

1 Nassau Place

Environmental Assessment Statement

PREPARED FOR

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CEQR No. 22DCP171R
ULURP Nos. N220412RAR, N220411RAR,
N220410RAR

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City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) FULL FORM

Please fill out and submit to the appropriate agency ([see instructions](#))

Part I: GENERAL INFORMATION

PROJECT NAME 1 Nassau Place

1. Reference Numbers

CEQR REFERENCE NUMBER (to be assigned by lead agency)
22DCP171R

BSA REFERENCE NUMBER (if applicable)

ULURP REFERENCE NUMBER (if applicable)
N220412RAR, N220411RAR, N220410RAR

OTHER REFERENCE NUMBER(S) (if applicable)
(e.g., legislative intro, CAPA)

2a. Lead Agency Information

NAME OF LEAD AGENCY
NYC Department of City Planning

NAME OF LEAD AGENCY CONTACT PERSON
Stephanie Shellooe, AICP, Director, Environmental
Assessment and Review Division

ADDRESS 120 Broadway, 31st Floor

CITY New York

STATE NY

ZIP 10271

TELEPHONE (212)-720-3328

EMAIL
sshellooe@planning.nyc.gov

2b. Applicant Information

NAME OF APPLICANT
EW Direct 1 Nassau, LLC

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON
Deirdre A. Carson
Greenberg Traurig, LLP

ADDRESS One Vanderbilt Avenue

CITY New York

STATE NY

ZIP 10017

TELEPHONE (212) 801-6855

EMAIL CarsonD@gtlaw.com

3. Action Classification and Type

SEQRA Classification

☐ UNLISTED ☒ TYPE I: Specify Category (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended): (b)(6)(vi)

Action Type (refer to [CEQR Technical Manual Chapter 2](#), "Establishing the Analysis Framework" for guidance)

☒ LOCALIZED ACTION, SITE SPECIFIC ☐ LOCALIZED ACTION, SMALL AREA ☐ GENERIC ACTION

4. Project Description

The Development Site is in the Charleston neighborhood of Staten Island Community District 3 and located at 1 Nassau Place (Block 7971, Lot 125). The Applicant, EW Direct 1 Nassau, LLC, is seeking the following actions (the Proposed Actions) to facilitate the development of a one-story, 43-foot tall, approximately 332,009 gross square-foot (gsf) high-cube warehouse (Use Group 16 warehouse and distribution center) (the Proposed Development):

1. Zoning Authorization pursuant to Section 107-64 (Removal of Trees) of the NYC Zoning Resolution (ZR) to waive ZR Section 107-32 (Tree Regulations);
2. Zoning Authorization pursuant to ZR Section 107-65 (Modifications of Existing Topography) to waive ZR Section 107-312 (Areas not within Designated Open Space);
3. Zoning Authorization pursuant to ZR Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to waive ZR Section 107-472 (Maximum Size of a Group Parking Facility).

Additionally, the project may require the following approvals: Article 25 Tidal Wetlands Permit and Report from the New York State Department of Environmental Conservation (NYSDEC); NYS DEC State Pollutant Discharge Elimination System (SPDES) and Municipal Separate Storm Sewer System (MS4) construction permit from the New York City Department of Environmental Protection (NYCDEP); and NYSDEC approval of Amended Soil Management Plan, Environmental Materials Management Plan, and Remedial Action Workplan. Environmental review for this Type I project will be coordinated with NYSDEC.

The Development Site, while subject to waterfront regulations, is exempt from visual corridors and waterfront public access area requirements for zoning lots in manufacturing districts per ZR Section 62-81 (Certifications by the Chairperson of the City Planning Commission) of the zoning resolution as the Proposed Development contains predominantly Use Group 16 uses.

The approximately 332,009 gsf Proposed Development would include 60 loading docks and 175 employee parking spaces at grade. The warehouse is being designed to accommodate up to three tenants, with units of approximately

110,730 gsf, 128,550 gsf, and 92,420 gsf, respectively. Loading docks are proposed on the north side of the warehouse, facing Mill Creek. A total of 52,665 sf is allocated for parking, including: 31,618 sf on the Development Site's south side, 1,832 sf on the northwest side and 19,215 sf on the east side. Two curb cuts would be located on Nassau Place and a third, an exit-only driveway, would be located on Arthur Kill Road, near the northern limits of the site.

Finally, the following transportation improvements are proposed as Project Components Related to the Environment (PCREs) in order to facilitate traffic flow to and from the Development Site:

1. The southbound Arthur Kill Road approach would be restriped to provide a left turn lane at the intersection of Nassau Place.
2. The project would reconstruct the sidewalks along the Development Site's Arthur Road and Nassau Place frontages and provide a pedestrian ramp (that would be ADA compliant) at the northeast corner of the intersection of Arthur Kill Road and Nassau Place.

Project Location

BOROUGH Staten Island COMMUNITY DISTRICT(S) 3 STREET ADDRESS 1 Nassau Place

TAX BLOCK(S) AND LOT(S) Block 7971, Lot 125 ZIP CODE 10307

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS

The Development Site is bounded by Arthur Kill Road to the west, Page Avenue to the east, Nassau Place to the southwest, the Staten Island Rapid Transit (SIRT) right-of-way to the southeast and Mill Creek to the north. Access to the site is available through an existing curb cut fronting Nassau Place. Just west of Arthur Kill Road is the Arthur Kill, which separates Staten Island from New Jersey.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M3-1;
Special South Richmond Development District

ZONING SECTIONAL MAP NUMBER 32d

5. Required Actions or Approvals (check all that apply)

City Planning Commission: ☒ YES ☐ NO ☐ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)

- | | | |
|---|--|--|
| ☐ CITY MAP AMENDMENT | ☐ ZONING CERTIFICATION | ☐ CONCESSION |
| ☐ ZONING MAP AMENDMENT | ☒ ZONING AUTHORIZATION | ☐ UDAAP |
| ☐ ZONING TEXT AMENDMENT | ☐ ACQUISITION—REAL PROPERTY | ☐ REVOCABLE CONSENT |
| ☐ SITE SELECTION—PUBLIC FACILITY | ☐ DISPOSITION—REAL PROPERTY | ☐ FRANCHISE |
| ☐ HOUSING PLAN & PROJECT | ☐ OTHER, explain: | |
| ☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE: | | |

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

ZR Section 107-64 (Removal of Trees) to Waive ZR Section 107-32 (Tree Regulations); ZR Section 107-65 (Modification of Existing Topography) to Waive ZR Section 107-312 (Areas not within Designated Open Space); ZR Section 107-68: (Modification of Group Parking Facility and Access Regulations) to waive ZR Section 107-472 (Maximum Size of a Group Parking Facility)

Board of Standards and Appeals: ☐ YES ☒ NO

- ☐ VARIANCE (use)
- ☐ VARIANCE (bulk)
- ☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

Department of Environmental Protection: ☒ YES ☐ NO ☐ Cogeneration Facility ☐ Title V Permit

Other City Approvals Subject to CEQR (check all that apply)

- | | |
|--|--|
| ☐ LEGISLATION | ☐ FUNDING OF CONSTRUCTION, specify: |
| ☐ RULEMAKING | ☐ POLICY OR PLAN, specify: |
| ☐ CONSTRUCTION OF PUBLIC FACILITIES | ☐ FUNDING OF PROGRAMS, specify: |
| ☐ 384(b)(4) APPROVAL | ☒ PERMITS, specify: See "Project Description" attachment |
| ☐ OTHER, explain: | |

Other City Approvals Not Subject to CEQR (check all that apply)

- | | |
|---|--|
| ☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) | ☐ LANDMARKS PRESERVATION COMMISSION APPROVAL |
| | ☒ OTHER, explain: See "Project Description" attachment |

State or Federal Actions/Approvals/Funding: ☒ YES ☐ NO If "yes," specify: Article 25 Tidal Wetlands Permit and Report from NYSDEC; NYSDEC SPDES and MS4 construction permit from the NYCDEP; and NYSDEC approval of Amended Soil Management Plan, Environmental Materials Management Plan, and Remedial Action Workplan.		
6. Site Description: <i>The directly affected area consists of the project site and the area subject to any change in regulatory controls. Except where otherwise indicated, provide the following information with regard to the directly affected area.</i> Graphics: <i>The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11 x 17 inches in size and, for paper filings, must be folded to 8.5 x 11 inches.</i>		
☒ SITE LOCATION MAP ☒ TAX MAP ☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP	☒ ZONING MAP ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)	☒ SANBORN OR OTHER LAND USE MAP
Physical Setting (both developed and undeveloped areas) Total directly affected area (sq. ft.): 785,439 Waterbody area (sq. ft.) and type: ~196,339 Roads, buildings, and other paved surfaces (sq. ft.): ~589,100 Other, describe (sq. ft.): N/A		
7. Physical Dimensions and Scale of Project (if the project affects multiple sites, provide the total development facilitated by the action) SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 332,009 NUMBER OF BUILDINGS: 1 GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 332,009 HEIGHT OF EACH BUILDING (ft.): 43 NUMBER OF STORIES OF EACH BUILDING: 1		
Does the proposed project involve changes in zoning on one or more sites? ☐ YES ☒ NO If "yes," specify: The total square feet owned or controlled by the applicant: The total square feet not owned or controlled by the applicant:		
Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO If "yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known): AREA OF TEMPORARY DISTURBANCE: 332,009 sq. ft. (width x length) VOLUME OF DISTURBANCE: (cut and fill) ~65,210 cubic ft. (width x length x depth) AREA OF PERMANENT DISTURBANCE: 332,009 sq. ft. (width x length)		
8. Analysis Year CEQR Technical Manual Chapter 2		
ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2024		
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18 months		
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY? N/A		
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Construction will begin in 2022 and will be complete in 2024. Construction will consist of a single approximately 18-month phase.		
9. Predominant Land Use in the Vicinity of the Project (check all that apply) ☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☒ PARK/FOREST/OPEN SPACE ☐ OTHER, specify:		

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type of residential structures				
No. of dwelling units				
No. of low- to moderate-income units				
Gross floor area (sq. ft.)				
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type (retail, office, other)				
Gross floor area (sq. ft.)				
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type of use			Warehouse/distribution center	
Gross floor area (sq. ft.)			332,009	332,009
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
PARKING				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Attended or non-attended				
Lots	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	0	0	0	
No. of accessory spaces	~2,000	~2,000	175	-1,825
Operating hours	On demand vehicle storage for auto dealership	On demand vehicle storage for auto dealership		
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
POPULATION				
Residents	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
If "yes," specify number:				
Briefly explain how the number of residents was calculated:	N/A			
Businesses	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	1-vehicle storage for auto dealership	1-vehicle storage for auto dealership	Up to 3 warehouse/distribution businesses (the number and types of tenants/types of businesses are TBD)	Up to 2
No. and type of workers by business	1	1	166	165
No. and type of non-residents who are not workers	N/A	N/A	Delivery vehicle operators	
Briefly explain how the number of businesses was calculated:	1 worker per 2,000 gsf of warehouse space per the "Made in New York (MiNY) Bush Terminal South Campus EAS".			
Other (students, visitors, concert-goers, etc.)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If any, specify type and number:				
Briefly explain how the number was calculated:	N/A			
ZONING				
Zoning classification	M3-1	M3-1	M3-1	
Maximum amount of floor area that can be developed	1,592,000	1,592,000	1,592,000	0
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Vacant Land, Residential, Commercial, Park M3-1, M1-1, R3A, R3X	Vacant Land, Residential, Commercial, Park M3-1, M1-1, R3A, R3X	Vacant Land, Residential, Commercial, Park M3-1, M1-1, R3A, R3X	
Attach any additional information that may be needed to describe the project.				
If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

INSTRUCTIONS: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the CEQR Technical Manual. Check each box that applies.

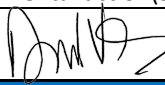
- If the proposed project can be demonstrated not to meet or exceed the threshold, check the "no" box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the "yes" box.
- For each "yes" response, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Full EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
1. LAND USE, ZONING, AND PUBLIC POLICY: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☐	☒
(c) Is there the potential to affect an applicable public policy?	☒	☐
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. See Section 2 of EAS		
(e) Is the project a large, publicly sponsored project?	☐	☒
o If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries ?	☒	☐
o If "yes," complete the Consistency Assessment Form . See Appendix A		
2. SOCIOECONOMIC CONDITIONS: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of more than 200 residential units or 200,000 square feet of commercial space?	☐	☒
▪ If "yes," answer both questions 2(b)(ii) and 2(b)(iv) below.		
o Directly displace 500 or more residents?	☐	☒
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
o Directly displace more than 100 employees?	☐	☒
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
o Affect conditions in a specific industry?	☐	☒
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
o If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	☐	☐
o If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	☐	☐
ii. Indirect Residential Displacement		
o Would expected average incomes of the new population exceed the average incomes of study area populations?	☐	☐
o If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	☐	☐
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	☐	☐
o If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	☐	☐
iii. Direct Business Displacement		
o Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	☐	☐
o Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve,	☐	☐

	YES	NO
enhance, or otherwise protect it?		
iv. Indirect Business Displacement		
o Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☐
o Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☐
v. Effects on Industry		
o Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☐
o Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	☐	☐
3. COMMUNITY FACILITIES: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. Early Childhood Programs		
o Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
o If "yes," would the project result in a collective utilization rate of the Early Childhood Programs in the study area that is greater than 100 percent?	☐	☐
o If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Public Schools		
o Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
o If "yes," would the project result in a utilization rate of the elementary or middle schools that is equal to or greater than 100 percent?	☐	☐
o If "yes," would the project generate 100 or more elementary or middle school students past the 100% utilization rate?	☐	☐
o If "yes," would the project result in a utilization rate of the high schools that is equal to or greater than 100 percent?	☐	☐
o If "yes," would the project increase the high school utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iii. Libraries		
o Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
o If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
o If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iv. Health Care Facilities		
o Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
o If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
o Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
o If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. OPEN SPACE: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) Would the project generate more than 200 additional residents or 500 additional employees?	☐	☒
5. SHADOWS: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☐	☒
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See Section 3 of EAS		

	YES	NO
6. HISTORIC AND CULTURAL RESOURCES: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☐	☒
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Appendix B for LPC Response Letter		
7. URBAN DESIGN AND VISUAL RESOURCES: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☐	☒
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10 .		
8. NATURAL RESOURCES: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11 ?	☒	☐
o If "yes," list the resources and attach supporting information on whether the project would affect any of these resources. See Section 4 of the EAS		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed ?	☐	☒
o If "yes," complete the Jamaica Bay Watershed Protection Plan Project Tracking Form and submit according to its instructions .		
9. HAZARDOUS MATERIALS: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☐	☒
(c) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☒	☐
(d) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in the Hazardous Materials Appendix (including nonconforming uses)?	☒	☐
(e) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(f) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (e.g., gas stations, oil storage facilities, heating oil storage)?	☒	☐
(g) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(h) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☒	☐
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Section 5 of the EAS		
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? No-the remedy has been implemented.	☐	☒
10. WATER AND SEWER INFRASTRUCTURE: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area , would it result in the same or greater development than that listed in Table 13-1 in Chapter 13 ?	☐	☒
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☒	☐
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas , including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒

	YES	NO
(f) Would the proposed project be located in an area that is partially sewerer or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☒	☐
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation. See Section 6 of EAS		
11. SOLID WASTE AND SANITATION SERVICES: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14 , the project's projected operational solid waste generation is estimated to be (pounds per week): 288		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
o If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
12. ENERGY: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15 , the project's projected energy use is estimated to be (annual BTUs): 71,813,547		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. TRANSPORTATION: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16 ?	☒	☐
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? <i>**It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.</i>	☒	☐
o Would the proposed project result in more than 200 subway/rail, bus trips, or 50 Citywide Ferry Service ferry trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☐
o Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, bus stop, or Citywide Ferry Service landing?	☐	☐
14. AIR QUALITY: CEQR Technical Manual Chapter 17		
(a) <i>Mobile Sources:</i> Would the proposed project result in the conditions outlined in Section 210 in Chapter 17 ?	☒	☐
(b) <i>Stationary Sources:</i> Would the proposed project result in the conditions outlined in Section 220 in Chapter 17 ?	☒	☐
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17 ? (Attach graph as needed)	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Section 8 of EAS		
15. GREENHOUSE GAS EMISSIONS: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☐	☒
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18 ?	☐	☒
o If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008 ; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☒
16. NOISE: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 114 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed	☐	☒

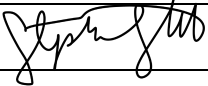
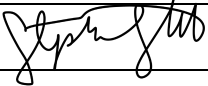
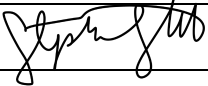
	YES	NO
rail line with a direct line of sight to that rail line?		
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Section 9 of EAS		
17. PUBLIC HEALTH: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20 , "Public Health." Attach a preliminary analysis, if necessary. See EAS Part II: Supplemental Analyses		
18. NEIGHBORHOOD CHARACTER: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21 , "Neighborhood Character." Attach a preliminary analysis, if necessary. See EAS Part II: Supplemental Analyses		
19. CONSTRUCTION: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☐	☒
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc.)?	☐	☒
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
o The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☐	☒
o Disturbance of a site containing or adjacent to a site containing natural resources?	☒	☐
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22 , "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See EAS Part II: Supplemental Analyses		
20. APPLICANT'S CERTIFICATION		
I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.		
Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.		
APPLICANT/REPRESENTATIVE NAME David Velez, AICP	SIGNATURE 	DATE 9/15/2022
PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.		

Part III: DETERMINATION OF SIGNIFICANCE (To Be Completed by Lead Agency)

INSTRUCTIONS: In completing Part III, the lead agency should consult 6 NYCRR 617.7 and 43 RCNY § 6-06 (Executive Order 91 or 1977, as amended), which contain the State and City criteria for determining significance.

1. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude.

**Potentially
Significant
Adverse Impact**

IMPACT CATEGORY	YES	NO						
Land Use, Zoning, and Public Policy	☐	☒						
Socioeconomic Conditions	☐	☒						
Community Facilities and Services	☐	☒						
Open Space	☐	☒						
Shadows	☐	☒						
Historic and Cultural Resources	☐	☒						
Urban Design/Visual Resources	☐	☒						
Natural Resources	☐	☒						
Hazardous Materials	☐	☒						
Water and Sewer Infrastructure	☐	☒						
Solid Waste and Sanitation Services	☐	☒						
Energy	☐	☒						
Transportation	☐	☒						
Air Quality	☐	☒						
Greenhouse Gas Emissions	☐	☒						
Noise	☐	☒						
Public Health	☐	☒						
Neighborhood Character	☐	☒						
Construction	☐	☒						
2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.	☐	☒						
3. Check determination to be issued by the lead agency: ☐ Positive Declaration: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a <i>Positive Declaration</i> and prepares a draft Scope of Work for the Environmental Impact Statement (EIS). ☐ Conditional Negative Declaration: A <i>Conditional Negative Declaration</i> (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617. ☒ Negative Declaration: If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a <i>Negative Declaration</i>. The <i>Negative Declaration</i> may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.								
4. LEAD AGENCY'S CERTIFICATION <table border="1"> <tbody> <tr> <td>TITLE Director, Environmental Assessment and Review Division</td> <td>LEAD AGENCY Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st FL. New York, NY 10271 212.720.3328</td> </tr> <tr> <td>NAME Stephanie Shellooe</td> <td>DATE September 16th, 2022</td> </tr> <tr> <td colspan="2">SIGNATURE </td> </tr> </tbody> </table>			TITLE Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31 st FL. New York, NY 10271 212.720.3328	NAME Stephanie Shellooe	DATE September 16 th , 2022	SIGNATURE 	
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NAME Stephanie Shellooe	DATE September 16 th , 2022							
SIGNATURE 								

NEGATIVE DECLARATION**Statement of No Significant Effect**

Pursuant to Executive Order 91 of 1977, as amended, and the Rules of Procedure for City Environmental Quality Review, found at Title 62, Chapter 5 of the Rules of the City of New York and 6 NYCRR, Part 617, State Environmental Quality Review, the Department of City Planning acting on behalf of the City Planning Commission assumed the role of lead agency for the environmental review of the proposed actions. Based on a review of information about the project contained in this environmental assessment statement (EAS) and any attachments hereto, which are incorporated by reference herein, the lead agency has determined that the proposed actions would not have a significant adverse impact on the environment.

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would not have a significant adverse impact on the environment. Reasons supporting this determination are noted below.

