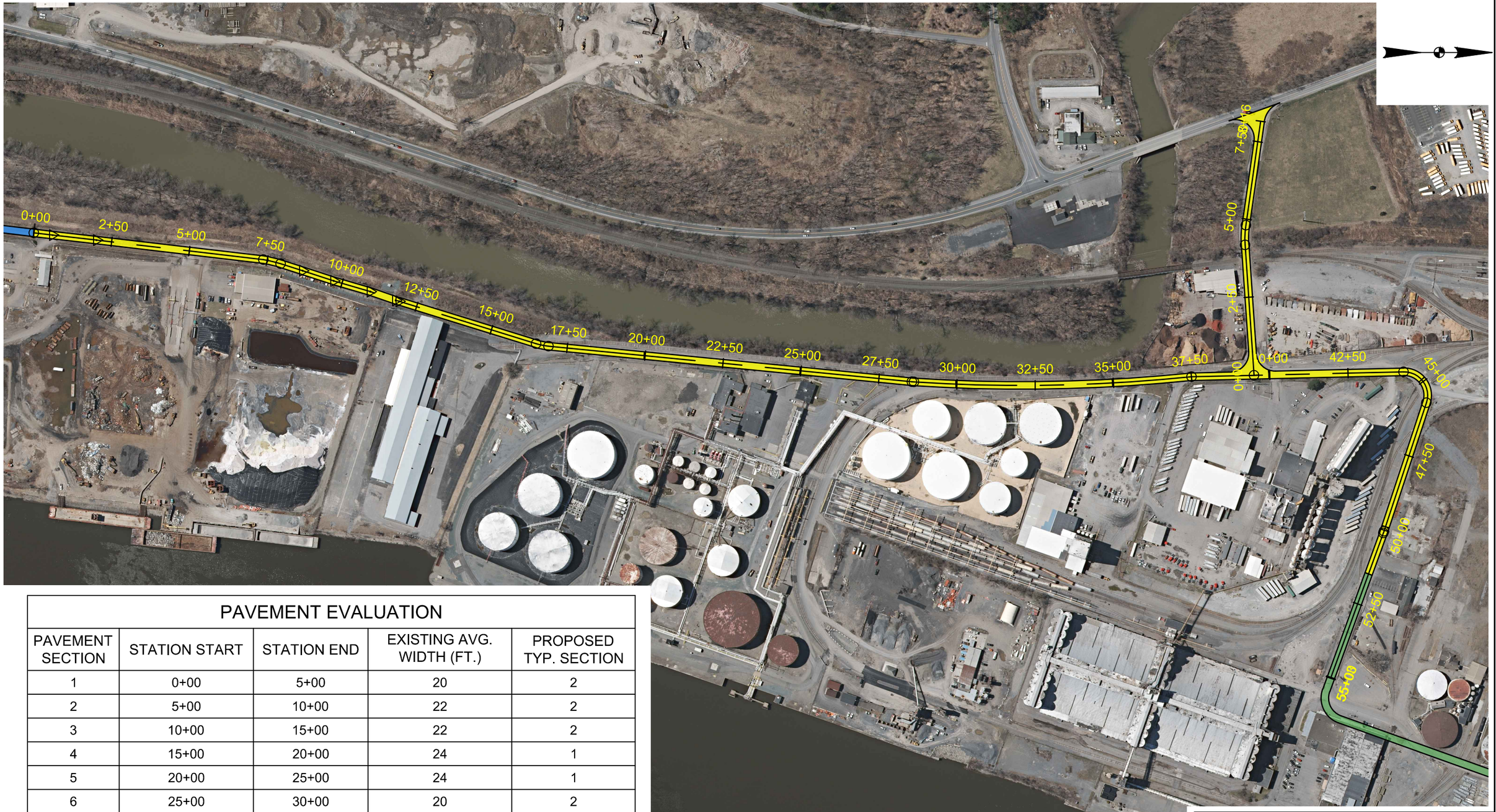
PORT OF ALBANY

BETHLEHEM, NEW YORK

PORT DISTRICT TRUCK ROUTE CONCEPT ROADWAY

SCALE:	DATE:	FIGURE:
1"=500'	MARCH 2020	G-01

McFarland Johnson



PAVEMENT EVALUATION				
PAVEMENT SECTION	STATION START	STATION END	EXISTING AVG. WIDTH (FT.)	PROPOSED TYP. SECTION
1	0+00	5+00	20	2
2	5+00	10+00	22	2
3	10+00	15+00	22	2
4	15+00	20+00	24	1
5	20+00	25+00	24	1
6	25+00	30+00	20	2
7	30+00	35+00	25	1
8	35+00	40+00	24	1
9	40+00	45+00	28	1
10	45+00	50+00	22	2
11	50+00	55+00	20	2
12	0+00	7+50	24	1