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The Applicant, EW Direct 1 Nassau Place, LLC, is seeking a Zoning Authorization pursuant to Section 107-64 (Removal of Trees) of the NYC Zoning Resolution (ZR) to waive ZR Section 107-32 (Tree Regulations), a Zoning Authorization pursuant to ZR Section 107-65 (Modifications of Existing Topography) to waive ZR Section 107-312 (Areas not within Designated Open Space), and a Zoning Authorization pursuant to ZR Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to waive ZR Section 107-472 (Maximum Size of a Group Parking Facility)(collectively, the "Proposed Actions"). The Proposed Actions would facilitate the development of one-story, 43-foot tall, approximately 332,009 gross square-foot (gsf) high cube warehouse (Use Group 16 warehouse and distribution center) (the Proposed Development) containing 60 loading docks and 177 employee parking spaces at grade at 1 Nassau Place (Block 7971, Lot 125) (The "Development Site"). The Development Site is currently used for vehicle storage in an open vehicle storage lot. The Proposed Actions are limited to the development Site and would not result in zoning changes to the surrounding area. The analysis finds that the Proposed Actions would not result in significant adverse impact on land use, zoning, or public policy. The Development Site is located within the Coastal Zone Boundary, and the Proposed Actions would be consistent with the policies set forth in the New York City Waterfront Revitalization Program (WRP#21-200).

Natural Resources

An analysis of natural resources is included in the EAS. The Development Site is generally bounded by two natural resources: Arthur Kill to the west and Mill Creek to the north. The Development Site also contains tidal wetlands and adjacent area regulated by NYSDEC as well as federally classified wetland areas. The EAS includes analysis on Habitats/Vegetation/Wildlife, Rare/Protected Species and communities, and Wetlands Stormwater and Surface Waters. The Proposed Development would avoid impacts to sensitive areas, such as Mill Creek and adjacent wetland which would remain undeveloped and continue provide habitat for wildlife use. The design of the Proposed Development would allow for at least a 30-foot setback from the tidal wetland along Mill Creek, which would be partially stabilized with a revetment slope. The revetments consist of earthen embankments with erosion protection which is a preventative measure to protect the wetlands and Mill Creek. Additionally, the Development Site has implemented all appropriate stormwater management as part of the site design to avoid the potential for adverse impacts to water quality of Mill Creek and downstream waters. As such, the Proposed Actions would not result in significant adverse impacts on natural resources.

Transportation

A detailed analysis related to transportation (traffic) is included in the EAS. The analysis determined that the proposed actions would not result in significant adverse traffic impacts with the implementation of the proposed transportation improvements as Project Components Related to the Environment (PCREs), including re-striping the southbound Arthur Kill Road approach to provide a left turn lane at the intersection of Nassau Place, and reconstruction of the sidewalks along the Development Site's Arthur Kill Road and Nassau Place frontages and providing an ADA complaint pedestrian ramp at the northeast corner of the intersection of Arthur Kill Road and Nassau Place. The Applicant will enter a Restrictive Declaration, to be recorded against the Development Site in association with the proposed actions, codifying these PCREs. In addition, modifications of signal timing at the intersection of Arthur Kill Road and Richmond Valley Road would be implemented by the NYC Department of Transportation (DOT). Therefore, with the PCREs in place, the proposed actions would not result in significant adverse impacts on transportation.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Yuning Feng at yfeng@planning.nyc.gov.

TITLE Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31 st Fl. New York, NY 10271 212.720.3328
NAME Stephanie Shellooe	DATE September 16, 2022
SIGNATURE 	

EAS Figures

Figure 1 Project Area Map

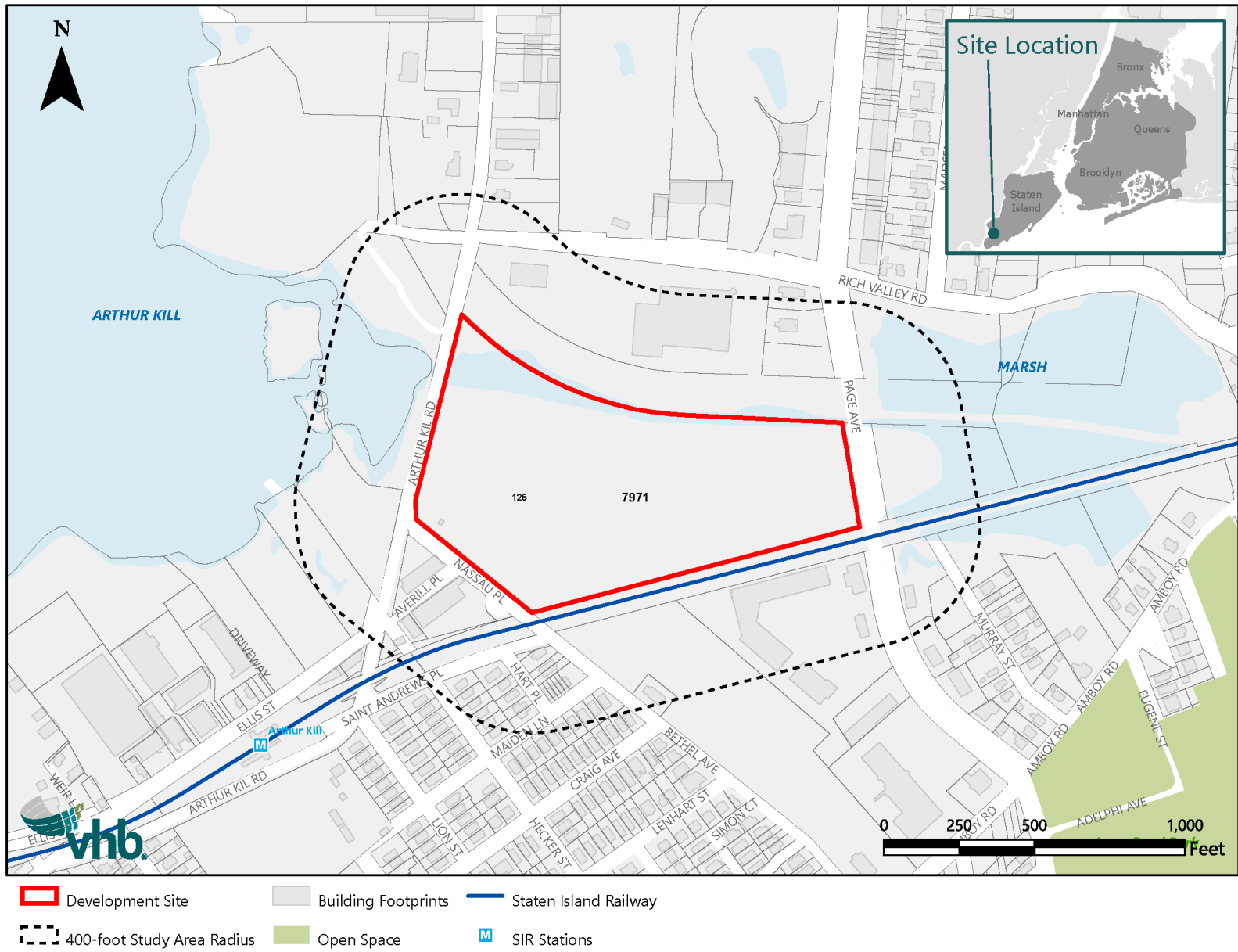


Figure 2 Tax Map

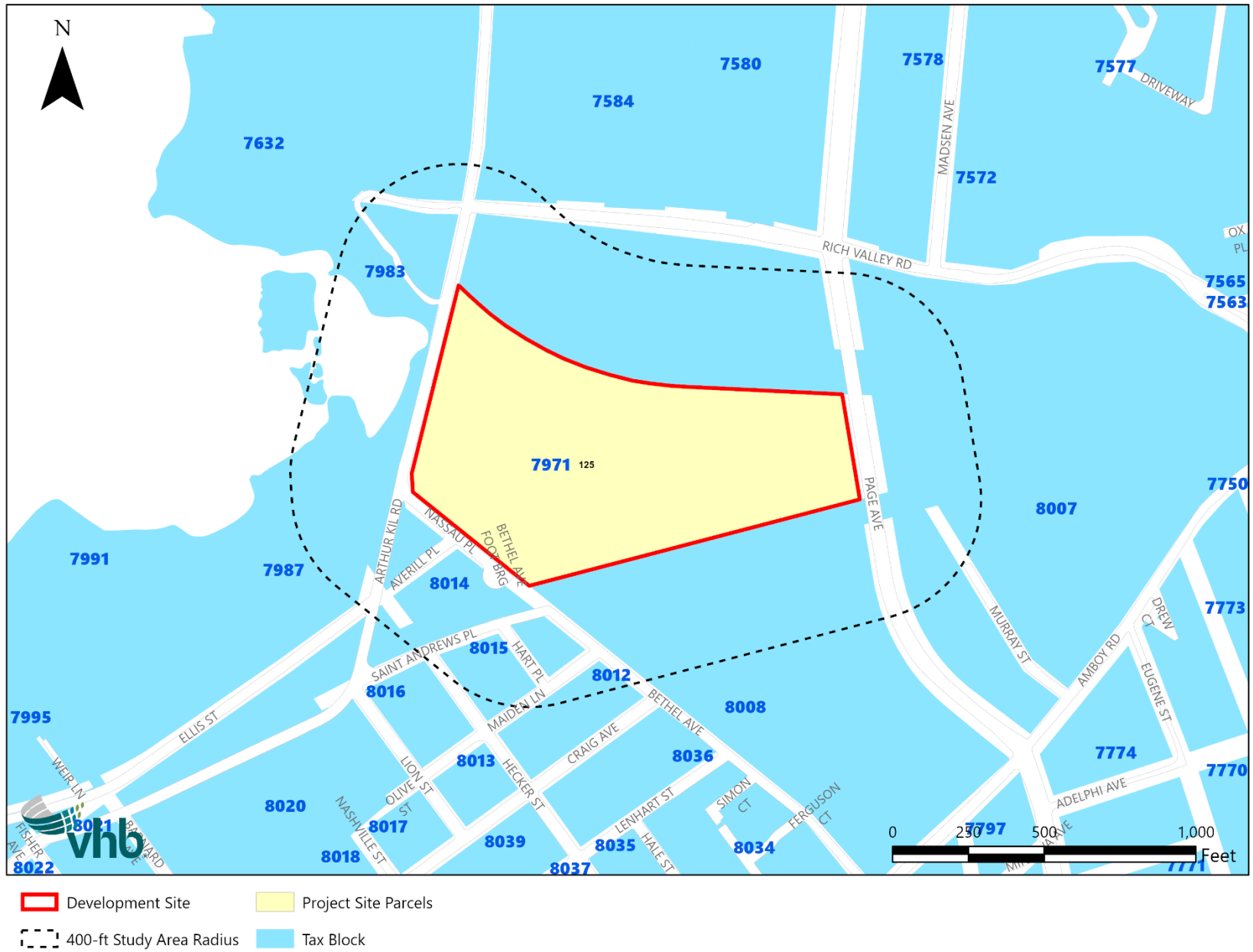


Figure 3 Existing Zoning Map



Figure 4 Land Use Map

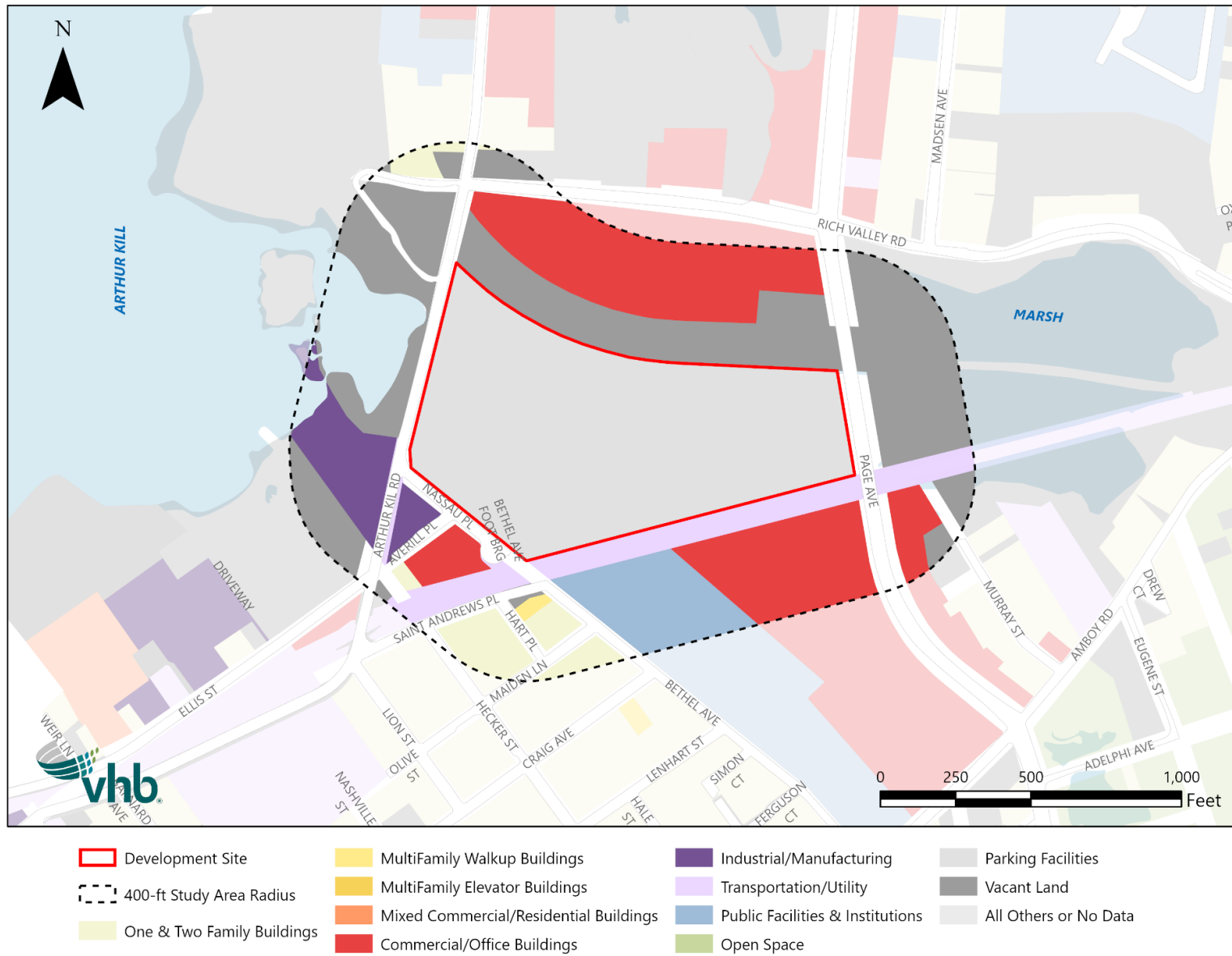


Figure 5 Photo Key



Photo 1 Nassau Place and Averill Place Looking Southeast



Photo 2 Nassau Place and Averill Place Looking North



4/17/20

Photo 3 Arthur Kill Road and Nassau Place Looking East



4/17/20

Photo 4 Arthur Kill Road North of Nassau Place Looking North



4/17/20

4/17/20

Photo 5 Arthur Kill Road and Richmond Valley Road Looking South



Photo 6 View South from Parking Lot on Richmond Valley Road between Arthur Kill Road and Page Avenue



4/17/20

Photo 7 View South from Parking Lot on Richmond Valley Road between Arthur Kill Road and Page Avenue



4/17/20

Photo 8 Page Avenue and Richmond Valley Road Looking South



4/17/20

4/17/20



Part I: Project Description

This section provides descriptive information about the requested discretionary land use action(s) and the development project that could be facilitated by the requested actions. The purpose of this section is to convey project information relevant to the environmental review.

Introduction

The Applicant, EW Direct 1 Nassau, LLC, is seeking the following actions (the Proposed Actions) to facilitate the development of a one-story, 43-foot-tall, approximately 332,009-gross-square-foot (gsf) (331,309 zoning square feet (zsf)) high cube warehouse¹ (Use Group 16 warehouse and distribution center) (the Proposed Development):

1. Zoning Authorization pursuant to Section 107-64 of the NYC Zoning Resolution (ZR) (Removal of Trees) to waive ZR Section 107-32 (Tree Regulations);
2. Zoning Authorization pursuant to ZR Section 107-65 (Modifications of Existing Topography) to waive ZR Section 107-312 (Areas not within Designated Open Space);
3. Zoning Authorization pursuant to ZR Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to waive ZR Section 107-472 (Maximum Size of a Group Parking Facility).

Additionally, the project may require the following approvals: Article 25 Tidal Wetlands Permit and Report from the New York State Department of Environmental Conservation (NYSDEC); NYSDEC State Pollutant Discharge Elimination System (SPDES) and Municipal Separate Storm Sewer System (MS4) construction permit from the New York City Department of Environmental Protection (NYCDEP); and NYSDEC approval of Amended Soil Management Plan, Environmental Materials Management Plan, and Remedial Action Workplan. The NYSDEC wetlands permit is a discretionary action that is pending CEQR approval.

The project is classified as a Type I Action pursuant to the Official Compilation of Codes, Rules, and Regulations of the State of New York, Title 6 Department of Environmental Conservation Chapter VI, General Regulations Part 617 of the State Environmental Quality Review (6 CRR-NY 617.4). Environmental review for this project will be coordinated with NYSDEC.

¹ High-cube warehouse or distribution centers are primarily for the storage and/or consolidation of manufactured goods prior to their distribution to retail locations or other warehouses.

The Development Site (Staten Island Block 7971, Lot 125), while subject to waterfront regulations, is exempt from visual corridors and waterfront public access area requirements for zoning lots in manufacturing districts per ZR Section 62-81 (Certifications by the Chairperson of the City Planning Commission) because the Proposed Development contains predominantly Use Group 16 uses.

The proposed 332,009 gsf (including an enclosed stair shaft of approximately 242 gsf on the roof per New York City Building code requirements) high cube warehouse would include 60 loading docks and 175 employee parking spaces at grade. A total of 52,665 sf of lot area is allocated for parking spaces; 31,618 sf on the Development Site's south side, 1,832 sf on the northwest side and 19,215 sf on the east side. The proposed new building would be one-story and 43-feet tall. The warehouse is being designed to accommodate up to three tenants, with units having areas of 110,730 gsf, 128,550 gsf, and 92,420 gsf, respectively. Loading docks would be located on the north side of the warehouse facing Mill Creek. Two curb cuts would be located on Nassau Place and a third, an exit only driveway, would be located on Arthur Kill Road, near the northern limits of the site.

The Proposed Development, a high-cube warehouse, would be used for the storage and/or consolidation of manufactured goods prior to their distribution to retail locations or other warehouses. In other words, the goods received and distributed from the facility would move in bulk from business to business, rather than as individually packaged products from businesses to individual consumers. The facility would not serve as either a regional or local freight forwarder for time sensitive shipments via air freight or ground carriers, nor would it provide truck maintenance, washing or fueling facilities. Further, the parking capacity provided for the site would not support the parking demand that would be required for a last-mile distribution facility.

Project Area and Development Site

The Development Site is in the Charleston neighborhood of Staten Island Community District 3 and located at 1 Nassau Place (Block 7971, Lot 125). It is located on a block bounded by Arthur Kill Road to the west, Page Avenue to the east, Nassau Place to the southwest, the Staten Island Railway (SIR) right-of-way to the southeast and Mill Creek to the north. Existing access to the site is through an existing curb cut fronting Nassau Place. Just west of Arthur Kill Road is the Arthur Kill, which separates Staten Island from New Jersey. The Development Site contains 785,439 sf of lot area in an irregular shape. As described in **Section 5, Water and Sewer Infrastructure**, a 70-foot-wide sewer easement runs along the northern portion of the Development Site, outside the area to be developed. The Development Site is currently leased for use as vehicle storage for approximately 2,000 vehicles associated with a car dealership (see **Figure I-1**).

Block 7971, Lot 125 was the former location of the Nassau Smelting and Refinery and was purchased by Lucent Technologies in 1996. Lucent Technologies coordinated with the NYSDEC to conduct environmental cleanup of this site in 2006. The Development Site was enrolled in the NYS Voluntary Cleanup Plan (VCP), a predecessor to the current NYS Brownfield Cleanup Program (BCP). It has completed its NYSDEC-supervised cleanup under the VCP and remains subject to a Site Management Plan (SMP) authorized and approved by

NYSDEC. The SMP requires, among other things, that the owner maintain an impermeable cap over a significant portion of the Development Site, consisting of either a constructed building, building slab, Geosynthetic Clay Liner (Soil-GCL Cap), or asphalt cap. Pursuant to the SMP the cap cannot be disturbed without NYSDEC approval.

The Development Site is located within an M3-1 zoning district and is in the Special South Richmond Development District (Special District). The M3-1 zoning district where the Development Site is located was mapped in 1961. There are no other recent actions affecting the Development Site.

The Special District was established in 1975 to guide the development of the southern part of Staten Island and manage growth in the area, ensuring that the provision of public infrastructure kept pace with new development and that natural resources were protected. The district mandates tree preservation and planting requirements, controls to changes in topography, and establishes special building height and setback limits. Nearby rezonings to the south and west include the Tottenville Rezoning (C 050014 ZMR, effective 7/27/05) and the Pleasant Plains Rezoning (C 970453 ZMR, effective 9/25/02).