SCALE

0 300 600

FEET

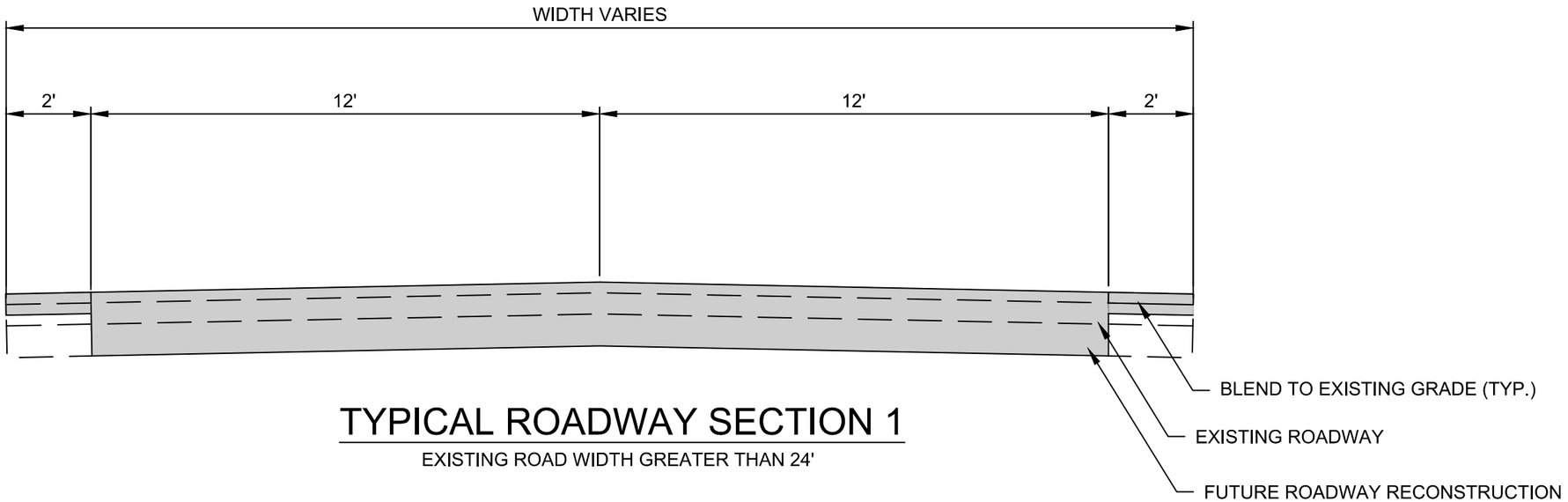
PORT OF ALBANY

BETHLEHEM, NEW YORK

PORT DISTRICT TRUCK ROUTE CONCEPT ROADWAY

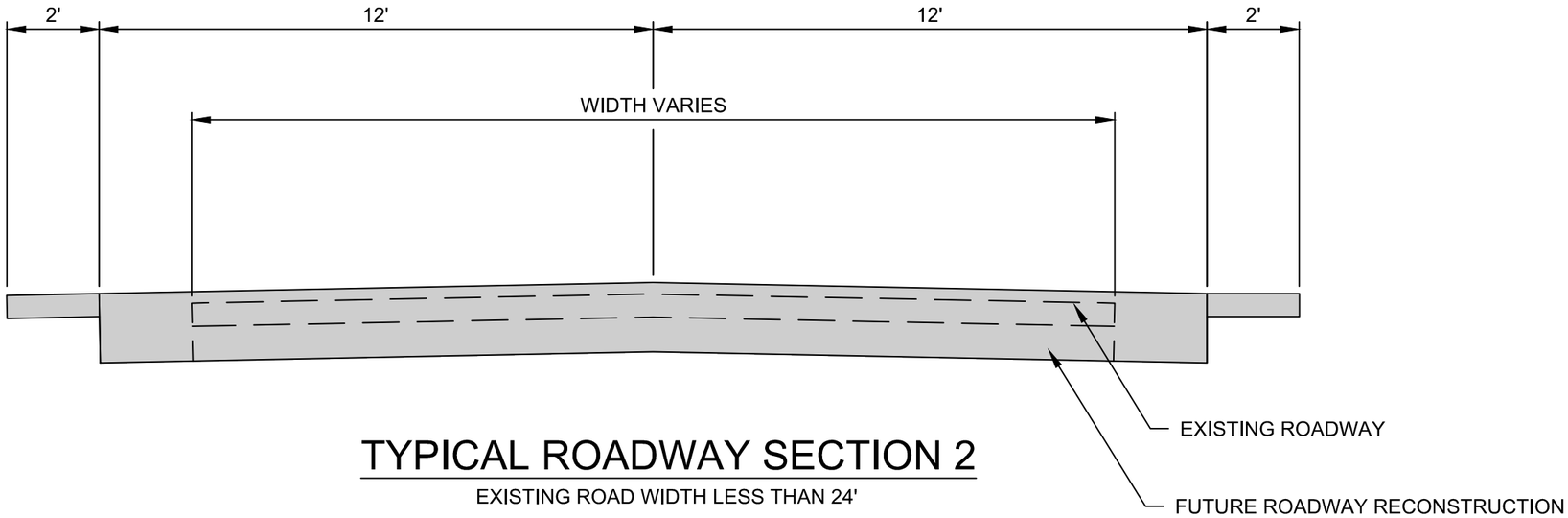
SCALE:	DATE:	FIGURE:
1"=300'	MARCH 2020	G-02

McFarland Johnson



TYPICAL ROADWAY SECTION 1

EXISTING ROAD WIDTH GREATER THAN 24'



TYPICAL ROADWAY SECTION 2

EXISTING ROAD WIDTH LESS THAN 24'

NOTE: THE ABOVE TYPICAL ROADWAY SECTIONS ARE CONCEPTUAL IN NATURE. ROADWAY SECTIONS ARE TO BE FINALIZED IN THE DESIGN PHASE OF THE ROADWAY.

PORT OF ALBANY
BETHLEHEM, NEW YORK

PORT DISTRICT TRUCK ROUTE CONCEPT ROADWAY

SCALE:	DATE:	FIGURE:
N.T.S.	MARCH 2020	G–03

McFarland Johnson

APPENDIX A

SECTION 1

APPENDIX A

SECTION 2

APPENDIX A

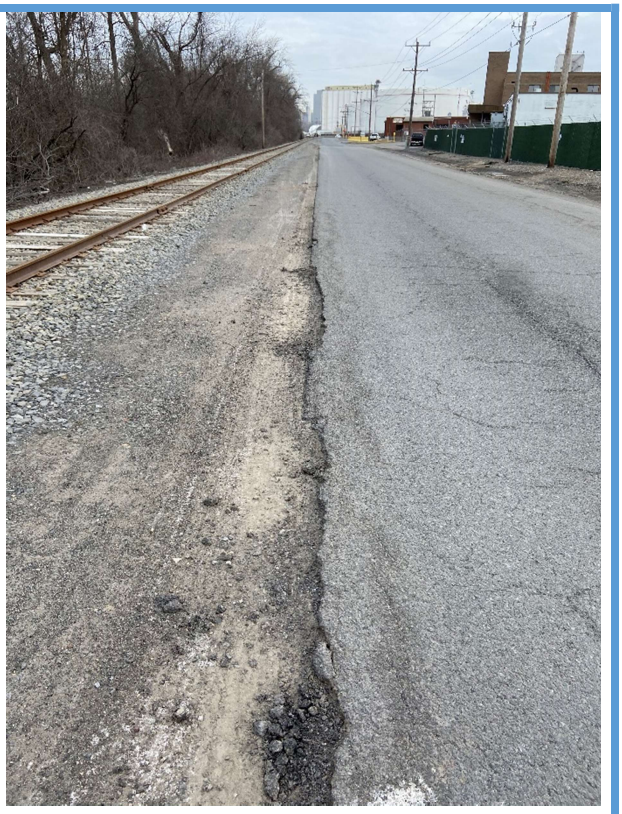
SECTION 3

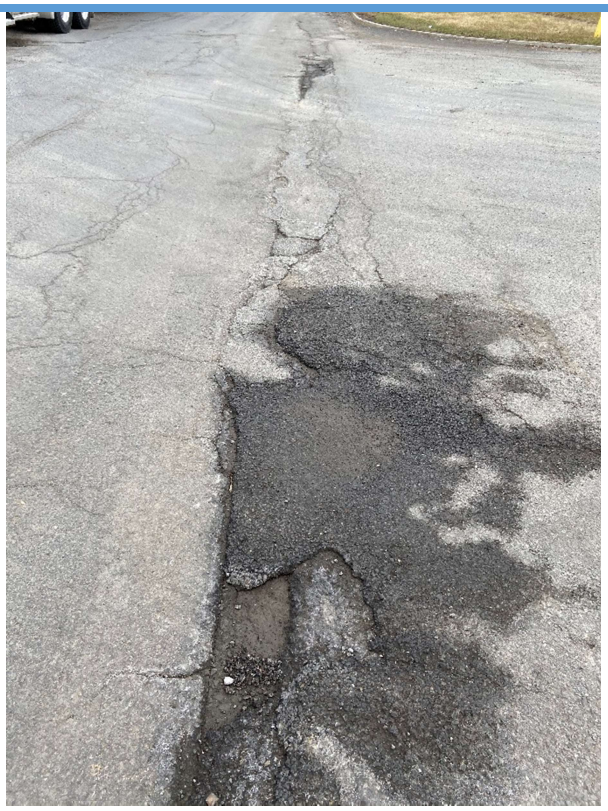
APPENDIX A

SECTION 4

APPENDIX A

SECTION 5



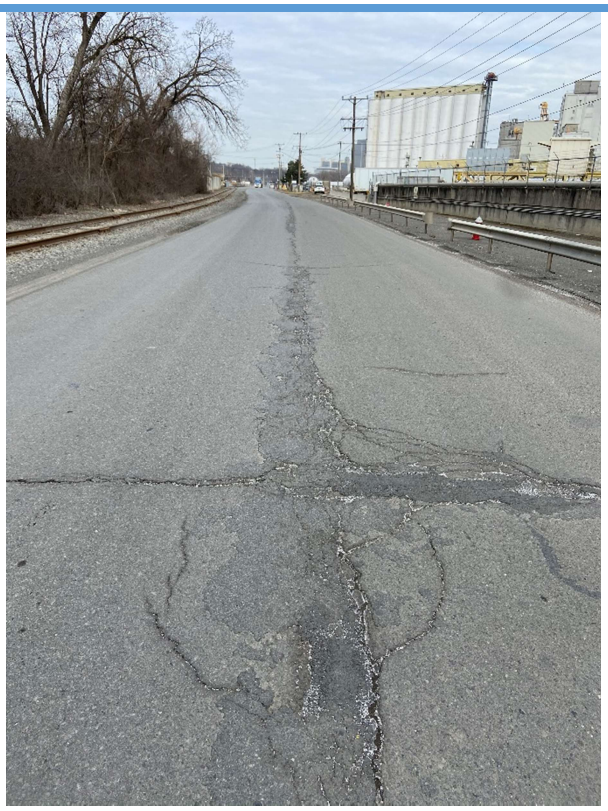


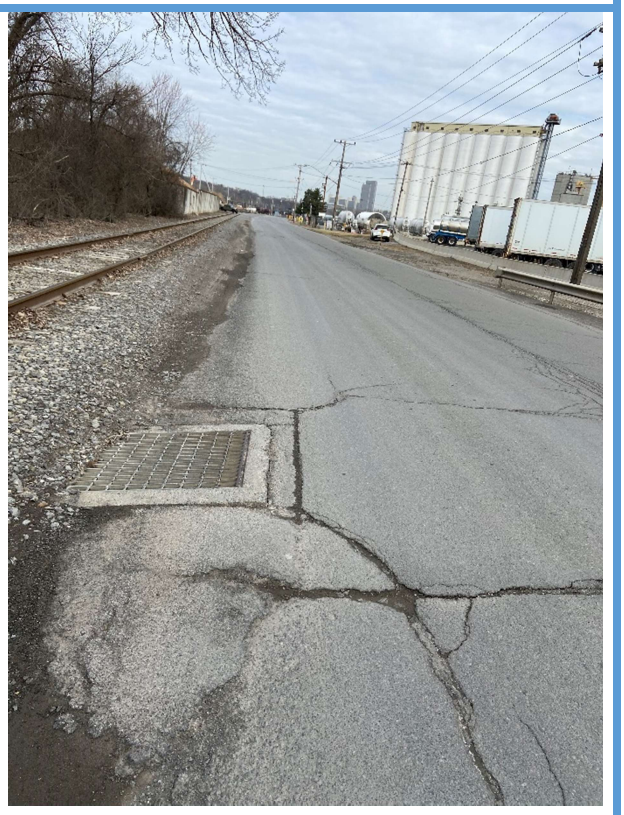
APPENDIX A

SECTION 6

APPENDIX A

SECTION 7





APPENDIX A

SECTION 8

APPENDIX A

SECTION 9

APPENDIX A

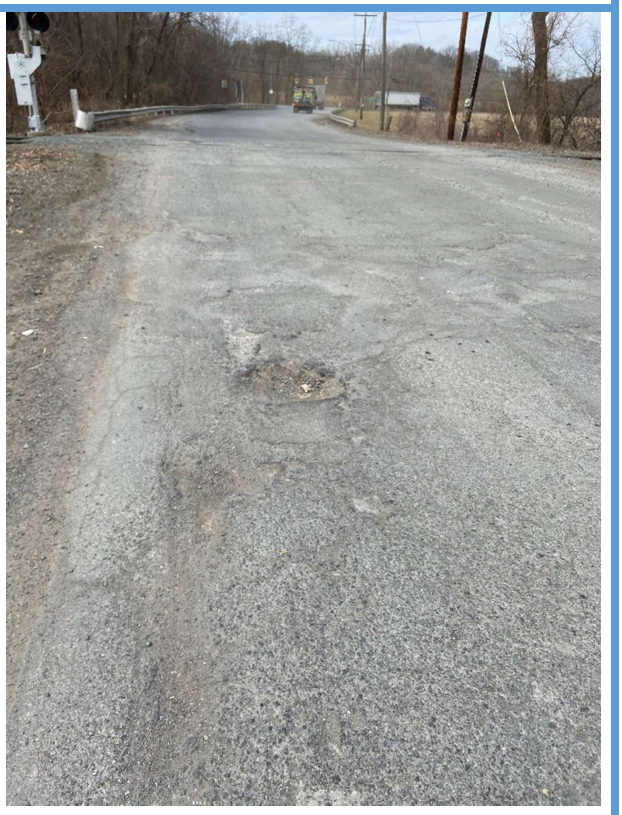
SECTION 10

APPENDIX A