Zoning districts mapped to the north of the Development Site include M1-1 and R3X zones. South of the Development Site, across the SIR right-of-way, M3-1, R3X, R3A and M1-1 zoning districts are mapped. The M3-1 district covers the areas to the west and east of the Development Site within 400 feet.

In the 1970s and 1980s, the Department of City Planning (DCP) established three special districts affecting portions of Staten Island (Special Natural Area District (SNAD) in Staten Island and the Bronx and Special Hillside Preservation District and Special South Richmond Development District in Staten Island). These districts encompass more than half of Staten Island, including the Development Site. The special districts intend to ensure that neighborhood development and preservation of environmentally sensitive resources are balanced. Over the past four decades, the rules have resulted in treelined streets, preservation of local wetlands (the Bluebelt Program), and forested parks. However, DCP recently considered modifications to these districts because the current system allows a property owner to remove or modify natural features through a site-by-site review by the City Planning Commission without considering their relationship to the larger ecological context. Additionally, the policies were seen by some as taking a one-size fits all approach for parcels of all sizes, land uses or types of natural feature. Over time, this has resulted in inconsistent application of the rules and created unnecessary cost and time burden, especially for small homeowners. In 2019, DCP proposed a text amendment (Staten Island/Bronx Special Districts Text Amendment (C 190429 ZMR)) that would codify best practices, streamline the special districts' rules to reflect updated environmental science and take a more holistic approach to natural resource preservation with clear development standards resulting in better and more predictable outcomes. After receiving input from the Staten Island community, advocacy groups and elected officials requesting further engagement, the application, C 190429 ZMR, was withdrawn on June 10, 2019. In December 2020, DCP began environmental scoping for a new set of actions, including a zoning text amendment to the Special District regulations, that would lift many of the burdens placed on homeowners and owners of small parcels, while maintaining site plan review and approval for many actions on sites larger than one acre.

There is one capital project led by New York City Department of Design and Construction (DDC), on behalf of New York City Department of Transportation, to reconstruct Richmond Valley Road between Arthur Kill Road on the west and Page Avenue on the east. The planned project will improve this corridor with a resurfaced roadway, a bike lane, completed sidewalks to enhance pedestrian safety, and landscaping. In addition, the planned project also requires the acquisition of land within private lots that extends into the mapped street right of way. Construction of the proposed project is anticipated to start in 2022 and be completed in 2024.

As described in more detail in **Section 3, Natural Resources**, the Development Site contains tidal wetlands and adjacent area regulated by NYSDEC. The Development Site also contains federally classified wetland areas. The topography slopes downward toward Mill Creek to the north property line with a grade change of approximately 16 feet. The site is located within Flood Zones AE and X.

The Development Site is also in MS4 Area, which is used to manage storm water. MS4 construction permits may be required because construction will require soil stockpiling, management and contour changes.

Figure I-1 Site Location Map

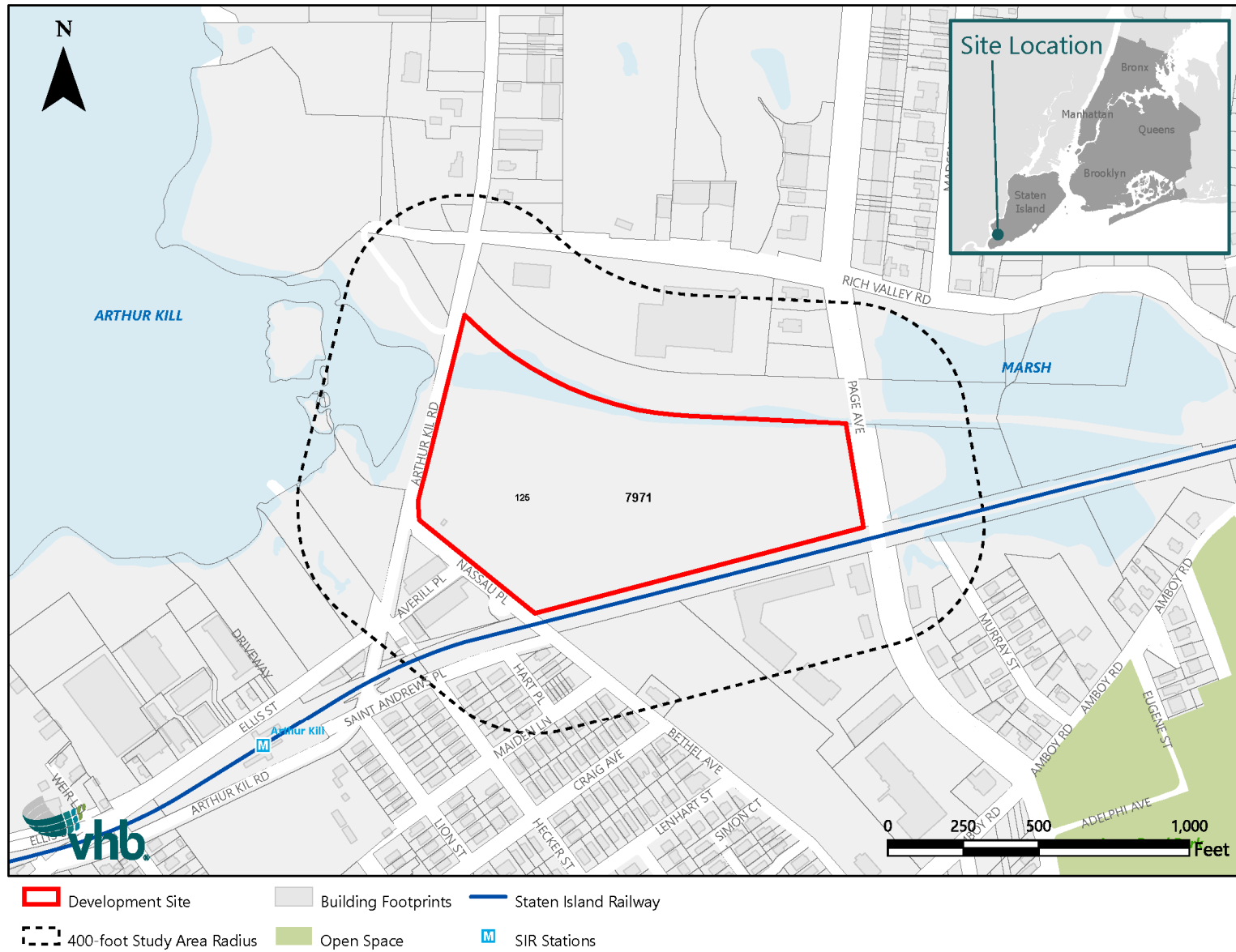
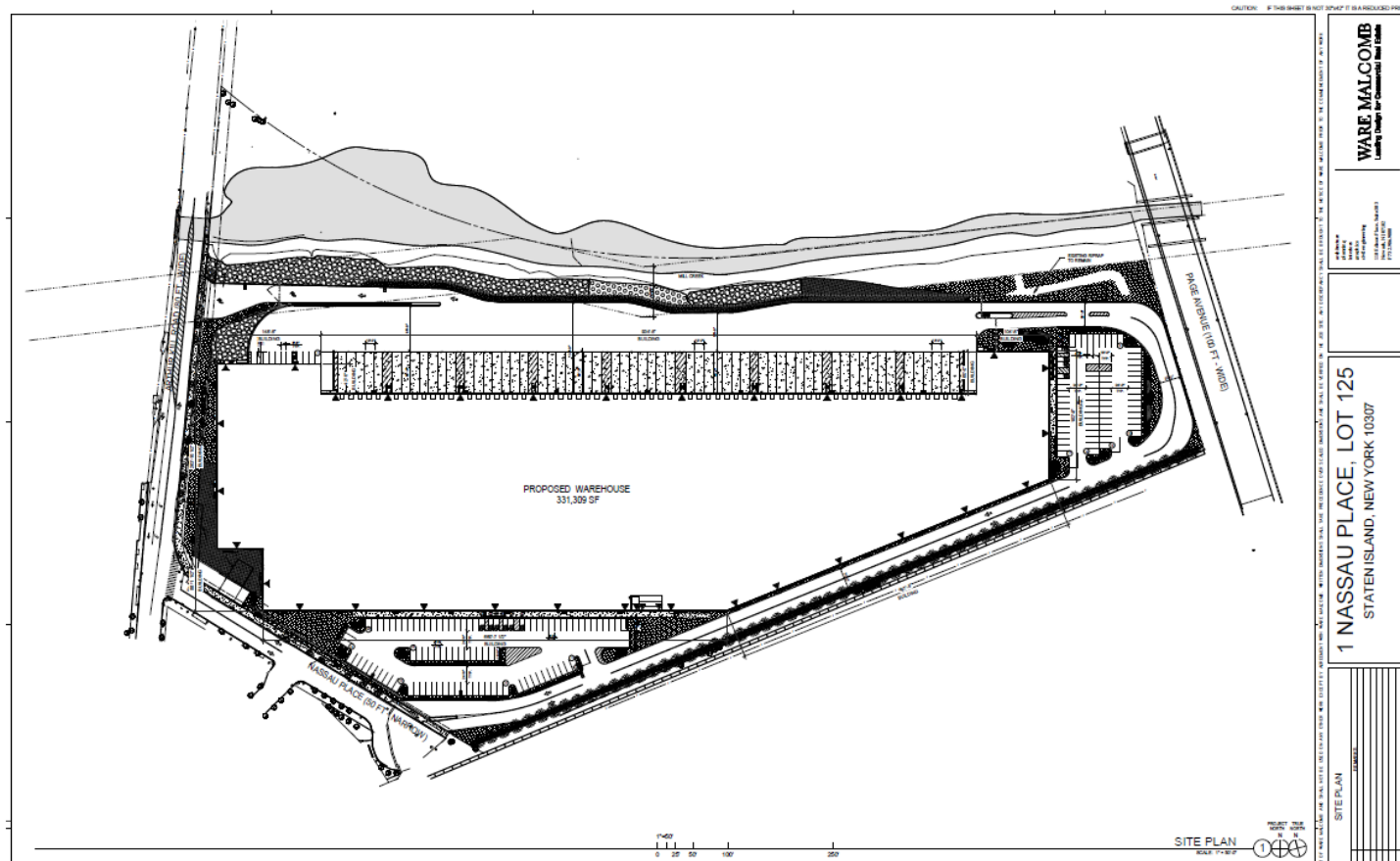


Figure I-2 Existing Zoning Map



Figure I-3 Site Plan



Proposed Actions

The requested land use actions would facilitate the Proposed Development as follows:

Authorization pursuant to ZR Section 107-64 (Removal of Trees) to Waive ZR Section 107-32 (Tree Regulations)

The Applicant proposes to remove trees of six-inch caliper or more, located more than eight feet outside the proposed building footprint, in order to facilitate development of the site.

Authorization pursuant to ZR Section 107-65 (Modification of Existing Topography) to Waive ZR Section 107-312 (Areas not within Designated Open Space)

In order to facilitate development of the site, including proposed parking, the Applicant proposes to modify portions of the site's existing topography beyond two feet of the proposed building footprint.

Authorization pursuant to ZR Section 107-68: (Modification of Group Parking Facility and Access Regulations) to waive ZR Section 107-472 (Maximum Size of a Group Parking Facility)

Because more than 30 parking spaces are proposed for the Proposed Development within the SSRDD, the Applicant is seeking a CPC Authorization pursuant to ZR 107-68.

As indicated above, the project may require the following approvals: Article 25 Tidal Wetlands Permit and Report from NYSDEC; NYSDEC SPDES Permit and MS4 construction permit from NYCDEP; and NYSDEC approval of Amended Soil Management Plan, Environmental Materials Management Plan, and Remedial Action Workplan.

Proposed Development and With-Action Condition

As described above, in the With-Action Scenario, the Applicant would construct a one-story 332,009 gsf (including an enclosed stair shaft of approximately 242 gsf on the roof per New York City Building code requirements) high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and 175 employee parking spaces at grade. A total of 52,665 sf is allocated for parking spaces, with 31,618 sf on the south side of the Development Site, 1,832 sf on the northwest side, and 19,215 sf on the east side. The proposed warehouse is being designed to accommodate up to three tenants, with a 110,730-gsf space, 128,550-gsf space, and 92,420-gsf space. Two curb cuts would be located on Nassau Place and the third, an exit only driveway, would be located on Arthur Kill Road. The proposed building would be one-story and 43-feet tall.

Project Purpose and Need

The Proposed Actions are requested in order to permit the construction of a new high cube warehouse with an outdoor group parking facility larger than is permitted in the Special District on an as-of-right basis. The Special District regulations require substantial tree plantings and other greening on a site that is subject to the SMP, under the jurisdiction of NYSDEC. The SMP will not allow substantial excavation because an impervious surface is required to be maintained over 100 percent of the Development Site that is currently capped.

A larger outdoor group parking facility is desirable to ensure that all employee parking can be accommodated on-site. The Proposed Actions are further requested to allow for site grading such that the Proposed Development would be raised to an elevation of 18.5 feet, which is above the maximum flood elevation of 15 feet. In order to complete the grading, 9 trees of 6-inch caliper or more must be removed. The Development Site's Arthur Kill Road frontage would feature a lawn area and a meadow area, planted with grasses and flowering plants (although the site would remain capped beneath this landscaping). Three retaining walls, located at the proposed north drive-aisle, to the west of the Proposed Development at its Arthur Kill Road frontage, and along the Development Site's Nassau Place frontage, would support the proposed grading of the Development Site, designed to raise the Proposed Development out of the floodplain. Adjacent to the Proposed Development and on islands within the proposed parking areas, the Development Site would feature lawns planted with shrubs and grasses. At the Development's Site's southern lot line, adjacent to the SIRT right of way, 57 trees would be planted in raised planters (in order to avoid disturbance of the required site cap). An existing natural area, filled with vegetation and trees, at the northwest corner of the Development Site, north of Mill Creek, is not affected by the SMP and is not proposed to be disturbed as a result of the Proposed Development.

The NYC Department of Buildings issued determinations waiving the planting and screening requirements of ZR Section 107-483 and ZR Section 37-92 because such requirements would be infeasible on the Development Site due to the State-mandated SMP and required site cap.

Approval of the Requested Actions would allow the Applicant to develop the Proposed Development in a manner that would account for projected future flood levels at the Development Site and would allow the Proposed Development to provide accessory off-street parking both required by the Zoning Resolution and by prospective tenants who would occupy the high-cube warehouse on the site.

Warehousing and distribution space is in high demand across New York City, driven primarily by e-commerce growth. As reported in November 2019, sales for warehouse and distribution space are up over 100 percent since 2016². The Proposed Development would activate a site that is currently underutilized with a use that is compatible with the applicable environmental restrictions.

Analysis Framework and Reasonable Worst-Case Development Scenario

For the purpose of the environmental analyses, the No-Action condition represents the future absent the Proposed Actions and serves as the baseline by which the Proposed Actions (or the With-Action condition) are compared to determine the potential for significant environmental impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the City Environmental Quality Review (CEQR) process.

² <https://www.crainsnewyork.com/real-estate/e-commerce-has-citys-warehouse-market-booming-retail-slows-report-says>

Future No-Action Condition

In the No-Action condition, the Development Site would remain in its existing condition. As indicated above, the Development Site is currently used for vehicle storage in an open vehicle storage lot. No new construction would occur in the absence of the Proposed Actions.

Future With-Action Condition

As described above, in the With-Action Scenario, the Applicant would construct a one-story 332,009 gsf high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and a 175-employee parking spaces at grade. A total of 52,665 sf is allocated for parking across the Development Site, including 31,618 sf on the south side of the proposed building, 1,832 sf on the northwest side of the proposed building, and 19,215 sf on the east side of the proposed building. The warehouse is being designed to accommodate up to three tenants, with a 110,730-gsf space, 128,550-gsf space, and 92,420-gsf space. Two curb cuts are proposed on Nassau Place and the third, an exit only driveway, would be located on Arthur Kill Road. The proposed building would be one-story and 43-feet tall.

The With-Action condition must maintain compliance with the capping that is required on this site pursuant to the NYSDEC approved remedy and SMP requiring maintenance of an impervious cap across most of the Development Site, NYSDEC requires an annual certification that the site is 100 percent impervious. The proposed development would require the disturbance of NYSDEC regulated tidal wetland adjacent area.

Therefore, it is anticipated that the Proposed Development may require the following approvals: approval of an Article 25 Tidal Wetlands Permit and Report NYSDEC; NYSDEC SPDES and MS4 construction permit from NYCDEP; and NYSDEC approval of Amended Soil Management Plan, Environmental Materials Management Plan, and Remedial Action Workplan.

Increment for Analysis

Table I-2 shows the incremental development that would result from the Proposed Development under With-Action conditions as compared to the existing and No-Action condition.

Table I-2 Future No-Action and With-Action Comparison

	Existing Conditions	No-Action Conditions	With-Action Conditions	Increment
Total GSF	0	0	332,009	332,009
Total ZSF	0	0	331,309	331,309
FAR	0	0	0.4	0.4

Analysis (Build Year)

Once the Negative Declaration is issued by the NYC Department of City Planning, the NYC City Planning Commission (CPC) will then refer the application out to the local community

board for review (for a period of approximately 45 days, as described below in the discussion of the Public Review process). The CPC will then review and vote on the application at a public review session, which is expected prior to the end of 2022. The status of the required permits is provided below. As described below, it is anticipated that the required permits from NYSDEC and NYC DEP would all be granted within four months of CPC approval of the project, with all state and city approvals expected in early 2023.

- › NYSDEC Tidal Wetlands application has already been completed, submitted, and initial comments addressed. Further review and completion of the permitting is pending CEQR completion. It is anticipated that final approval will take three to four months upon CEQR completion.
- › NYSDEC SPDES/NYC DEP Small Municipal Stormwater Sewer Systems (MS4) pre-applications have been completed and submitted. Conditional approval is anticipated from the NYC DEP MS4 group by the end of 2022. Upon completion of CEQR, the SPDES permit could be issued by NYSDEC within two weeks and the MS4 group would be expected to issue the construction permit within about a month.
- › A Site Management Plan (SMP), dated 17 September 2010, was prepared by Remedial Engineering, P.C. and Roux Associates, Inc. The SMP was developed to manage remaining contamination at the Development Site by addressing the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are part of the final remedy for the Development Site. NYSDEC has approved the SMP and the design plans/project approach is consistent with those plans. The project approach has been reviewed with NYSDEC and they have indicated their agreement of the approach. Should a revised Site management plan be required by NYSDEC, approval of a revised SMP would be expected within two to three months after CEQR approval.

Construction will consist of a single approximately 18-month phase, beginning in mid-2023, with construction completion and building occupancy anticipated prior to the end of 2024.

Public Review Process

The Proposed Development described above is subject to public review under the CEQR procedures. While this application will not undergo a full review under the City's Uniform Land Use Review Procedure, the CPC will refer the application out to the local community board for review. It is customary for the CPC to allow 45 days for such referrals. The CPC will review and vote on the application at a public review session following the community board's review. The time for CPC review is not fixed by law.



Part II: Supplemental Analyses

Additional Technical Information for EAS Full Form

An analysis framework has been established to assess the potential for the proposed actions to result in significant adverse environmental impacts. The setting for the assessment of the impacts of the Proposed Actions is based on when the full effects of the Proposed Actions are expected to have occurred. Based on approval of the Proposed Actions in 2022 and an 18-month build-out period, it is anticipated that the Proposed Development would be constructed and operational by 2024.

Based on existing conditions, observed trends, and known and expected changes, a development scenario was prepared for the future without the Proposed Actions (No-Action Condition) in the 2024 analysis year. The No-Action condition was used as a baseline to identify the potential impacts of the Proposed Actions. Given the specificity of the Proposed Actions, which include three Zoning Authorizations, the Proposed Development would represent the reasonable worst-case development scenario. As appropriate, the Proposed Development was analyzed based on worst-case assumptions specific to each technical area.

The EAS examines the potential for significant adverse impacts to result from the Proposed Actions. As detailed in **Part I: Project Description**, the Proposed Actions are:

1. Zoning Authorization pursuant to Section 107-64 (Removal of Trees) of the NYC Zoning Resolution (ZR) to waive ZR Section 107-32 (Tree Regulations);
2. Zoning Authorization pursuant to ZR Section 107-65 (Modifications of Existing Topography) to waive ZR Section 107-312 (Areas not within Designated Open Space); and,
3. Zoning Authorization pursuant to ZR Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to waive ZR Section 107-472 (Maximum Size of a Group Parking Facility).

The Development Site, while subject to waterfront regulations, is exempt from visual corridors and waterfront public access area requirements for zoning lots in manufacturing zoning districts per ZR Section 62-81 (Certifications by the Chairperson of the City Planning Commission) as the Proposed Development contains predominantly Use Group 16 uses.

Provided below are preliminary screening analyses, conducted based on guidelines presented in the *2021 CEQR Technical Manual* in order to determine whether further analysis of a given technical area is necessary to determine the potential for significant adverse impacts to the environment in that area. The screening analyses provided below include information about how the Environmental Assessment Statement (EAS) will evaluate areas for which further analysis is warranted.