SECTION 11

APPENDIX A

SECTION 12



BR-48 (6/90)

NYSDOT MATERIALS BUREAU

DISTRESS DATA FORM

Region _____ County _____ Route No. _____ PIN _____ PAVEMENT FLEXIBLE ☐

Number of Lanes _____ Survey Pertinent to _____ Lane(s) _____ Direction _____ FLEXIBLE/RIGID ☐

Date Insp. _____ Inspectors _____ Sheet _____ of _____

DISTRESS	SEVERITY		SECTION (1)	(2)	(3)	(4)	(5)	EXTENT TOTAL SUM	EXTENT TOTAL %	REMARKS
		Beginning	0	5	10	15	20			
		Ending	5	10	15	20	25			
CORRUGATIONS (%)	N	None	✓	✓	✓	✓	✓			
	P	Present	X (NONE)							
SETTLEMENTS & HEAVES (#)	N	None	✓	✓	✓	✓	✓			
	P	Present								
ASPHALT CONC. OVERLAY OR SPRAY PATCH (#)	N	None			✓	✓				
	G	Good								
	F	Fair	IIII							27'x2'/8'x2'/5'x2'/11'x3'/24'x3'
	P	Poor	III	1			1			20'x5'/25'x8'/12'x4'
WHEELPATH CRACKING %	N	None			✓		✓			
	L	Single Crack								
	M	Multiple Cracks	9	1		2				
	H	Mult. Cracks w/Potholes								
FULL WIDTH TRANSVERSE CRACKING (#)	N	None				✓				
	L	Single Crack		IIIIII	IIIII		III			
	M	Multiple Cracks	1	1		1				
	H	Mult. Cracks w/Potholes								
LONGITUDINAL CRACKING (%)	N	None								
	L	Single Crack			(NONE)					
	M	Multiple Cracks	10		9	9	10			
	H	Mult. Cracks w/Potholes		2						
EDGE CRACKING (%)	N	None								
	L	Single Crack								
	M	Multiple Cracks	7 (NONE)		4					
	H	Mult. Cracks w/Potholes		5	5	4	(NONE) 6			
CRACKING OTHER (%)	N	None								
	L	Single Crack								
	M	Multiple Cracks	10	5	(NONE) 9	9	9			
	H	Mult. Cracks w/Potholes								
SLIPPAGE CRACKS ☑	N	None	✓	✓	✓	✓	✓			
	P	Present								
RAVELLING (%)	N	None	✓		✓	✓	✓			
	P	Present	X (NONE)	1						
WHEELPATH RUTTING (MEASURE) ☑	N	None	✓	✓	✓	✓	✓			
	L	<3/8"								
	M	3/8" - 3/4"								
	H	>3/4"								
WIDENING DROPOFF (MEASURE) ☑	N	None	✓	✓	✓	✓	✓			
	L	<3/8"								
	M	3/8" - 3/4"								
	H	>3/4"								