Based on the analysis framework, and as indicated in the EAS Full Form Part II, the following technical areas have the potential to result in significant adverse impacts and therefore have been determined to warrant additional analysis in the EAS: land use, zoning and public policy; natural resources; shadows; hazardous materials; water and sewer infrastructure;

transportation; air quality; and noise. The Proposed Actions would not have the potential to result in significant adverse impacts on socioeconomic conditions, community facilities, open space, historic and cultural resources, urban design and visual resources, solid waste and sanitation services, energy, greenhouse gas emissions, public health, neighborhood character, or construction. Therefore, no further analysis of these technical areas is warranted.

Land Use, Zoning, and Public Policy

According to the *2021 City Environmental Quality Review (CEQR) Technical Manual*, a land use analysis characterizes the uses and development trends in the area that may be affected by a project, describes the public policies that guide development, and determines whether a project is compatible with those conditions and policies or whether it may affect them. A detailed assessment of land use is appropriate if an action would result in a significant change in land use or would substantially affect regulation or policies governing land use. The analysis considers the action's compliance with, and effect on, the area's zoning and other applicable public policies, including the City's sustainability goals (PlaNYC/OneNYC), goals related to the City's Waterfront Revitalization Plan (WRP), and other relevant public policies.

A detailed assessment of land use conditions is necessary if a detailed assessment has been deemed appropriate for other technical areas, or for generic or area-wide zoning map amendments. The Proposed Actions would consist of three zoning authorizations. As described in **Part I: Project Description**, the Proposed Actions include site-specific authorizations that seek to waive zoning regulations related to removal of trees, modification of existing topography, and maximum size of a group parking facility. Therefore, a preliminary assessment has been prepared in **Section 2, Land Use, Zoning and Public Policy**.

Shadows

The *2021 CEQR Technical Manual* recommends a shadows assessment for proposed actions that would result in new structures (or additions to existing structures) greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly accessible open spaces, sunlight-sensitive natural features, or historic resources with sun-sensitive features.

While the Proposed Actions would result in the construction of building that is lower than 50-feet in height (a 43-foot-tall building is proposed), the Development Site is adjacent to sunlight-sensitive natural features, such as tidal wetlands and an adjacent area regulated by NYSDEC, as well as federally classified wetland areas. Therefore, it was determined that a shadows assessment was warranted (see **Section 3, Shadows**).

Natural Resources

As stated in the *2021 CEQR Technical Manual*, a natural resource is defined as a plant or animal species and any area capable of providing habitat for plant and animal species or capable of functioning to support environmental systems and maintain the City's

environmental balance (e.g., surface and groundwater, wetlands, landscaped areas, gardens, and built structures used by wildlife). An assessment of natural resources is appropriate if a natural resource exists on or near the project site, or if there is a potential for impacts related to stormwater and shadows. The Development Site is located adjacent to two natural resources: Arthur Kill to the west and Mill Creek to the north. The Development Site also contains tidal wetlands and adjacent area regulated by NYSDEC as well as federally classified wetland areas. Therefore, an assessment of natural resources has been prepared in **Section 4, Natural Resources**.

Hazardous Materials

According to the *2021 CEQR Technical Manual*, a hazardous materials assessment is conducted when elevated levels of hazardous materials exist on a site, when an action would increase pathways to their exposure, either human or environmental, or when an action would introduce new activities or processes using hazardous materials, thereby increasing the risk of human or environmental exposure. Because the Proposed Development would be located in a former manufacturing and industrial area, and would involve subsurface disturbance, an analysis of hazardous materials is provided in the EAS. Discussion of current site conditions, and subsurface investigations has been prepared in **Section 5, Hazardous Materials**.

Water and Sewer Infrastructure

According to the *2021 CEQR Technical Manual*, a water and sewer infrastructure assessment analyzes whether a proposed project may adversely affect New York City's water distribution or sewer system and, if so, assesses the effects of the project to determine whether the impact is significant.

The Proposed Development would involve development on a site that is 5 acres or larger, where the amount of impervious surface would increase as compared to existing conditions. Therefore, a preliminary infrastructure assessment for wastewater and stormwater conveyance and treatment is warranted. **Section 6, Water and Sewer Infrastructure** provides an assessment of the Proposed Development.

Transportation

According to the *2021 CEQR Technical Manual*, detailed transportation analyses may be warranted if a proposed project results in 50 or more vehicle-trips and/or 200 or more transit/ pedestrian trips during a given peak hour. The Proposed Development is expected to exceed the threshold for vehicle trips, and therefore, detailed analyses of the Proposed Development's potential to result in significant adverse impacts is provided in the EAS.

Based on a preliminary assessment, it is expected the Proposed Development would generate 50 or more vehicles per hour during one or more of the peak hours through one or more intersections. Therefore, the Proposed Actions have the potential to result in significant adverse traffic impacts, and a detailed traffic analysis is provided in the EAS.

Because the Proposed Development is projected to exceed those thresholds for vehicles, detailed count and intersection level of service analyses was conducted for traffic but not for subways, buses, or pedestrians. A summary of Level 1, Level 2 and detailed analyses, assumptions, source materials and findings is included in **Section 7, Transportation**.

Air Quality

Consistent with the *2021 CEQR Technical Manual*, detailed air quality analysis may be warranted for projects that would result in stationary or mobile sources of pollutant emissions that could have a significant adverse impact on ambient air quality. This analysis also considers the potential of existing sources of air pollution to impact uses introduced by an action.

As described in **Part I: Project Description**, the Proposed Development would result in a new development with fossil fuel-fired heating, ventilation, and air conditioning (HVAC) systems. It would also introduce new mobile sources in the form of project-related traffic, predominantly in the form of truck trips to and from the site and would also add new surface parking to the site. As a result, the project would have the potential for significant adverse impacts on air quality. The EAS air quality analysis provided in **Section 8, Air Quality** therefore assesses the following:

- › The potential for changes in vehicular travel associated with the Proposed Development to result in significant mobile source (vehicle-related) air quality impacts;
- › The potential for significant adverse impacts from the emissions of the proposed surface parking lot.
- › The potential for emissions from the HVAC systems of the Proposed Development to have significant adverse impacts on existing land uses (project-on-existing impacts).

Noise

The *2021 CEQR Technical Manual* states that a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. The Proposed Development is evaluated for the potential to result in noise impacts at nearby sensitive receptor locations due to increases in mobile sources and/or the introduction of new stationary sources of sound. The Development Site does not have noise-sensitive uses and the Proposed Actions would not introduce new noise-sensitive receptors. Therefore, an assessment of whether new receptors would be introduced into an acceptable ambient noise environment is not warranted and it will not be necessary to assess the need for specific window/wall sound attenuation measures.

Ambient noise monitoring was conducted at three locations. Measurements were conducted over a 1-hour period at two of the three locations due to the site's location near a train line and were conducted for 20 minutes at Nassau Place and Arthur Kill Road during the peak periods since this particular location was not located within close proximity to the train line. A preliminary mobile source noise analysis was conducted in conjunction with the transportation analysis. Based on the findings of the analysis, it was determined that a detailed traffic noise analysis was not required. A stationary source screening was also

conducted to analyze the potential for the Proposed Development's HVAC equipment to adversely affect receptors near the Proposed Development. See **Section 9, Noise**.

Public Health

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, water quality, hazardous materials, and noise.

According to the guidance of the *2021 CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As described in the analyses provided in this EAS, the Proposed Actions would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise. Therefore, the Proposed Actions would not have the potential to result in significant adverse public health impacts, and a further assessment is not warranted.

Neighborhood Character

As this EAS provides analyses of land use, zoning, and public policy, shadows, transportation and noise, a preliminary screening analysis is warranted to determine if a detailed neighborhood character analysis is needed.

Neighborhood character is an amalgam of various elements that give neighborhoods their distinct "personality." According to the *2021 CEQR Technical Manual*, a preliminary assessment may be appropriate if a project has the potential to result in significant adverse impacts on any of the following technical areas: land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; historic and cultural resources; urban design and visual resources; shadows; transportation or noise.

The *2021 CEQR Technical Manual* also states that for projects not resulting in significant adverse impacts to any technical areas related to neighborhood character, additional analyses may be required to determine if the Proposed Actions would result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. However, the *2021 CEQR Technical Manual* indicates that neighborhood character impacts are rare, and it would be unusual that, in the absence of a significant adverse impact in any of the relevant technical areas, a combination of moderate effects in the neighborhood would result in any significant adverse impact to neighborhood character.

The Proposed Actions would facilitate the development of a high-cube warehouse within an existing M3-1 zoning district. The Proposed Development is a permitted land use in this district. The proposed building bulk is consistent with the site's existing zoning, aside from the requested authorizations for removal of trees, modification of existing topography beyond two feet of the building footprint, and authorization to waive the maximum size of a group parking facility. Per the analyses provided in this EAS, although the Proposed Actions required supplemental screening or detailed analyses of some of the technical areas that contribute to the character of a neighborhood, there would be no project-generated significant adverse impacts, nor would there be a combination of moderate effects to several elements that cumulatively may affect neighborhood character. As such, no adverse effects to neighborhood character are anticipated and no additional assessment is warranted.

Construction

Construction impacts, although temporary, can include disruptive and noticeable effects resulting from an action. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are considered when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise levels, and area air quality conditions. In addition, because soils may be disturbed during construction, any action proposed for a site that has been found to have the potential to contain hazardous materials should also consider the potential construction impacts that could result from contamination.

A construction assessment is typically warranted for construction activities (a) lasting longer than two years; (b) located along an arterial highway or major thoroughfare; (c) involving the closing, narrowing, or otherwise impeding of traffic, transit, or pedestrian elements; (d) involving multiple buildings; (e) involving the operation of several pieces of diesel equipment in a single location; (f) resulting in the closure or disruption of a community facility service; (g) located within 400 feet of a historic or cultural resource; (h) disturbing a site containing or adjacent to a natural resources; and/or (i) occurring on multiple sites in the same geographic area.

The anticipated period of construction associated with the Proposed Development is less than 24 months. Although the Proposed Development is located along Arthur Kill Road, which is a major thoroughfare, it is anticipated that all staging and deliveries would occur on the Development Site. As such, construction activities would not impede traffic along Arthur Kill Road. Further, no pedestrian or transit elements would be affected.

Construction of the Proposed Development would not involve the operation of several pieces of diesel equipment in a single location, would not result in the closure or disruption of a community facility or service, would not be located within 400 feet of a historic or cultural resource, and would not occur on multiple sites in the same geographic area.

While the site is located near natural resources, there will be a substantial buffer between the area of active construction and the adjacent wetland. As described in the natural resources and water and sewer infrastructure sections, appropriate protections will be implemented to ensure that the natural resources are not disturbed during construction. Therefore, no adverse effects to construction are anticipated and no additional assessment is warranted.



1

Introduction

As discussed in **Part II: Supplemental Analysis** of this Environmental Assessment Statement (EAS), several technical areas were identified for further analysis:

- › Land Use, Zoning, and Public Policy
- › Shadows
- › Natural Resources
- › Hazardous Materials
- › Water and Sewer Infrastructure
- › Transportation
- › Air Quality
- › Noise

Analysis of these areas follow in **Section 2** through **Section 9**.



2

Land Use, Zoning, and Public Policy

This section considers the potential for the proposed project to result in significant adverse impacts to land use, zoning, and public policy. Under the guidelines of the *2021 City Environmental Quality Review (CEQR) Technical Manual*, this analysis evaluates the uses in the area that may be affected by the proposed project and determines whether the proposed project is compatible with land use, zoning, and public policy conditions, or may otherwise affect them. The analysis also considers the proposed project's compatibility with zoning regulations and other public policies applicable to the area.

Introduction

The Applicant, EW Direct 1 Nassau, LLC, is seeking to construct a 332,009-gross square-foot (gsf) high-cube warehouse (Use Group 16 warehouse and distribution center) on the Development Site (see **Part I: Project Description**). The Applicant is seeking the Proposed Actions, which include three zoning authorizations, to facilitate construction of the warehouse and distribution center, including loading docks, employee parking spaces and curb cuts.

Methodology

This analysis of land use, zoning, and public policy follows the guidelines set forth in the *2021 CEQR Technical Manual* for a preliminary assessment (Section 320). According to the *2021 CEQR Technical Manual*, a preliminary land use and zoning assessment:

- › Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- › Characterizes the land use development trends in the area surrounding the project site that might be affected by a proposed action; and
- › Determines whether the Proposed Development is compatible with those trends or may alter them.

The following assessment method was used to determine the potential for the Proposed Development to result in significant adverse impacts on Land Use, Zoning, and Public Policy:

1. Establish a "study area", a geographic area surrounding the project site to determine how the Proposed Development may affect the immediate surrounding area. For this assessment, a study area of 400 feet surrounding the Development Site was used (the "Study Area").
2. Identify data sources, including any public policies (formal plans, published reports) to be used to describe the existing and No-Action conditions related to land use, zoning, and/or public policy.
3. Assess the Proposed Development's potential effects on land use, zoning and public policy to determine whether the Proposed Development is consistent with or conflicts with area land uses, zoning, or the identified policies.
 - If a proposed project could conflict with the identified policies, a detailed assessment would be conducted; or
 - If the proposed project is found to not conflict with the identified policies, no further assessment is needed.

As indicated above, the Study Area for this analysis is the area within 400-feet of the project site which, for the Proposed Development, extends north to Richmond Valley Road, to a point beyond Page Avenue on the east, as far south as the intersection of Craig Avenue and Bethel Avenue, and west across Arthur Kill Road into the Arthur Kill.

Assessment

Existing Conditions

Land Use

Development Site

The Development Site is in the Charleston neighborhood of Staten Island Community Board 3 and consists of Staten Island Block 7971, Lot 125 (**Figure 2-1**). The 785,439 sf (approximately 3.42-acre) Development Site is bounded by Arthur Kill Road to the west, Page Avenue to the east, Nassau Place to the southwest, the Staten Island Railway (SIR) right-of-way to the southeast and Mill Creek to the north. Immediately west of Arthur Kill Road is the Arthur Kill, which separates Staten Island from New Jersey.

The Development Site is currently occupied by an open vehicle storage lot and was previously occupied by Nassau Metals, an industrial facility. There are no buildings or

permanent structures on the property. The portion of the Development Site that would be redeveloped is paved in a rectangle stretching approximately 275-feet from the southeast side along the SIR right-of-way towards Mill Creek on its short side and approximately 1,165 feet from its northeast corner to its northwest corner in its long side (an area of approximately 7.85 acres). This paved portion currently serves as the vehicle storage lot. The remainder of the site between the area of redevelopment and Arthur Kill Road to the west and Mill Creek to the north is unpaved, with limited gravel driveways circling it.

A small portion of the Development Site lies northwest of Mill Creek along Arthur Kill Road and consists of a densely wooded triangle that the Applicant has chosen to not be disturbed by the Proposed Development.

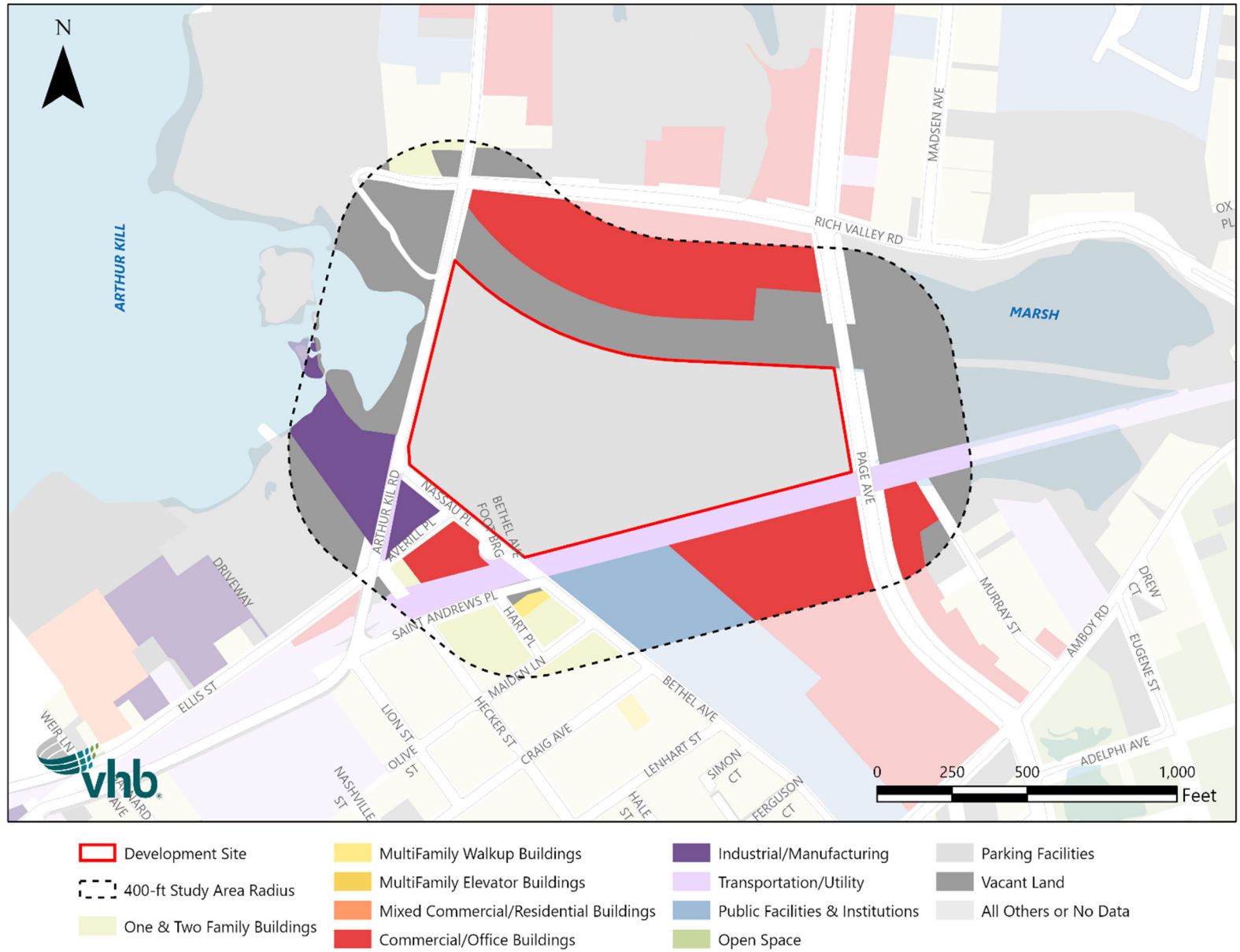
Study Area

As indicated above, the Study Area is comprised of a 400-foot boundary from the perimeter of the Development Site and includes the Charleston and Tottenville neighborhoods to the north/east and south, respectively. The Study Area contains a mix of commercial, institutional, and residential uses, with vacant land interspersed to the north, west and east. The SIR forms the site's southern boundary. Residential uses are located south of the Development Site in the area located between Bethel Avenue, St. Andrews Place, and Arthur Kill Road. Northeast of Bethel Avenue is the Bethel United Methodist Church, a parsonage, and the cemetery associated with that congregation. West of Bethel Cemetery the Study Area encompasses some residential land uses, which continue south and west to the southern tip of Staten Island. These residential land uses are primarily one- and two-family buildings. Southeast of the Development Site is another large shopping center on Page Avenue. Northeast of the church property, the area contains a variety of commercial uses that front on Page Avenue, including fast food and sit-down restaurants, a CVS pharmacy, a car wash, and other local retail uses. East of the Development Site on the opposite side of Page Avenue is the eastward flow of Mill Creek and its surrounding wetlands, which is vacant land use. Adjacent to the commercial uses on Page Avenue is a small area of residential uses on either side of Murray Street in the form of one- and two-family homes.

West of the Development Site within the Study Area are industrial and manufacturing land uses and some vacant parcels. The south side of Nassau Place is manufacturing land use that is occupied by two indoor sports facilities. Opposite the two sports centers, on the west side of Arthur Kill road is a warehouse. North of Development Site on the north side of Richmond Valley Road is vacant land, a single residence on the west side of Arthur Kill Road and a small commercial strip.

The closest publicly accessible open space resource is Long Pond Park, a 91.09-acre park which is located approximately a quarter mile southeast of the Development Site, beyond the study area boundaries. This park is composed of a combination of wetland and woodland, including naturally formed Long Pond.