SHOULDER SURVEY PERTINENT TO: BOTH ☐ RIGHT ☐ LEFT ☐

SHOULDER DETERIORATION ☑	N	None								
	L	Single Crack								
	M	Multiple Cracks								
	H	Mult. Cracks w/Potholes								
LANE/SHOULDER SEPARATION (MEASURE) ☑	N	None								
	L	<1/4" /Sealed								
	M	1/4" - 1"								
	H	>1"								
LANE/SHOULDER DROPOFF (MEASURE) ☑	N	None								
	L	<1"								
	M	1" - 2"								
	H	>2"								
SHOULDER DEFORMATION ☑	N	None								
	P	Present								

BR-48 (6/90)

NYSDOT MATERIALS BUREAU

DISTRESS DATA FORM

PAVEMENT

Region _____ County _____ Route No. _____ PIN _____ FLEXIBLE ☐

Number of Lanes _____ Survey Pertinent to _____ Lane(s) _____ Direction _____ FLEXIBLE/RIGID ☐

Date Insp. _____ Inspectors _____ Sheet _____ of _____

DISTRESS	SEVERITY		SECTION Beginning	(6)(1) 25	(7)(2) 30	(8)(3) 35	(9)(4) 40	(10)(5) 45	EXTENT TOTAL SUM	EXTENT TOTAL %	REMARKS
			Ending	30	35	40	45	50			
CORRUGATIONS (%)	N	None		✓	✓	✓	✓	✓			
	P	Present									
SETTLEMENTS & HEAVES (#)	N	None		✓	✓	✓	✓				
	P	Present						2			
ASPHALT CONC. OVERLAY OR SPRAY PATCH (#)	N	None									
	G	Good									
	F	Fair					1				
	P	Poor		1	1	11	1	1			
WHEELPATH CRACKING %	N	None		✓	✓	✓	✓	✓			
	L	Single Crack									
	M	Multiple Cracks									
	H	Mult. Cracks w/Potholes									
FULL WIDTH TRANSVERSE CRACKING (#)	N	None									
	L	Single Crack		1	1		1	1111 1			
	M	Multiple Cracks		1	11	1	11	1			
	H	Mult. Cracks w/Potholes			11		1	1			
LONGITUDINAL CRACKING (%)	N	None									
	L	Single Crack									
	M	Multiple Cracks		6							
	H	Mult. Cracks w/Potholes		3	10	8		10			
EDGE CRACKING (%)	N	None									
	L	Single Crack									
	M	Multiple Cracks		5			2	3			
	H	Mult. Cracks w/Potholes		5	5	6	5				
CRACKING OTHER (%)	N	None									
	L	Single Crack			3	~~NONE~~ 3	3	1			
	M	Multiple Cracks		5	1	X	1	7			
	H	Mult. Cracks w/Potholes		5				2			
SLIPPAGE CRACKS ☑	N	None		✓	✓	✓	✓	✓			
	P	Present									
RAVELLING (%)	N	None		~~NONE~~		~~NONE~~	✓	✓			
	P	Present		2	1	X 2					
WHEELPATH RUTTING (MEASURE) ☑	N	None		✓	✓	✓	✓	✓			
	L	<3/8"									
	M	3/8" - 3/4"									
	H	>3/4"									
WIDENING DROPOFF (MEASURE) ☑	N	None		✓	✓	✓	✓				
	L	<3/8"									
	M	3/8" - 3/4"									
	H	>3/4"									

SHOULDER SURVEY PERTINENT TO: BOTH ☐ RIGHT ☐ LEFT ☐

SHOULDER DETERIORATION ☑	N	None									
	L	Single Crack									
	M	Multiple Cracks									
	H	Mult. Cracks w/Potholes									
LANE/SHOULDER SEPARATION (MEASURE) ☑	N	None									
	L	<1/4" /Sealed									
	M	1/4" - 1"									
	H	>1"									
LANE/SHOULDER DROPOFF (MEASURE) ☑	N	None									
	L	<1"									
	M	1" - 2"									
	H	>2"									
SHOULDER DEFORMATION ☑	N	None									
	P	Present									

BR-48 (6/90)

NYSDOT MATERIALS BUREAU

DISTRESS DATA FORM

Region _____ County _____ Route No. _____ PIN _____ PAVEMENT FLEXIBLE ☐

Number of Lanes _____ Survey Pertinent to _____ Lane(s) _____ Direction _____ FLEXIBLE/RIGID ☐

Date Insp. _____ Inspectors _____ Sheet _____ of _____

DISTRESS		SEVERITY	SECTION (1) (11)	SECTION (2) (12)	SECTION (3)	SECTION (4)	SECTION (5)	EXTENT TOTAL SUM	EXTENT TOTAL %	REMARKS
		Beginning	50	750						
		Ending	55	↓						
CORRUGATIONS (%)	N	None	✓	✓						
	P	Present								
SETTLEMENTS & HEAVES (#)	N	None	✓	~~X~~ (NAE)						
	P	Present		1						
ASPHALT CONC. OVERLAY OR SPRAY PATCH (#)	N	None		✓						
	G	Good								
	F	Fair								
	P	Poor	1							
WHEELPATH CRACKING %	N	None	✓	✓						
	L	Single Crack								
	M	Multiple Cracks								
	H	Mult. Cracks w/Potholes								
FULL WIDTH TRANSVERSE CRACKING (#)	N	None								
	L	Single Crack								
	M	Multiple Cracks	IIII							
	H	Mult. Cracks w/Potholes	IIII	II						
LONGITUDINAL CRACKING (%)	N	None								
	L	Single Crack								
	M	Multiple Cracks		4						
	H	Mult. Cracks w/Potholes	10	4						
EDGE CRACKING (%)	N	None								
	L	Single Crack								
	M	Multiple Cracks		4						
	H	Mult. Cracks w/Potholes	10	4						
CRACKING OTHER (%)	N	None								
	L	Single Crack								
	M	Multiple Cracks		4						
	H	Mult. Cracks w/Potholes	10	1						
SLIPPAGE CRACKS ☑	N	None	✓	✓						
	P	Present								
RAVELLING (%)	N	None	✓							
	P	Present		6						
WHEELPATH RUTTING (MEASURE) ☑	N	None	✓	✓						
	L	<3/8"								
	M	3/8" - 3/4"								
	H	>3/4"								
WIDENING DROPOFF (MEASURE) ☑	N	None	✓	✓						
	L	<3/8"								
	M	3/8" - 3/4"								
	H	>3/4"								

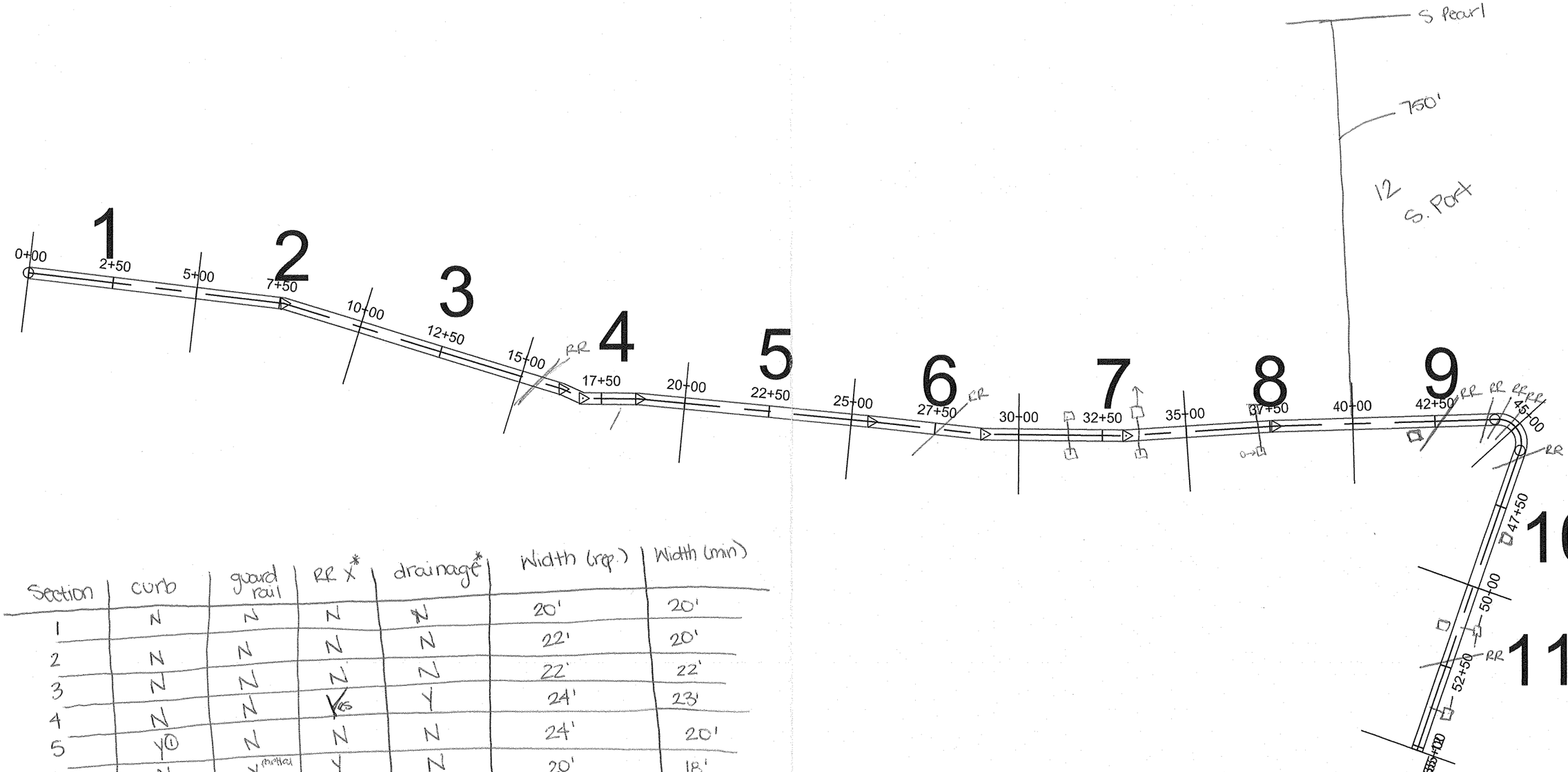
SHOULDER SURVEY PERTINENT TO: BOTH ☐ RIGHT ☐ LEFT ☐