Figure 2-1 Land Use Map



Zoning

Project Site and Area

The Development Site is located in an M3-1 Manufacturing use district, which was mapped in 1961 (see **Figure 2-2**). This M3-1 district extends east of the Development Site past Page Avenue and west to the Arthur Kill. It is bounded to the north by Richmond Valley Road and to the south by the SIR. M3-1 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. Typical uses include power plants, solid waste transfer facilities and recycling plants, and fuel supply depots. M3 districts are usually located near the waterfront and buffered from residential areas. Large M3 districts are mapped along the Arthur Kill in Staten Island. M3 districts have a FAR of 2.0 and a maximum base height before setback of 60 feet; however, building heights are limited to 50 feet in the Special South Richmond Development District (Special District). M3-1 districts are subject to the same parking requirements as M1-1, M1-2, M1-3, M2-1, and M2-2 districts, which, are subject to parking requirements based on the type of use and size of an establishment. For example, a warehouse in an M3-1 district requires one off-street parking space per 2,000 sf of floor area or per every three employees, whichever would be less. The Development Site is located entirely in the Special District, discussed in greater detail below.

Study Area

The Study Area is located entirely within the Special District, which was established in 1975 to guide the development of the southern part of Staten Island and manage growth in the area “to promote and protect public health, safety, general welfare and amenity,” as stated in the Section 107-00: General Purposes of the NYC Zoning Resolution (ZR). The establishment of the Special District also aimed to ensure that the provision of public infrastructure kept pace with new development and protecting natural resources. The district mandates tree preservation and planting requirements, controls to changes in topography, and establishes special building height and setback limits.

The Study Area is a mix of manufacturing and residential zoning districts. North of the Development Site, the Study Area clips the southern edge of an M1-1 manufacturing zoning district. An M1-1 zoning district is also located at the southeast corner of the Study Area. M1-1 zoning districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Floor area ratios (FAR) in M1 districts range from 1.0 to 10.0, depending on location; building height and setbacks are controlled by a sky exposure plane which may be penetrated by a tower in certain districts.

The southwestern portion of the Study Area encompasses residential zoning districts, including R3A and R3X zoning districts. R3X zoning districts permit only one- and two-family detached homes on lots that must be at least 35 feet wide. R3A contextual districts feature modest single- and two-family detached residences on zoning lots as narrow as 25 feet in width. In both R3A and R3X residential zoning districts, the amount of open space on a lot is governed by yard requirements. The maximum FAR of 0.5 may be increased up to 20 percent by an attic allowance for the inclusion of space beneath a pitched roof. The perimeter wall may rise to 21 feet before sloping or being set back to a maximum building height of 35 feet.

The southeast and southwest corners of the Study Area are mapped with an R3X zoning district, which is a contextual zoning district. Along Page Avenue there is a sliver of land located between the SIR and Amboy Road, which is mapped with a C1-1 commercial zoning overlay. C1-1 overlays are mapped along streets that serve local retail needs, they are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. When commercial overlays are mapped in R1 through R5 districts, as is the case here, the maximum commercial FAR is 1.0.

Figure 2-2 Zoning Map



Public Policy

Waterfront Revitalization Program

The Development Site is located within the Coastal Zone Boundary. Therefore, policies related to the Waterfront Revitalization Program (WRP) apply to the Proposed Development.

The WRP is the City's principal Coastal Zone management tool and establishes a broad range of public policies for the City's coastal areas. The guiding principle of the WRP is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing the conflicts among these objectives. The WRP was originally adopted in 1982. The recent revisions include incorporation of climate change and sea level rise considerations to increase the resiliency of the waterfront area, promotion of waterfront industrial development as well as commercial and recreational waterborne activities, increased restoration of ecologically significant areas, and best practices for the design of waterfront open spaces. Because the project is located in the Coastal Zone, and requires local, State, and/or Federal discretionary actions or review, an assessment of the project's consistency with applicable WRP policies was conducted.

Zoning for Coastal Flood Resiliency (ULURP No. N210095 ZRY)

DCP updated the Flood Resilience Zoning Text and Special Regulations for Neighborhood Recovery, which were adopted on an emergency basis after Superstorm Sandy. These zoning text amendments were adopted to advance the reconstruction of storm-damaged properties and enable new and existing buildings to comply with flood-resistant construction standards set forth in Appendix G of the NYC Building Code. Because these rules were set to expire, DCP updated and made them permanent under a citywide zoning text amendment known as Zoning for Coastal Flood Resiliency (ZCFR). As currently set forth by DCP, the updated and permanent rules feature:

1. Expand the geography where optional zoning rules apply to the 0.2 percent annual chance floodplain, in addition to the 1 percent annual chance floodplain, to facilitate investments in small resiliency improvements to buildings or otherwise proactively meet or exceed flood-resistant construction standards;
2. Allow optional flexibility to measure the building envelope from a reference plane that can be placed anywhere between the Design Flood Elevation (DFE) and 10 feet above grade (for lots where at least a portion is located within the 1 percent annual chance floodplain) or a reference plane that can be placed anywhere between grade and 5 feet above grade (for lots where at least a portion is located within the 0.2 percent annual chance floodplain), so building owners can accommodate projected sea level rise when designing new buildings or retrofitting existing ones;
3. Allow wet-floodproofed ground floors to be exempted from floor area, and a portion of dry floodproofed non-residential ground floors to be exempted from floor area under certain circumstances, to better create accessible and inviting streetscapes;
4. Allow flexibility for existing non-compliant and/or non-conforming buildings to be retrofitted or reconstructed to meet or exceed flood-resistant construction standards, under certain circumstances;

5. Allow more flexibility with permitted obstruction rules for buildings to locate mechanical, electrical and plumbing equipment above the DFE, including emergency generators, and allow flood protection measures as permitted obstructions on open areas;
6. Create rules that facilitate the reconstruction of damaged buildings to allow the City to more quickly recover from future disasters.
7. In the flood zone, limit the growth of nursing homes for residents who have negative health consequences if subject to mandatory evacuation.
8. Require buildings utilizing the allowances in the text amendment to meet streetscape mitigation regulations to help alleviate the effects of elevated access and potential blank walls caused by resiliency needs;
9. Modify provisions applying in the waterfront areas to ensure that existing waterfront regulations allow sites to incorporate flood risk and sea level by giving flexibility in grading and shoreline design.

Since these zoning changes would affect the Development Site, their relevant and applicable effects are analyzed below.

No-Action Condition

Absent the Proposed Development (the future No-Action Conditions), the Development Site would remain in its existing condition.

Land Use

There are no new planned developments within the 400-foot Study Area that are expected to be completed by the 2024 analysis year. There is one capital project led by New York City Department of Design and Construction (DDC), on behalf of New York City Department of Transportation, to reconstruct Richmond Valley Road between Arthur Kill Road on the west and Page Avenue on the east. The planned project will improve this corridor with a resurfaced roadway, a bike lane, completed sidewalks to enhance pedestrian safety, and landscaping. In addition, the planned project also requires the acquisition of land within private lots that extends into the mapped street right of way. Construction of the planned project is anticipated to start in 2022 and be completed in 2024.

Zoning

In the future No-Action Condition, the Development Site would continue to be governed by the applicable zoning regulations described above. As described in the existing conditions above, the Development Site would continue to be controlled by the requirements of the Special District and by the Site Management Plan (SMP). It is anticipated that the Development Site will remain in its current use, as an open-air vehicle storage lot and vacant land absent the Proposed Actions.

Public Policy

In the future No-Action condition, there are no known public policy changes that are anticipated to affect the Development Site or Study Area.

With-Action Condition

As described above, the Proposed Actions would facilitate the development of a one-story, 43-foot high, approximately 332,009-gsf warehouse (includes an enclosed stair shaft of approximately 242 gsf on the roof per New York City Building Code requirements) and distribution center with 60 loading docks and 175 employee parking spaces at grade. A total of 52,665 sf is allocated for parking spaces: 31,618 sf on the Development Site's south side, 1,832 sf on the northwest side and 19,215 sf on the east side. The warehouse is being designed to accommodate up to three tenants, with units of 110,730 gsf, 128,550 gsf, and 92,420 gsf, respectively. Loading docks would be located on the north side of the warehouse facing Mill Creek. Two curb cuts would be located on Nassau Place and a third, an exit only driveway, would be located on Arthur Kill Road, near the northern limits of the site.

In addition, the Proposed Actions are subject to various state and city approvals. The Applicant has filed a New York State Department of Environmental Conservation (NYSDEC) Tidal Wetlands application. The Applicant also completed pre-applications for NYSDEC State Pollutant Discharge Elimination System (SPDES) Permit and New York City Department of Environmental Protection (NYCDEP) Municipal Separate Storm Sewer System (MS4) construction permit. It is anticipated that the Applicant will obtain conditional approval by the NYCDEP MS4 group by mid-2022. Upon completion of environmental review, the SPDES permit could be issued by NYSDEC within approximately two weeks and the MS4 group would issue the construction permit within approximately a month.

The Development Site is also governed by a NYSDEC-approved Site Management Plan (SMP) and the Proposed Development is consistent with those plans in consultation with NYSDEC. Upon completion of environmental review and in the event of revising the existing SMP, it is anticipated that approval would occur within 2 to 3 months. Lastly, the Applicant is filing a NYSDEC Article 25 Permit which is subject to a 30-day public comment period which would begin once the Proposed Development receives a negative declaration.

Land Use

The Proposed Actions would introduce a new warehouse and distribution center on the Development Site, an as-of-right use within the M3-1 zoning district. As compared to No-Action conditions, the Proposed Actions would facilitate the improvement of the Development Site with a new building where there is currently vacant land and vehicle storage in an open-air vehicle storage lot. No changes in land use are anticipated within the 400-foot Study Area.

Zoning

As detailed in **Part I: Project Description**, the Applicant is requesting the following actions:

- › Zoning Authorization pursuant to ZR Section 107-64 (Removal of Trees) to waive ZR Section 107-32 (Tree Regulations). The Applicant proposes to remove trees of six-inch caliper or more, located more than eight feet outside the proposed building footprint, in order to facilitate development of the site. A total of 9 trees of 6-inch caliper or more would be removed. The Development Site's Arthur Kill Road frontage would feature a lawn area and a meadow area, planted with grasses and flowering plants (although the site would remain capped beneath this landscaping). Three retaining walls, located at the

proposed north drive-aisle, to the west of the Proposed Development at its Arthur Kill Road frontage, and along the Development Site's Nassau Place frontage, would support the proposed grading of the Development Site, designed to raise the Proposed Development out of the floodplain. Adjacent to the Proposed Development and on islands within the proposed parking areas, the Development Site would feature lawns planted with shrubs and grasses. At the Development's Site's southern lot line, adjacent to the SIRT right of way, 57 trees would be planted in raised planters (in order to avoid disturbance of the required site cap). An existing natural area, filled with vegetation and trees, at the northwest corner of the Development Site, north of Mill Creek, is not affected by the SMP and is not proposed to be disturbed as a result of the Proposed Development.

The NYC Department of Buildings issued determinations waiving the planting and screening requirements of ZR Section 107-483 and ZR Section 37-92 because such requirements would be infeasible on the Development Site due to the State-mandated SMP and required site cap.

- › Zoning Authorization pursuant to ZR Section 107-65 (Modifications of Existing Topography) to waive ZR Section 107-312 (Areas not within Designated Open Space). In order to facilitate development of the site, including proposed parking, the Applicant proposes to modify portions of the site's existing topography beyond two feet of the proposed building footprint. To ensure the Proposed Development is raised above the floodplain, the Development Site would be graded so that it is constructed at an elevation of 18.5 feet, above the Development Site's maximum flood elevation of 15 feet. This would reduce the risk that the Proposed Development could be inundated by flood waters in the event of a hurricane or similar event. The proposed grading would require installation of retaining walls along portions of the Development Site, between the Proposed Development and Arthur Kill Road, between the Proposed Development and Nassau Place, and along the south side of the Proposed Development's northern drive lane (leading to Arthur Kill Road).
- › Zoning Authorization pursuant to ZR Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to modify ZR Section 107-472 (Maximum size of group parking facility). Because more than 30 parking spaces are proposed for the Proposed Development within the SSRDD, the Applicant is seeking a CPC Authorization pursuant to ZR Section 107-68.

The Development Site is an M3-1 zoning district, where parking for warehouse uses is required at a rate of one parking space per 2,000 sf or one space per three employees, whichever is less. The Proposed Development would contain approximately 332,009 gsf (331,309 zsf) of warehouse use and would therefore be required to provide 166 parking spaces. The Applicant proposes to provide 175 accessory parking spaces in an outdoor parking lot on the Development Site. There is little on-street parking in the immediate vicinity of the Development Site, and the Applicant seeks to prevent the Proposed Development's employees from using on-street parking by providing ample parking on-site. The proposed 175 parking spaces represent the maximum number of parking spaces achievable on the Development Site while accommodating the Proposed Development's programming, providing appropriate access to the street and respecting Mill Creek and associated wetlands.

The Development Site, while subject to waterfront regulations, is exempt from visual corridors and waterfront public access area requirements for zoning lots in manufacturing districts per ZR Section 62-81 (Certifications by the Chairperson of the City Planning Commission) as the Proposed Development contains predominantly Use Group 16 uses. Per the SSRDD maps, the Development Site is not mapped within a Designated Open Space or Special Areas. An arterial setback is mapped along Arthur Kill Road as discussed in **Section 7, Transportation**.

The Proposed Actions are requested in order to permit the construction of a new high cube warehouse with an outdoor group parking facility larger than is permitted in the Special District on an as-of-right basis. These Proposed Actions are being requested due to the Development Site's location in the Special District, which imposes different requirements than are typically found in an M3-1 zoning district. The Special District regulations require substantial tree plantings and other greening on a site that is subject to the SMP, under the jurisdiction of NYSDEC. The SMP requires that an impervious surface be maintained over a majority of the Development Site excluding the northwest corner, north of Mill Creek. The SMP was developed to manage remaining contamination at the Development Site by addressing the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are part of the final remedy for the Development Site (see **Section 5, Hazardous Materials**). The requested actions would be limited to the Development Site and would not result in zoning changes to the surrounding area.

Warehousing and distribution space is in high demand across New York City, driven primarily by e-commerce growth. Sales for warehouse and distribution space are up over 100 percent since 2016. The Proposed Development would activate a site that is currently underutilized with a use that is compatible with the applicable zoning restrictions.

Public Policy

Waterfront Revitalization Program

Given that the Development Site is located within the New York City Coastal Zone, the Proposed Development is subject to review for its consistency with the City's WRP policies. In accordance with the guidelines of the *2021 CEQR Technical Manual*, an evaluation of the Proposed Development's consistency with the WRP policies was undertaken and reviewed by the Department of City Planning (WRP #21-200). This preliminary evaluation requires completion of the WRP Consistency Assessment Form (CAF), which contains a series of questions designed to screen out those policies that would have no bearing on a consistency determination for a proposed action (see **Appendix A**). The CAF lists the WRP policies and indicates whether the Proposed Development would promote or hinder that policy, or if that policy would not be applicable. For any policies which may be affected, this section provides additional information. As detailed in **Appendix A**, the Proposed Development would be consistent with WRP policies.

Zoning for Coastal Flood Resiliency

The implementation of ZCFR would allow developers to opt to measure height from a Reference Plane up to 10 feet above the Design Flood Elevation, which could result in a building up to 10 feet taller. The Proposed Development is consistent with the proposed ZCFR given that the first floor is elevated above the design flood elevation but still meets its

needs by providing building access to employees/visitors and loading operations. Therefore, the current design of the proposed building would both meet resiliency needs and the purpose of the Proposed Development.

Conclusion

As described above, the Proposed Development would activate a site that is currently underutilized with a use that is compatible with the applicable zoning restrictions and the goals of the Special District. The Proposed Actions are requested in order to permit the construction of a new high cube warehouse with an outdoor group parking facility larger than is permitted in the Special District on an as-of-right basis. Warehousing and distribution space is in high demand across the City. The Proposed Actions are being requested due to the Development Site's location in the Special District, which imposes different requirements than are typically found in an M3-1 manufacturing zoning district. The Special District regulations require substantial tree plantings and other greening on a site that is subject to a SMP and site cap, under the jurisdiction of NYSDEC, that preclude the planting of new, in-ground trees or other plantings with deep roots that would penetrate the site cap. The requested actions would be limited to the Development Site and would not result in zoning changes to the surrounding area. Therefore, the Proposed Development would not result in any significant adverse impacts to land use, zoning, or public policy.



3

Shadows

A shadow is defined in the *2021 CEQR Technical Manual* as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space, or feature. The purpose of this section is to assess whether new structures may cast shadows on sunlight sensitive publicly accessible resources or other resources of concern such as natural resources, and to assess the significance of their impact.

Introduction

According to the *2021 CEQR Technical Manual*, a shadows assessment is required for proposed actions that would result in new structures greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features. A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

The Proposed Actions are expected to facilitate the construction of an approximately 46-foot-tall (43-foot-tall building with three-foot bulkhead) high-cube warehouse on the Development Site in the future With-Action condition. Although the Proposed Actions would

facilitate construction of a new building that is below the 50-foot threshold defined by the *2021 CEQR Technical Manual*, an analysis is required to determine the potential for impacts to adjacent natural resources (e.g., adjacent to tidal wetlands and federally classified wetland areas) as a result of shadows cast by the Proposed Development.

Methodology

According to the *2021 CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. In accordance with the *2021 CEQR Technical Manual*, a preliminary screening assessment is conducted to ascertain whether shadows resulting from a project would reach any sunlight-sensitive resource at any time of year; if the preliminary assessment indicates that, in the absence of intervening buildings, shadows from a project would reach sunlight-sensitive resources on any of the representative analysis days, a detailed analysis is typically warranted.

Sunlight-Sensitive Resources

The *2021 CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources:¹

- › **Public open space** (e.g., parks, beaches, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The uses and vegetation in an open space establish its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather-dependent features like wading pools and sand boxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include passive uses, such as sitting or sunning; active uses, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is a minimum requirement.
- › **Features of historic architectural resources that depend on sunlight for their enjoyment by the public.** Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained-glass windows; exterior building

¹ According to the *2021 CEQR Technical Manual*, City streets, sidewalks, and private open spaces (such as private residential front and back yards, stoops, and vacant lots) are not considered to be sunlight-sensitive resources.

materials and color that depend on direct sunlight for visual character (e.g., the polychromy (multicolored) features found on Victorian Gothic Revival or Art Deco façades); historic landscapes, such as scenic landmarks including vegetation recognized as an historic feature of the landscape; and structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as an historic landmark.

- › **Natural resources where the introduction of shadows could alter the resource's condition or microclimate.** Such resources could include surface water bodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

Preliminary Assessment

The preliminary screening assessment consists of three tiers of analysis:

- › **Tier 1 Screening:** The first tier determines a simple radius around the proposed building representing the longest shadow that would be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier.
- › **Tier 2 Screening:** The second-tier analysis reduces the area that would be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the northern hemisphere. According to the *2021 CEQR Technical Manual*, shadows cannot be cast within New York City within 108 degrees from True North. Topographic lines are included to demonstrate the terrain of the area.
- › **Tier 3 Screening:** If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that would be reached by new shadows by looking at specific representative days of the year and determining the maximum extent of shadow over the course of each representative day. For the Tier 3 screening, three-dimensional modeling software with the capacity to model shadows is used, and the maximum building envelope that would be achieved as a result of the Proposed Development is modeled and geo-located within the program. Terrain, which has been included in the Tier 1 and Tier 2 Screenings, is also incorporated into the model to account for how changes in elevation throughout the study area can influence shadows that would be cast by the Proposed Development. The representative days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes). The modeling software is also used to approximate times that shadows cast from the Proposed Development would enter and exit a resource.

Detailed Assessment

As noted above, if the Tier 3 screening indicates that, in the absence of intervening buildings, shadows from a proposed project would reach a sunlight-sensitive resource on any of the representative analysis days, a detailed shadow analysis would be warranted. Because existing buildings (or No-Action buildings) may already cast shadows on a sun-sensitive resource, a proposed project may not result in additional (incremental) shadows upon that resource. The detailed shadow analysis models a baseline condition (future No-Action) that

is compared to the future condition resulting from a proposed project (future With-Action) to illustrate the shadows cast by the No-Action development and distinguish the additional (incremental) shadow cast by the project. The detailed shadows analysis uses a combination of Geographic Information Systems (GIS) 3D modeling and modeling in Sketchup, as well as GIS data provided publicly.

Determination of Significance

As described in the *2021 CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact generally occurs when an incremental shadow of 10 minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- › **Vegetation:** a substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project), or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).
- › **Historic and cultural resources:** a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.
- › **Open space utilization:** a substantial reduction in the usability of open space as a result of increased shadow, with consideration given to anticipated new users and the open space's utilization rates throughout the affected time periods as well as to the inventory of available open space resources in the study area.
- › **For any sunlight-sensitive feature of a resource:** complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

In general, a significant adverse shadow impact occurs when the incremental shadow added by a proposed action falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

Preliminary Assessment

Tier 1 and 2 Screening

As described in **Part I: Project Description**, the Proposed Development would consist of a one-story 46-foot tall (includes the 43-foot-tall building and a three-foot bulkhead) high-cube warehouse located on the Development Site. The maximum shadow screening radius was drawn around the building footprint because the proposed building would only cover a portion of the surface area of the Development Site. The resulting maximum shadow screening radius is approximately 202.1 feet, which is the height of the Proposed Development (46-feet, including bulkhead) multiplied by 4.3. The area that cannot be

shaded by the Proposed Development was drawn from the southernmost point of the building footprint.

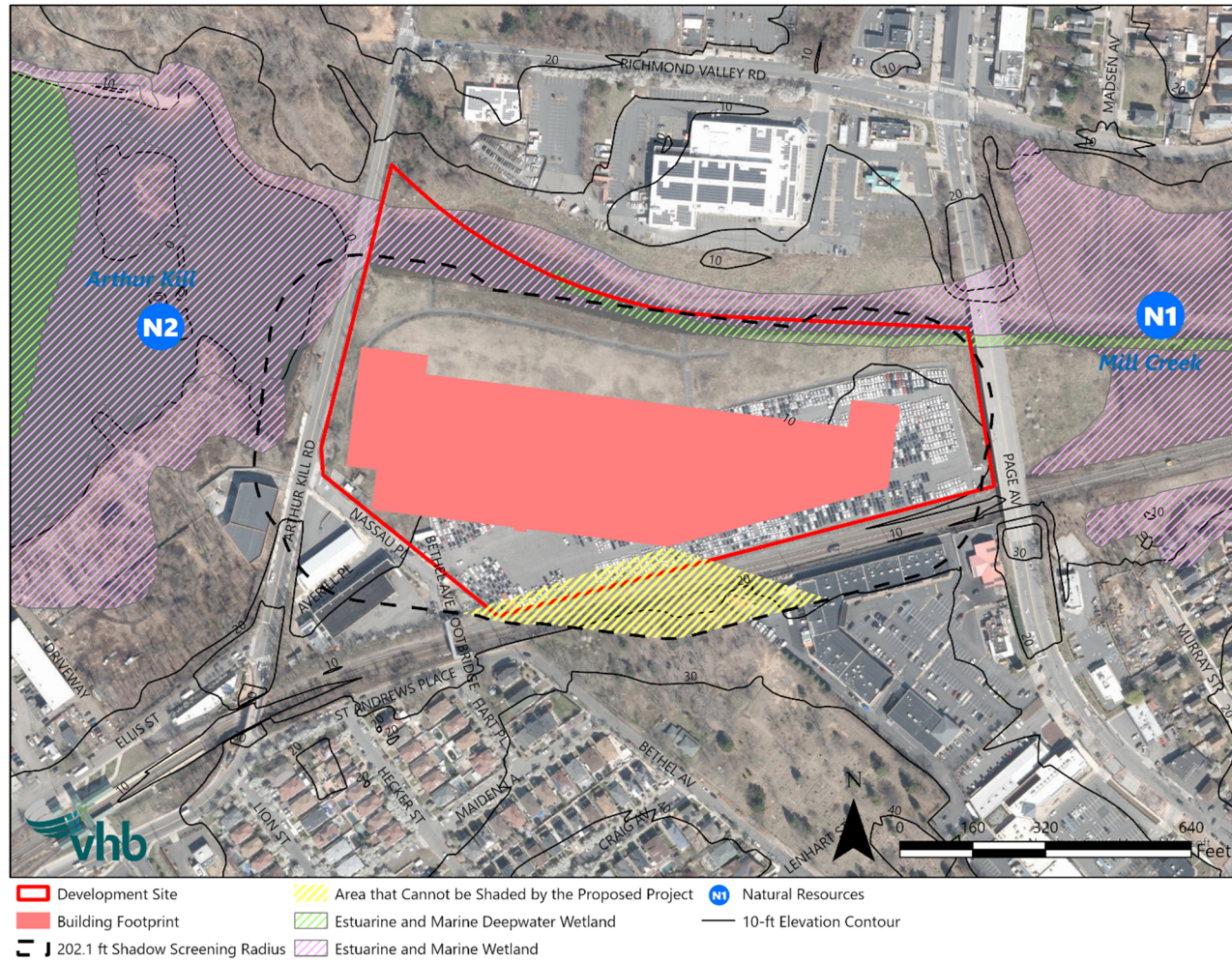
The Tier 1 and 2 screening assessment determined that there would be two natural resources within the maximum shadow screening radius, including Mill Creek and Arthur Kill. Mill Creek (N1) is a narrow creek that runs through southern Staten Island and empties into Arthur Kill, just west of the Development Site. Estuarine and deepwater tidal wetlands occur within the Mill Creek corridor that generally parallels the northern site boundary, and portions of the wetlands are located within the Development Site boundary. Arthur Kill (N2) is a saltwater channel that separates Staten Island from New Jersey. Tidal wetlands are present along the shore of the Arthur Kill, directly west of the Development Site. As these natural resources would be located within the maximum shadow radius, a Tier 3 screening assessment is provided below. **Table 3-1** lists and **Figure 3-1** shows the potential sunlight-sensitive resources identified in the Tier 1 and Tier 2 screening assessment. **Figure 3-1** also shows the locations of estuarine and marine wetlands that comprise the two natural resources located within the shadow screening radius.

Table 3-1 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Potential Resource Summary	Sunlight-Sensitive Elements
Natural Resources			
N1	Mill Creek	Narrow creek running through southern Staten Island, emptying into the Arthur Kill	Surface waterbody, wetlands
N2	Arthur Kill	Saltwater channel that separates Staten Island from New Jersey	Surface waterbody, salt marsh

Source: National Wetlands Inventory, New York City Open Data

Figure 3-1 Tier 1 and Tier 2 Screening



Tier 3 Screening Assessment

In accordance with the *2021 CEQR Technical Manual*, a Tier 3 screening assessment was performed because the Tier 1 and Tier 2 assessments identified several sunlight-sensitive resources within ± 108 degrees of True North and within the area of the longest shadow that could be cast by the Proposed Development.

The Tier 3 screening assessment was performed for the four representative days of the year set forth in the *2021 CEQR Technical Manual*: December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6/August 6, the midpoints between the summer solstice and the equinoxes; and June 21, the summer solstice and the longest day of the year.

In accordance with the *2021 CEQR Technical Manual*, a model of the building in the With-Action condition was developed in a three-dimensional computer program (Sketchup). The model was geolocated, and the surrounding terrain was imported into the model to account for differences in topography. As noted above, the Tier 3 shadow screening shows the shadows that could be cast as a result of the Proposed Development but does not account for existing buildings which may already cast shadows on the identified resources. **Figure 3-2** through **Figure 3-5** below show Tier 3 screening results.

The Tier 3 screening indicates that in the absence of intervening structures, the Proposed Development could cast shadows on Mill Creek (N1) on the December 21 analysis day only and on the Arthur Kill (N2) on each of the four analysis days. Therefore, further discussion of the Tier 3 shadows that would be cast on Mill Creek (N1) and the Arthur Kill (N2) is provided below.

Figure 3-2 Tier 3 Screening December 21 Analysis Day

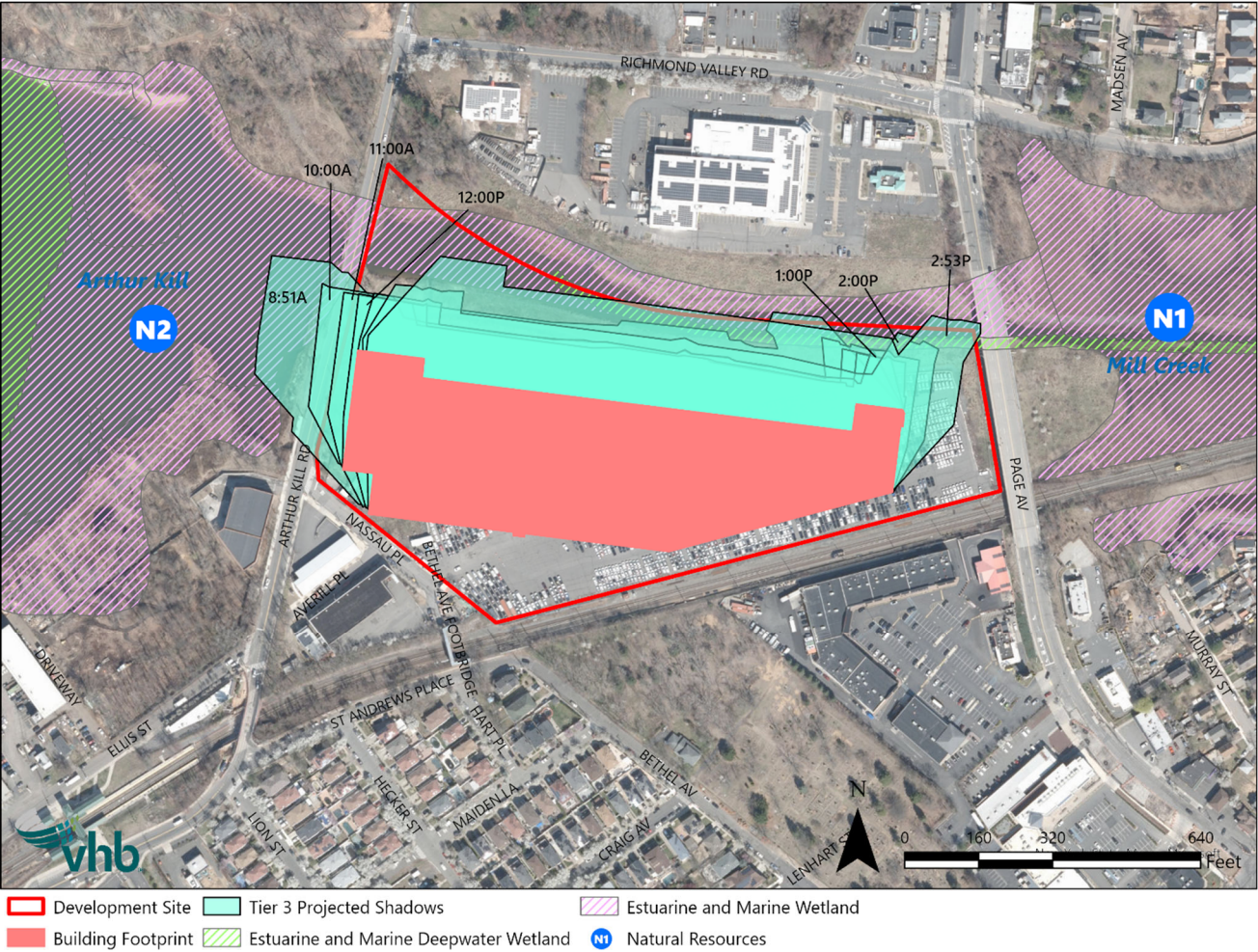


Figure 3-3 Tier 3 Screening March 21/September 21 Analysis Day

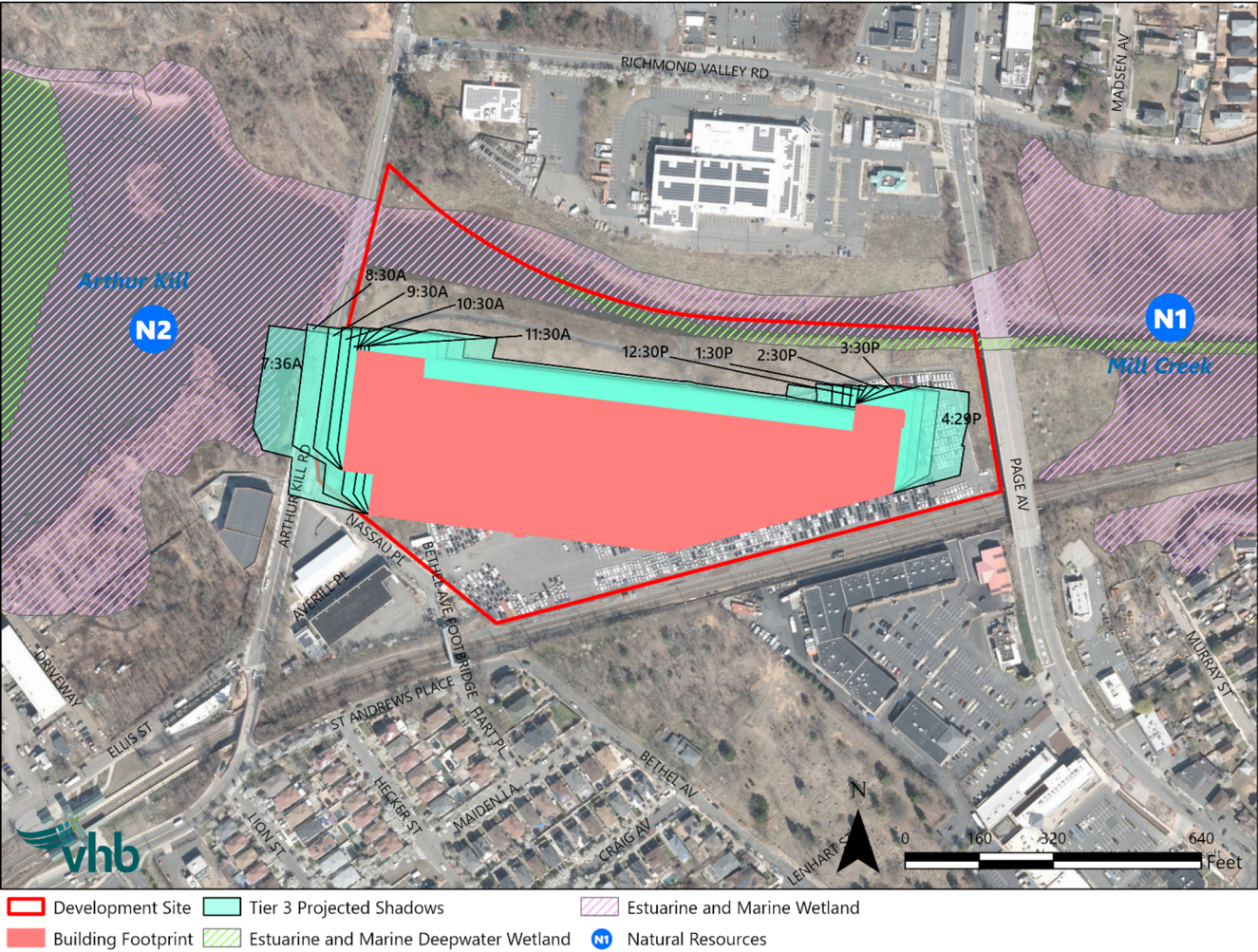


Figure 3-4 Tier 3 Screening May 6/August 6 Analysis Day

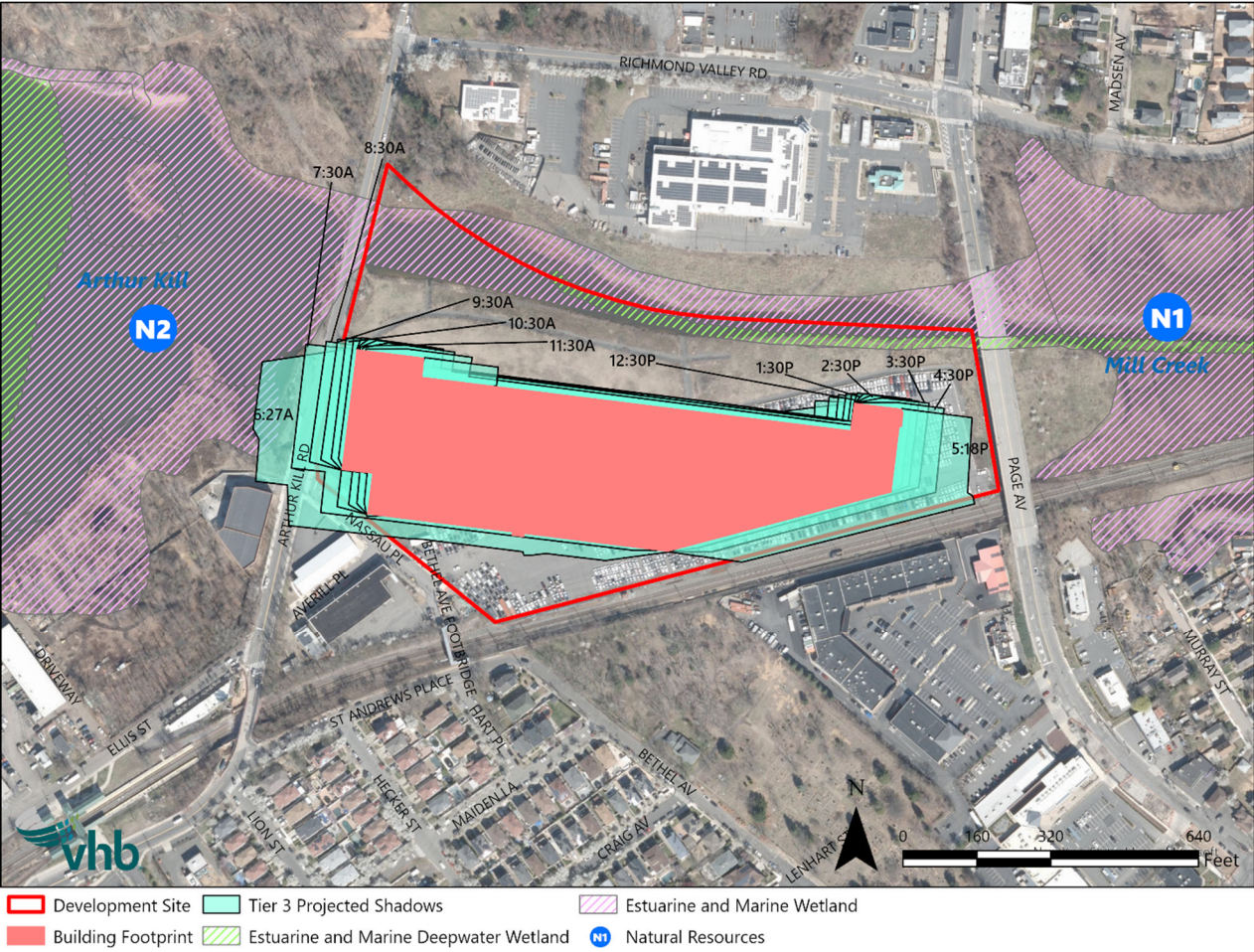
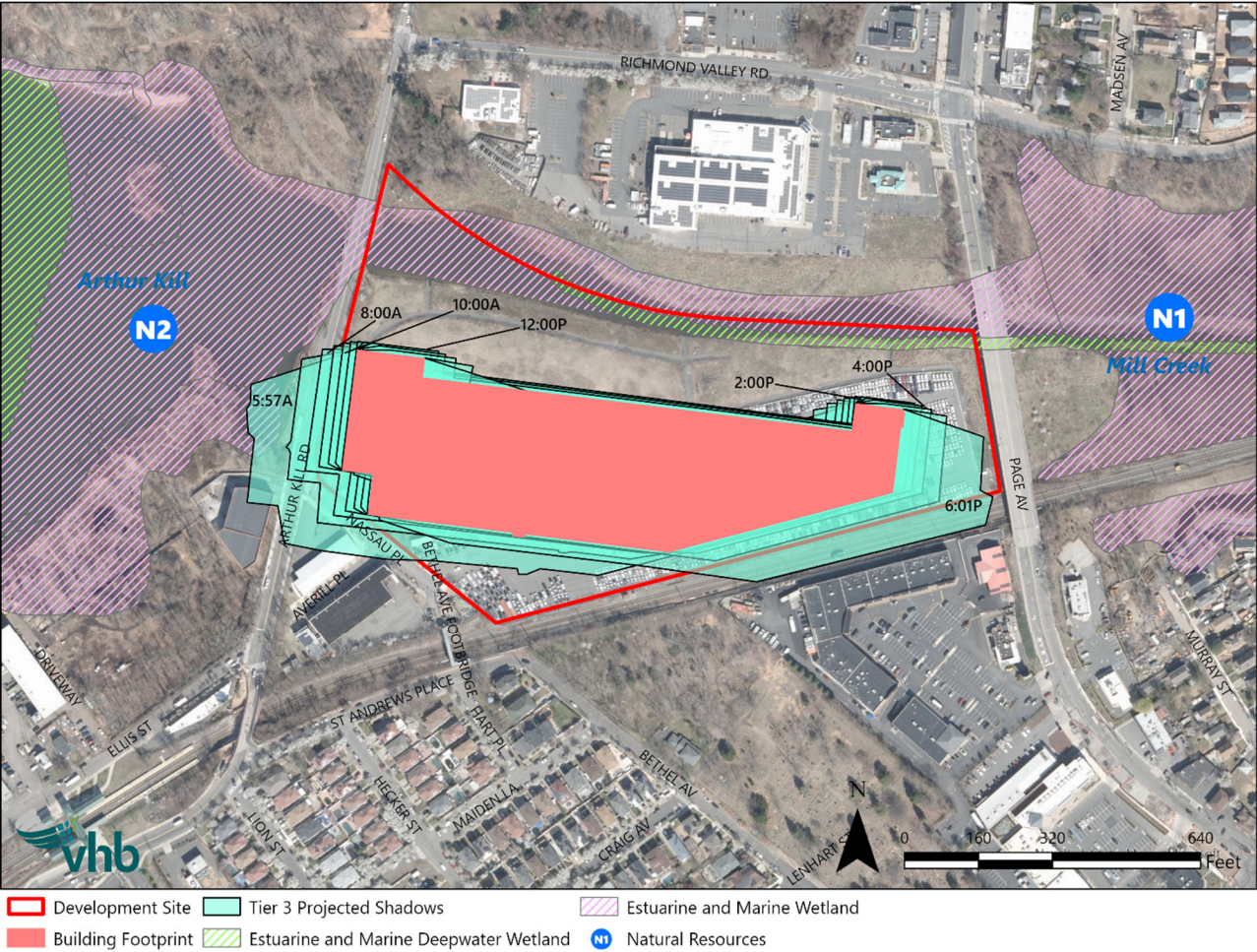


Figure 3-5 Tier 3 Screening June 21 Analysis Day



Mill Creek (N1)

Mill Creek is a narrow creek that winds through southern Staten Island, emptying into the Arthur Kill at its western extent on the north side of the Development Site. As described in greater detail in **Section 4: Natural Resources**, estuarine and deepwater tidal wetlands occur within the Mill Creek corridor that generally parallels the northern site boundary, and portions of the wetlands are located within the Development Site boundary. Mill Creek is part of the NYC Department of Environmental Protection's Bluebelt program, which preserves natural drainage corridors including streams, ponds, and wetlands, and enhances them to perform their functions of conveying, storing, and filtering runoff precipitation or stormwater.