SHOULDER DETERIORATION ☑	N	None								
	L	Single Crack								
	M	Multiple Cracks								
	H	Mult. Cracks w/Potholes								
LANE/SHOULDER SEPARATION (MEASURE) ☑	N	None								
	L	<1/4" /Sealed								
	M	1/4" - 1"								
	H	>1"								
LANE/SHOULDER DROPOFF (MEASURE) ☑	N	None								
	L	<1"								
	M	1" - 2"								
	H	>2"								
SHOULDER DEFORMATION ☑	N	None								
	P	Present								

Section		
①	G	Ø
	F	27'×2' / 8'×2' / 5'×2' / 11'×3' / 24'×3'
	P	20'×5' / 25'×8' / 12'×4'
②	G	Ø
	F	Ø
	P	25'×8'
③	G	Ø
	F	Ø
	P	Ø
④	G	Ø
	F	Ø
	P	Ø
⑤	G	Ø
	F	Ø
	P	22'×9'

Section	
⑥	G F ∅ P 29'x 4'
⑦	G ∅ F ∅ P 26'x 12'
⑧	G ∅ F ∅ P 6'x2' / 8'x4'
⑨	G ∅ F 3'x2' P 107'x11'
⑩	G ∅ F ∅ P 14'x3' / 10'x4'
⑪	G ∅ F ∅ P 19'x8'

① Not on edge of rd. in front of business (B.Term.)
② off set



N = NO
Y = YES

Section	curb	guard rail	RR X*	drainage*	Width (rep.)	Width (min)
1	N	N	N	N	20'	20'
2	N	N	N	N	22'	20'
3	N	N	N	N	22'	22'
4	N	N	Yes	Y	24'	23'
5	Y①	N	N	N	24'	20'
6	N	Y (metal)	Y	N	20'	18'
7	N	Y	N	Y	25'	24'
8	N	N	N	Y	24'	24'
9	N	N	Y	Y	28'	28'
10	N	N	Y	Y	22'	20'
11	N	Y②	Y	Y	20'	19'
12	N	Y	Y	N	24'	23'

McFarland Johnson
60 RAILROAD PLACE, SUITE 402
SARATOGA SPRINGS, NY 12866

ALBANY PORT DISTRICT COMMISSION

TOWN OF BETHLEHEM, STATE OF NEW YORK

PORT OF ALBANY EXPANSION
ALTERNATIVE DRIVEWAY CONFIGURATION

SCALE:	1"=40'
DRAWN:	TCH
CHECKED:	SMB
DESIGN:	AJF
PROJECT:	18437.00
DATE:	APRIL 2020

1

1 OF 1

N:\18437.00 PORT OF ALBANY\DRAW\DRAWINGS\SHEET FILES\18437.00-RIGHT-OUT.DWG