Based on the Tier 3 screening assessment, the vast majority of shadows that would be cast by the Proposed Development would occur within upland areas of the Development Site and therefore would not affect the Mill Creek tidal wetland complex. Significantly, no shadows would be cast at any time of day on the Mill Creek tidal wetland complex on the analysis days that represent the spring, summer, and autumn seasons (June 21, March 21/September 21, and May 6/August 6), when vegetation is actively growing and photosynthesizing, and reproduction and other biological life processes for most resident wildlife and aquatic organisms are occurring (see **Figure 3-3**, **Figure 3-4** and **Figure 3-5**). Shading of Mill Creek from the Proposed Development would be limited to the December 21 analysis day, which represents the winter season when biological activity for most resident flora and fauna is at its nadir, and sunlight requirements for photosynthesis and other biological processes is similarly low. Moreover, shading of the wetland complex on the December 21 analysis day would be limited to less than three hours, and would only shade a small portion of the overall of the wetland complex (see **Figure 3-2**).

In summary, the Proposed Development would not result in shading of the Mill Creek tidal wetland complex during the representative analysis days when sunlight needs of resident flora and fauna for essential life processes are greatest. Shading of the resource would only occur on the December 21 analysis day and would be limited in temporal and areal extent. Accordingly, no significant adverse impact to Mill Creek are anticipated due to shading from the Proposed Development.

Arthur Kill (N2)

The Arthur Kill is a narrow, saltwater, tidal channel that separates Staten Island from New Jersey. The Staten Island and New Jersey waterfronts of the Arthur Kill are historically and currently heavily industrialized. As described in greater detail in **Section 4: Natural Resources**, tidal wetlands are present onsite along the shore of the Arthur Kill, directly west of the Development Site.

Based on the Tier 3 screening assessment, shadows cast by the Proposed Development on the March 21/September 21, May 6/August 6, and June 21, analysis days would occur over a small portion of the easternmost shoreline area of the Arthur Kill and would be limited to the first (morning) analysis hour of the day (see **Figure 3-3**, **Figure 3-4** and **Figure 3-5**). No shading of the Arthur Kill would occur after this hour on the March 21/September 21, May 6/August 6, and June 21 analysis days, which are representative of the seasons when

vegetation is actively growing and photosynthesizing, and reproduction and other biological life processes for most resident wildlife and aquatic organisms are taking place. On the December 21 analysis day, shadows cast by the Proposed Development would extend further west than shadows that would be cast on other analysis days and would therefore cover a slightly larger area of the Arthur Kill for under two hours (see **Figure 3-2**). The Arthur Kill would not experience project-related shading for the remainder of the analysis day. As noted previously, the December 21 analysis day is representative of the winter season, when biological activity for most resident flora and fauna is at its nadir, and sunlight requirements for photosynthesis and other biological processes is similarly low. As such, the highest degree of shading of the Arthur Kill from the Proposed Development would be minimal and would occur during the season when sunlight requirements of most resident flora and fauna are generally low.

Based on the foregoing, no significant adverse impact to the Arthur Kill is anticipated due to shading from the Proposed Development.

Conclusion

According to the Tier 3 analysis described above and summarized below in **Table 3-2**, the shading that would occur on Mill Creek (N1) as a result of the Proposed Development would only occur on the December 21 analysis day which represents the winter season when biological activity for most resident flora and fauna is at its nadir, and sunlight requirements for photosynthesis and other biological processes is similarly low. Further, shading of the wetland complex on the December 21 analysis day would be limited to less than three hours and would only shade a small portion of the overall wetland complex. The shading on the Arthur Kill (N2) would occur over a small portion of the easternmost shoreline area and would be limited to the first (morning) analysis hour of the day on the March 21/September 21, May 6/August 6, and June 21. No shading of the Arthur Kill would occur after this hour on the March 21/September 21, May 6/August 6, and June 21 analysis days, which are representative of the seasons when vegetation is actively growing and photosynthesizing, and reproduction and other biological life processes for most resident wildlife and aquatic organisms are taking place. Therefore, there would be no significant adverse impacts from the Proposed Development with respect to shadows as a result of the Proposed Actions, and no further analysis is required.

Table 3-2 Tier 1 through 3 Shadows Screening Results

Map ID	Resource Name	Tier 1-3 Screening Results
Natural Resources		
N1	Mill Creek	Screened at Tier 3
N2	Arthur Kill	Screened at Tier 3



4

Natural Resources¹

This section assesses the potential for a proposed action to result in significant adverse impacts on natural resources, which are defined as the City's biodiversity (plants, wildlife, and other organisms); any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and any areas capable of functioning in support of the ecological systems that maintain the City's environmental stability.

Introduction

As set forth in **Part I: Project Description**, the Applicant, EW Direct 1 Nassau, LLC, is seeking the following actions (the Proposed Actions) to facilitate the development of a one-story 331,700 gross square-foot (gsf) high cube warehouse (Use Group 16 warehouse and distribution center) (the Proposed Development):

1. Zoning Authorization pursuant to Section 107-64 (Removal of Trees) to waive Section 107-32 (Tree Regulations);
2. Zoning Authorization pursuant to Section 107-65 (Modifications of Existing Topography) to waive Section 107-312 (Areas not within Designated Open Space);
3. Zoning Authorization pursuant to Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to waive Section 107-472 (Maximum Size of a Group Parking Facility).

The proposed 331,700 gsf high cube warehouse would include 60 loading docks and 185 employee parking spaces at grade. A total of 52,665 sf of lot area is allocated for parking

¹ This chapter was prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, O.P.C

spaces; 31,618 sf on the Development Site's south side, 1,832 sf on the northwest side and 19,215 sf on the east side. The proposed new building would be one-story and 40-feet tall. The warehouse is being designed to accommodate up to three tenants, with units having areas of 110,730 gsf, 128,550 gsf, and 92,420 gsf, respectively. Loading docks would be located on the north side of the warehouse facing Mill Creek. Two curb cuts would be located on Nassau Place and a third, an exit only driveway, would be located on Arthur Kill Road, near the northern limits of the site.

Construction activities to facilitate the Proposed Development would include the following:

- › Clearing and Grubbing of all vegetation and structures within the limit of disturbance
- › Earthwork, including grading
- › Construction of building, asphalt parking lots, drainage structures, driveways and truck loading areas
- › Construction of rip rap revetment adjacent to the wetlands associated with Mill creek (Refer to **Drawing B-101**, Proposed Shoreline Plan, and **Drawing B-501**, Detail, in **Appendix C**)

This site has undergone remediation under the NYSDEC Voluntary Cleanup Program (Site # V-00159-2) for the Nassau Metals Corporation and presently contains an approved Site Remediation Design with engineering and institutional controls in place. The majority of Lot 125 has been capped with Engineering Controls, an asphalt cap or soil cap with impermeable Geosynthetic Clay Liner (GCL) that effectively make the site impervious and are required to be maintained.

Discussions with relevant agencies have been held over the past several years regarding the future redevelopment of the project site as envisioned in permit review processes for the remedial work. Redevelopment of the project site south of Mill Creek is envisioned within the limits of the former industrial facility shown on the 1974 Tidal Wetland map (see **Figure 4-3**). Wetland mitigation was even provided in the original permit application with NYSDEC in anticipation of future wetland impacts along the shoreline of Mill Creek required for redevelopment of the site.

The placement of the soil-GCL cap was such that future redevelopment could occur over the cap with appropriate engineering steps and in accordance with the Site Management Plan (SMP) approved by the NYSDEC. See **Appendix C** for figures from the SMP which includes more details on the cap throughout the different site areas. The Proposed Development would occur within, and would modify, the Soil-GCL cap and asphalt cap which comprise a portion of the engineering controls associated with the NYSDEC approved final environmental remedy for the site. Redevelopment of the site would be conducted under NYSDEC approved work plans.

While located within the limits of the former onsite development and within the limits of the existing remedial cap, the Proposed Action would result in the removal and/or alteration of vegetation within the limit of disturbance but will not encroach into Mill Creek or adjacent wetlands.

According to Chapter 11 of the *2021 CEQR Technical Manual*, a natural resource is defined as the City's biodiversity (a plant, wildlife or other organisms); any aquatic or terrestrial area capable of providing habitat for plants, wildlife or other organisms and any area capable of

functioning to support ecological systems that maintain the City's environmental balance (e.g., surface and groundwater, wetlands, landscaped areas, gardens, and built structures used by wildlife). An assessment of natural resources is appropriate if a natural resource exists on or near the Development Site, or if a proposed action involves disturbance of that resource. As shown on **Figure 4-3**, Mill Creek and adjacent tidally influenced wetlands traverse the northern portion of the Development Site. In addition, the western, northwestern, central and a narrow portion of the eastern part of the site are occupied by an open field which was established when the site was remediated and capped. This upland field, the tidal wetlands, and Mill Creek all provide potential habitat for wildlife, aquatic and marine organisms. Therefore, this section assesses the potential for the Proposed Development to result in significant adverse impacts on these natural resources which occur above the impervious cap.

Pursuant to the *2021 CEQR Technical Manual*, a natural resources assessment considers species in the context of the surrounding environment, habitat, or ecosystem, and examines the potential for a proposed action to impact these resources. Both direct and indirect effects to natural resources are considered when evaluating the need for an assessment. Direct effects are defined in the *2021 CEQR Technical Manual* as: "*activities that directly alter the condition of a resource.*" The potentially relevant direct effects listed in the *2021 CEQR Technical Manual* include the following:

- › Removal of vegetation;
- › Changing one habitat type to create another;
- › Development of roadways, parking lots, buildings, and other paved surfaces on previously vegetated or unpaved surfaces; and
- › Installation of drainage systems, including sewers, culverts, retaining basins, recharge wells, etc.

As defined in the *2021 CEQR Technical Manual*, indirect effects occur when: "*...the changes on a site alter conditions to adjacent or nearby resources or on the site itself after construction has ended.*" The potentially relevant indirect effects listed in the *2021 CEQR Technical Manual* include the following:

- › A change in on-site activities that would either increase the number of people, number of domestic animals, or noise level, thereby increasing disturbance to on-site or nearby natural resources.
- › An activity or a change in conditions that would introduce or facilitate colonization by new (particularly non-native) plant or animal species that could overtake existing (particularly native) species either on-site or in nearby resources.
- › A change that would increase the frequency of bird collisions with built structures due to increase in height, architectural design, or lighting infrastructure.

Methodology

To establish the regulatory setting for the Proposed Actions, a summary of the federal, state and local regulatory programs applicable to the Project Area is provided.

Regulatory Setting

The following text identifies the federal, state and local (New York City) legislation and regulatory programs pertaining to the natural resources of the Project Area and vicinity.

Federal

Clean Water Act (33 U.S. Code [USC] §§ 1251-1387)

The objective of the Clean Water Act, also known as the Federal Water Pollution Control Act, is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. The Clean Water Act regulates point sources of water pollution, such as discharges of municipal sewage, industrial wastewater, and stormwater runoff; the discharge of dredged or fill material into navigable waters and other waters; and non-point source pollution (e.g., runoff from streets, construction sites, etc.) that enters water bodies from sources other than from outfalls. Permitting pursuant to Section 404 of the Clean Water Act is administered by the U.S. Army Corps of Engineers (USACE). Pursuant to Section 401 of the Clean Water Act, applicants for discharges to navigable waters in New York State must also obtain a Water Quality Certification from the New York State Department of Environmental Conservation (NYSDEC).

Rivers and Harbors Act of 1899, Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable water of the United States, the excavation from or deposition of material in these waters, or any obstruction or alteration in navigable waters of the United States. The purpose of this Act is to protect navigation and navigable channels. Any structures placed in or over navigable waters, such as pilings, piers, or bridge abutments up to the mean high water (MHW) line are regulated pursuant to this Act. Permitting pursuant to Section 10 of the Rivers and Harbors Act is administered by the USACE.

Federal Endangered Species Act of 1973 (16 USC §§ 1531-1544)

The federal Endangered Species Act of 1973 (ESA) recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. The ESA provides for the protection of endangered and threatened species and the critical habitats on which endangered and threatened species depend for survival. The ESA also prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the ESA, and interstate or foreign commercial activities. Review of regulated activities and permitting under the ESA is administered by the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS).

Magnuson-Stevens Act (16 USC §§ 1801 TO 1883)

Section 305(b)(2)-(4) of the Magnuson-Stevens Act outlines the process for the National Marine Fisheries Service (NMFS) and the Regional Fishery Management Councils (in this case, the Mid-Atlantic Fishery Management Council) to comment on actions proposed by federal

agencies (i.e., by issuing permits, authorization or funding for projects) that may adversely impact areas designated as Essential Fish Habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC §1802(10)).

Adverse impacts on EFH, as defined in 50 CFR 600.910(A), include any impact that reduces the quality and/or quantity of EFH. Adverse impacts may include:

- › Direct impacts, such as physical disruption or the release of contaminants;
- › Indirect impacts, such as the loss of prey or reduction in the fecundity (number of offspring produced) of a managed species; and
- › Site-specific or habitat-wide impacts that may include individual, cumulative, or synergetic consequences of a federal action.

New York State

Tidal Wetlands Act, Article 25, ECL, Implementing Regulations 6 NYCRR § 661

In New York State, tidal wetlands include the Hudson River, as well as the marine shores, bays, inlets, canals, and estuaries of Long Island, New York City, and Westchester County. The NYSDEC administers the Tidal Wetlands regulatory program and the mapping of the State's tidal wetlands. A permit is required for various land uses and activities within regulated Tidal Wetlands and Tidal Wetland Adjacent Areas, which in New York City extend up to 150 feet inland from the Tidal Wetland boundary, with certain exceptions.

Protection of Waters Program, Article 15, Title 5 ECL, Implementing Regulations 6 NYCRR § 608

The NYSDEC administers the Protection of Waters Program to preserve and prevent undesirable impacts to rivers, streams, lakes, ponds and other surface waters. Through this program, the NYSDEC has established regulations and permitting requirements that are compatible with the preservation, protection, and enhancement of the present and potential values of the water resources, protect the public health and welfare, and are consistent with the reasonable economic and social development of New York State. Under the Protection of Waters Program, all New York State waters are assigned a class and standard designation based on existing or expected best usage of each water or waterway segment.

Endangered and Threatened Species of Fish and Wildlife; Species of Special Concern (ECL, Sections 11-0535[1]-[2], 11-0536[2], [4], Implementing Regulations 6 NYCRR § 182)

The Endangered and Threatened Species of Fish and Wildlife, Species of Special Concern Regulations perpetuate and restore native animal life within New York State for the use and benefit of current and future generations. The implementing regulations prohibit the unauthorized taking, import, transport, possession, or selling of any endangered or threatened species of fish or wildlife, or any hide, or other part of these species as listed in 6 NYCRR §182.6. The regulations further prohibit adverse modification of occupied habitat of endangered or threatened species without authorization from NYSDEC.

Protected Native Plants (ECL 9-1503, Implementing Regulations 6 NYCRR § 193.3)

The NYSDEC's Protected Native Plants Program provides protections for four categories of protected plants: endangered, threatened, rare and vulnerable to exploitation. Pursuant to 6 NYCRR § 193.3(e), it is a violation to pick, pluck, sever, remove, damage by the application of herbicides or defoliants, or carry away, without the consent of the landowner, any protected plant in New York State. The regulation gives landowners additional rights to prosecute those who collect plants without permission.

Waterfront Revitalization of Coastal Areas and Inland Waterways, NYS Executive Article 42 (910 to 923)

The federal Coastal Zone Management Act was passed in 1972 to encourage coastal states to develop and implement Coastal Management Programs (CMPs). The act was established as a United States national policy to preserve, protect, develop, and where possible, restore or enhance the resources of the Nation's coastal zone for current and succeeding generations. In New York State, the CMP is administered by the New York State Department of State (NYSDOS), under the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. NYSDOS has established 44 coastal policies that promote the beneficial use of coastal resources, prevent their impairment or otherwise address activities that may affect resources within the New York State Coastal Zone. Consistency review with New York State Coastal Policies is required for projects that are located within the New York State Coastal Zone and are subject to federal funding, permits, and/or authorizations.

New York City

NYC Waterfront Revitalization Program

The NYC Waterfront Revitalization Program (WRP) establishes the City's policies for waterfront planning, preservation, and development projects. The goal of the WRP is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing any potential conflicts among these objectives. The WRP is authorized by the New York State Waterfront Revitalization of Coastal Areas and Inland Waterways Act, which was enacted in response to the federal Coastal Zone Management Act and allows municipalities to participate in the State's Coastal Management Program by creating their own local WRP.

The City Planning Commission, in its capacity as the City Coastal Commission, and the New York City Department of City Planning are responsible for administering the WRP. Consistency review with WRP policies is required for projects that are located within WRP boundaries.

Existing Conditions

The property is generally bounded by Mill Creek along the northern property line, Arthur Kill Road to the west, Nassau Place and railroad tracks associated with the Staten Island Rapid Transit Operating Authority (SIRTOA) to the south, and an elevated roadway (Page Avenue) to the east. The site is approximately 18 acres, of which 8 acres is currently a paved area used for vehicle storage by an auto dealer. The balance of the site is a protective, vegetated

environmental cap with an impermeable liner that was installed as part of the remediation of the property carried out by a prior owner.

Site remediation activities were completed under the NYSDEC Voluntary Cleanup Program (VCP) (Site # V-00159-2). The final remedy consisted primarily of the dredging of metals impacted sediments from Mill Creek and on-site placement of the dredged materials, restoration of Mill Creek and associated wetlands with a soil capping system, installation of a soil cap with a Geosynthetic Clay Liner (soil-GCL) layer in upland areas, and the construction of an asphalt cap primarily in the location of the former buildings. The composite cover system, which includes the cap associated with the wetland restoration, the soil-GCL cap and the asphalt cap, constitute the Engineering Controls (ECs) that were part of the NYSDEC approved final remedy. Remnants of the former Nassau Metals refinery structures (foundations and/or floor slabs) lie below the pavement and/or vegetated cap. An existing Con Edison substation is located in the southwestern portion of the site. Several easements traverse the northern portion of the site in an approximate east-west orientation.

The redevelopment of the site anticipated during the remediation design process assumed wetland impacts along the shoreline of Mill Creek totaling approximately 0.25 acres. As a result, and in anticipation of this redevelopment project, wetland mitigation in the form of creation/restoration of the Tidal Wetlands along Mill Creek totaling approximately 0.75 acres was completed, as required by NYSDEC.

As shown in **Drawing WN102, Tidal Wetlands Adjacent Area Coverage – Existing Conditions** (See **Appendix C, Civil Engineering and Site Management Plan Drawings**) in the resulting condition, the wetland adjacent area occupies, in total, 171,810 square feet, or roughly 22 percent, of the total area of the lot.

Existing information was identified based on a site visit conducted in March 2021, agency correspondence, applicable literature, and information obtained from governmental and nongovernmental sources, such as: the Environmental Resource Mapper (ERM) published by the NYSDEC; NYSDEC Water Quality Classifications Data; NYCDEP Harbor Water Quality Survey data; NYSDEC New York State Regulatory Tidal Wetlands Data; U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps; USFWS Information for Planning and Consultation (IPaC) list of federally listed threatened and endangered species; Federal Emergency Management Agency (FEMA) Preliminary and Effective Flood Insurance Rate Maps (pFIRMs and FIRMs); the National Oceanic and Atmospheric Administration (NOAA) Essential Fish Habitat (EFH) mapper; the NOAA Endangered Species Act (ESA) Section 7 Mapper; the Cornell Lab of Ornithology eBird Hotspot Mapper; the 2000–2005 New York State Breeding Bird Atlas; and the New York Natural Heritage Program (NYNHP).

Habitats/Vegetation

The Development Site contains approximately 18 acres of various land uses. The Development Site contains various terrestrial, wetland, and aquatic habitats.

Ecological Communities

Ecological communities observed onsite may be classified consistent with the *Ecological Communities of New York State* (Eddinger, et. al., 2014) as saltwater tidal creek, high salt marsh and urban vacant lot.

Saltwater Tidal Creek

Mill Creek is a saltwater tidal creek that traverses the northern portion of the Development Site. According to the *Ecological Communities of New York State*, a saltwater tidal creek is defined as “the aquatic community of a shallow, continuously semidiurnally tidally flooded creek with submerged areas averaging less than 2 meters (6 feet) deep at low tide.” Salinity in a saltwater tidal creek ranges from saline to brackish. Saltwater tidal creeks have a global conservation rank of G4 and a state conservation rank of S3 (Eddinger, et. al., 2014).

High Salt Marsh

High salt marshland is located adjacent to portions of the onsite section of Mill Creek. According to the *Ecological Communities of New York State*, a high salt marsh is defined as “a coastal marsh community that occurs in sheltered areas of the seacoast, in a zone extending from mean high tide up to the limit of spring tides.” Common plants found in high salt marshes include salt-meadow grass (*Spartina patens*), cordgrass (*Spartina alterniflora*), spikegrass (*Distichlis spicata*), black-grass (*Juncus gerardii*), glassworts (*Salicornia* spp.), switchgrass (*Panicum virgatum*), sea-lavender (*Limonium carolinianum*), seaside gerardia (*Agalinis maritima*) and slender perennial saltmarsh aster (*Symphyotrichum tenuifolium* var. *tenuifolium*). High salt marshes have a global conservation rank of G4 and a state conservation rank of S3S4 (Eddinger, et. al., 2014).

Both Mill Creek and associated wetlands that were created previously during the remediation of the site are regulated Tidal Wetlands and are shown on **Drawing WN101, Tidal Wetlands and Adjacent Area Plan** (see **Appendix C**). **Figure 4-3** depicts the originally mapped extent of Tidal Wetlands on-site. These included Littoral Zone (LZ) (Mill Creek) and Coastal Shoals, Bars and Mudflats (SM). In addition to the above, the created Tidal Wetlands would now be classified as Intertidal Marsh (IM).

Urban Vacant Lot

Unpaved portions of the site south of Mill Creek consist of a reseeded soil-GCL cap formerly developed with an industrial facility. These areas are best characterized as urban vacant lot. According to the *Ecological Communities of New York State*, an urban vacant lot is defined as “an open site in a developed, urban area that has been cleared either for construction or following the demolition of a building.” Common plants found in urban vacant lots include Norway maple (*Acer platanoides*), white mulberry (*Morus alba*) and tree of heaven (*Ailanthus altissima*). Areas of the site south of Mill Creek are generally dominated by herbaceous cover, devoid of trees. Urban vacant lots do not have an associated global or state conservation rank (Eddinger, et. al., 2014).

Essential Fish Habitat

EFH comprises waters and substrates necessary for fish species spawning, breeding, feeding, or growing to maturity. Based on data provided from the National Oceanic and Atmospheric Administration's (NOAA) EFH Mapper program, there are a number of fish species with EFH located proximate to the study areas. **Table 4-1** lists the species and life stages of fish identified as having EFH in the Arthur Kill and Mill Creek in the vicinity of the Study Area.

Table 4-1 EFH-Designated Species in the Vicinity of Study Area

Common Name	Scientific Name	Life Stage			
		Eggs	Larvae	Juvenile	Adult
Bluefish	<i>Pomatomus saltatrix</i>			X	X
Little Skate	<i>Leucoraja erinacea</i>			X	X
Winter Skate	<i>Leucoraja ocellata</i>			X	X
Clearnose Skate	<i>Raja eglanteria</i>			X	X
Longfin Inshore Squid	<i>Doryteuthis pealeii</i>	X			
Atlantic Butterfish	<i>Peprilus triacanthus</i>		X		
Atlantic Herring	<i>Clupea harengus</i>		X	X	X
Summer Flounder	<i>Paralichthys dentatus</i>		X	X	X
Red Hake	<i>Urophycis chuss</i>	X	X	X	X
Winter Flounder	<i>Pseudopleuronectes americanus</i>	X	X	X	X
Windowpane Flounder	<i>Scophthalmus aquosus</i>	X	X	X	X

Source: NOAA EFH Mapper Report (Appendix F)

Significant Coastal Fish and Wildlife Habitats

The NYSDOS Division of Coastal Resources delineates the State's coastal zone boundary and identifies Significant Coastal Fish and Wildlife Habitats. The study area is within the New York State Coastal Zone, but the waters of Mill Creek are not designated Significant Coastal Fish and Wildlife Habitat. **Section 2, Land Use, Zoning, and Public Policy** assesses the consistency of the Proposed Actions with the New York City Waterfront Revitalization Program (WRP) approved as part of New York State's Coastal Zone Management Program.

Upland Habitat/Grassland

The *2021 CEQR Technical Manual* defines Grasslands to include plant communities that are dominated by grasses and sedges. Graminoids and limited forms (herbaceous non-grasslike flowering plants) are dominant and trees and shrubs are sparse or absent. In the City, maritime grasslands contain those species that can survive in the harsh environmental conditions that are created by strong winds and salt spray. This community is dominated by graminoids that usually collectively have greater than 50 percent cover. Dominant grasses are little bluestem (*Schizacharium scoparium*), switchgrass (*Panicum virgatum*), and broomsedge (*Andropogon virginicus*). Various wildlife species may use grassland areas such as voles (*Microtus*, sp.), upland sandpipers (*Bartramia longicauda*), and short-eared owl (*Asio flammeus*). Birds of prey and also grassland bird species that are in decline such as grasshopper sparrow, Henslow's sparrow, bobolink and eastern meadowlark also use some grasslands. As shown in **Figure 4-2**, the undeveloped, upland portion of the site, south of Mill Creek is currently occupied by an

open field underlain by an impermeable GCL that was installed as part of the remediation of the property carried out by the prior owner of the site. This field occupies approximately 8 acres (3.2 hectares).

A field investigation/survey of the vegetative community was performed by Langan scientists on June 26, 2022. Nine (9) representative vegetation survey plots were performed with the open habitat community on-site. The vegetative plot data has been provided in **Table 4-2**, below. A plot location figure is provided below as **Figure 4-1**. Note, no access to the northwestern corner of the site was available at the time of the survey. As such, no survey plots were completed in this area. However, the tree species present were viewed from Arthur Kill Road and recorded in that area.

The vegetation survey was completed using a modified *Density Method* survey to determine the absolute percent coverage of plant species within each plot, as described in the *Sampling Vegetation Attributes, Interagency Technical Reference* by the United States Department of Agriculture, Natural Resource Conservation Service, and Department of Interior. This method is often utilized when the "delineation of separate individual plants is difficult." Subjective placement of the plots was performed for the mixed herbaceous habitat (USDA NRCS, DOI, 1999). This is because this community exhibited areas of grass-dominated habitat and areas dominated by various flowering plants. Each plot was a 12 square-foot plot. This size was chosen due to the open nature of the area.

An ocular estimation of the absolute cover of each species within each plot was performed. Dominant species within each plot was determined utilizing the U.S. Army Corps of Engineers (USACE) Dominance Test or the "50/20 Rule". The Dominance Test defines the most abundant plants within a community. Plant species are considered a dominant species if the species individually covers 50 percent (%) or greater of a plot's area or the species (when listed in descending order of abundance) totals 50% or greater of the total coverage of vegetation within a plot. In addition, any species that individually covers at least 20% of a plot is also considered dominant (Environmental Laboratory, 1987). This method was selected because it is an accepted standard in the industry that is highly reproducible.

The dominant species within the mixed herbaceous community is comprised of eight-flower six-weeks grass (*Vulpia octoflora*), wand panic grass (*Panicum virgatum*), crownvetch (*Securigera varia*), Brome (Bromus Sp.), garden bird's-foot-trefoil (*Lotus corniculatus*), goldenrod (*Solidago* species), common wormwood (*Artemisia vulgaris*), Chinese bush-clover (*Lespedeza cuneata*), spotted knapweed (*Centaurea stoebe*), common milkweed (*Asclepias syriaca*), annual rye (*Lolium multiflorum*), poverty oatgrass (*Danthonia spicata*), callery pear seedlings (*Pyrus calleryana*), English plantain (*Plantago lanceolata*), annual wormwood (*Artemisia annua*), and clustered mountain-mint (*Pycnanthemum muticum*), as detailed in **Table 4-2**.

The species observed within the wooded area in the northwestern corner of the site primarily consist of eastern cottonwood (*Populus deltoids*), callery pear (*Pyrus calleryana*), black locust (*Robinia pseudoacacia*), and pin oak (*Quercus palustris*) in the canopy layer. The understory/shrub layer primarily consists of groundseltree (*Baccharis halimifolia*). The dominant herbaceous plant visible is common reed (*Phragmites australis*) and cordgrass (*Spartina* species) along the water's edge.

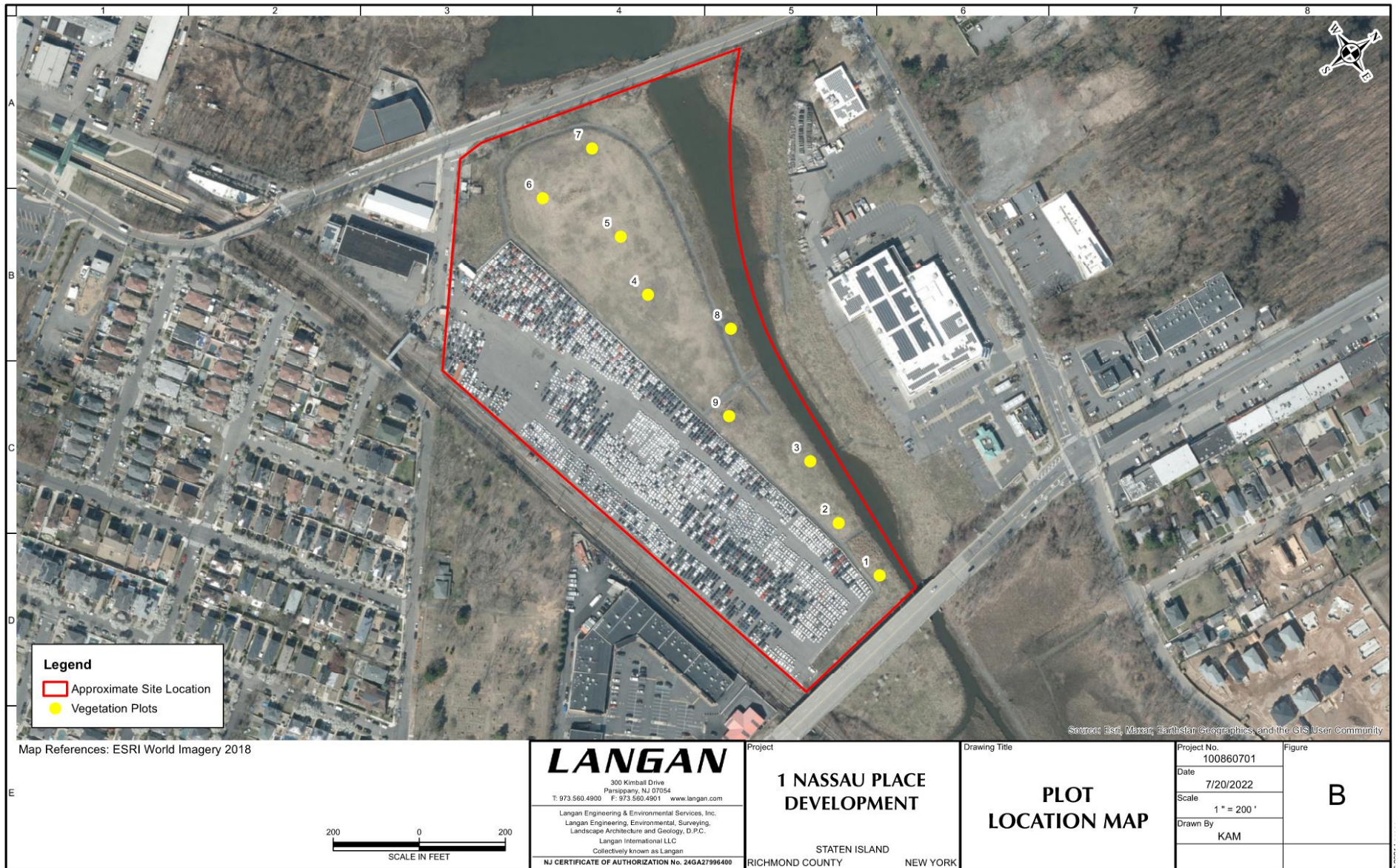
Table 4-2 Vegetation Six-Foot by Six-Foot Plot Surveys

Plot 1					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Eight-flower six-weeks Grass (<i>Vulpia octoflora</i>)	40%	X	Rough dropseed (<i>Sporobolus compositus</i>)	5%	
Wand panic grass (<i>Panicum virgatum</i>)	35%	X	Crow garlic (<i>Allium vineale</i>)	5%	
Crownvetch (<i>Securigera varia</i>)	15%		Rabbitfoot clover (<i>Trifolium arvense</i>)	1%	
English Plantain (<i>Plantago lanceolata</i>)	15%		Common gypsyweed (<i>Veronica officinalis</i>)	<1%	
White clover (<i>Trifolium repens</i>)	5%				
Plot 2					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Crownvetch (<i>Securigera varia</i>)	40%	X	Wand panic grass (<i>Panicum virgatum</i>)	2%	
Chinese bush-clover (<i>Lespedeza cuneata</i>)	40%	X	Upright yellow wood-sorrel (<i>Oxalis stricta</i>)	2%	
English Plantain (<i>Plantago lanceolata</i>)	15%		Crow garlic (<i>Allium vineale</i>)	2%	
Eight-flower six-weeks Grass (<i>Vulpia octoflora</i>)	10%		Orchard grass (<i>Dactylis glomerata</i>)	2%	
Carolina horse-nettle (<i>Solanum carolinense</i>)	5%		Late-flowering thoroughwort (<i>Eupatorium serotinum</i>)	5%	
Garden bird's-foot-trefoil (<i>Lotus corniculatus</i>)	5%		Curly Dock (<i>Rumex crispus</i>)	1%	
Plot 3					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Garden bird's-foot-trefoil (<i>Lotus corniculatus</i>)	30%	X	Crow garlic (<i>Allium vineale</i>)	5%	
Late-flowering thoroughwort (<i>Eupatorium serotinum</i>)	20%	X	Goldenrod (<i>Solidago</i> species)	5%	
Crownvetch (<i>Securigera varia</i>)	20%	X	Eight-flower six-weeks grass (<i>Vulpia octoflora</i>)	5%	
English Plantain (<i>Plantago lanceolata</i>)	10%		Firewheel (<i>Gaillardia pulchella</i>)	1%	
Philadelphia Fleabane (<i>Erigeron philadelphicus</i>)	10%		Foxtail sp. (<i>Setaria</i> ...)	1%	
Common yarrow (<i>Achillea millefolium</i>)	8%		Callery pear seedlings (<i>Pyrus calleryana</i>)	1%	
Poverty oatgrass (<i>Danthonia spicata</i>)	5%		White sweetclover (<i>Melilotus albus</i>)	<1%	
Great mullein (<i>Verbascum thapsus</i>)	1%		Curly Dock (<i>Rumex crispus</i>)	<1%	
Ox-eyed daisy (<i>Leucanthemum vulgare</i>)	1%		Carolina horse-nettle (<i>Solanum carolinense</i>)	<1%	

Plot 4					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Goldenrod (<i>Solidago</i> species)	25%	X	Brome calitus	5%	
Annual Wormwood (<i>Artemisia annua</i>)	20%	X	Eight-flower six-weeks grass (<i>Vulpia octoflora</i>)	1%	
Spotted knapweed (<i>Centaurea stoebe</i>)	15%	X	English rye grass	1%	
Crownvetch (<i>Securigera varia</i>)	15%		Late-flowering thoroughwort (<i>Eupatorium serotinum</i>)	1%	
Poverty oatgrass (<i>Danthonia spicata</i>)	15%		Canada thistle	<1%	
Common Fleabane (<i>Erigeron philadelphicus</i>)	5%		Deer tongue	<1%	
Carolina horse-nettle (<i>Solanum carolinense</i>)	5%				
Plot 5					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Clover, Japanese (<i>Kummerowia striata</i>)	50%	X	Mustard sp. (<i>Brassica</i> sp.)	1%	
Crownvetch (<i>Securigera varia</i>)	30%	X	Chinese bush-clover (<i>Lespedeza cuneata</i>)	1%	
Brome Calitus ()	10%		Northern drop seed (<i>Sporobolus heterolepis</i>)	1%	
Poverty oatgrass (<i>Danthonia spicata</i>)	10%		Wild geranium (<i>Geranium maculatum</i>)	<1%	
Common wormwood (<i>Artemisia vulgaris</i>)	2%		Brome (<i>Bromus</i> sp.)	<1%	
Crow garlic (<i>Allium vineale</i>)	1%		Common gypsyweed (<i>Veronica officinalis</i>)	1%	
Plot 6					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Common milkweed (<i>Asclepias syriaca</i>)	30%	X	Wand panic grass (<i>Panicum virgatum</i>)	15%	
Spotted knapweed (<i>Centaurea stoebe</i>)	30%	X	Poverty oatgrass (<i>Danthonia spicata</i>)	10%	
Annual rye (<i>Festuca perennis</i>)	20%	X	Goldenrod (<i>Solidago</i> species)	1%	
Crownvetch (<i>Securigera varia</i>)	15%		Timothy hay (<i>Phleum pretense</i>)	<1%	
Plot 7					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Common wormwood (<i>Artemisia vulgaris</i>)	40%	X	Sulphur cinquefoil (<i>Potentilla recta</i>)	5%	
Callery pear seedlings (<i>Pyrus calleryana</i>)	30%	X	English Plantain (<i>Plantago lanceolata</i>)	2%	
Poverty oatgrass (<i>Danthonia spicata</i>)	30%	X	Spikerush (<i>Eleocharis palustris</i>)	2%	

Black eyed susan	5%		Common Fleabane (<i>Erigeron philadelphicus</i>)	<1%	
eight-flower six-weeks Grass (<i>Vulpia octoflora</i>)	5%		Orchardgrass (<i>Dactylis glomerata</i>)	<1%	
Brome calitus	5%		Deptford pink	<1%	
Goldenrod (<i>Solidago</i> species)	5%		Rabbit-foot clover (<i>Trifolium arvense</i>)	<1%	
Plot 8					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
English Plantain (<i>Plantago lanceolata</i>)	50%	X	Penny grass (<i>Thlapsi arvense</i>)	5%	
Poverty oatgrass (<i>Danthonia spicata</i>)	10%		Annual Wormwood (<i>Artemisia annua</i>)	2%	
Crownvetch (<i>Securigera varia</i>)	10%		Great mullein (<i>Verbascum thapsus</i>)	1%	
Stinking chamomile (<i>Anthemis cotula</i>)	10%		Sweet bushclover (<i>Lespedeza capitata</i>)	1%	
eight-flower six-weeks grass (<i>Vulpia octoflora</i>)	5%		Fescue grass (<i>Festuca arundinacea</i>)	1%	
Common fleebane	5%		Grass sp.	<1%	
Chinese bush-clover (<i>Lespedeza cuneata</i>)	5%				
Plot 9					
Species	Absolute Cover (%)	Dominant Species	Species	Absolute Cover (%)	Dominant Species
Annual Wormwood (<i>Artemisia annua</i>)	40%	X	Curly Dock (<i>Rumex crispus</i>)	10%	
Short toothed mountain mint (<i>Pycnanthemum muticum</i>)	25%	X	Poverty oatgrass (<i>Danthonia spicata</i>)	10%	
Crownvetch (<i>Securigera varia</i>)	15%		Mustard sp. (<i>Brassica</i> sp.)	5%	
Shepard's purse (<i>Capsella bursa-pastoris</i>)	15%		Green foxtail (<i>Setaria viridis</i>)	5%	
Rocket lochspur (<i>Consilida ajacis</i>)	10%				

Figure 4-1 Plot Location Map



Remnants of the former Nassau Metals refinery structures (foundations and/or floor slabs) lie below the vegetated cap. A paved vehicle storage lot totaling approximately 8.5 acres occupies the remainder of the site, south of Mill Creek. Onsite areas north of Mill Creek generally comprise high marsh and low marsh wetlands associated with the Mill Creek corridor. A small area of undeveloped upland field is also present in the northwestern corner of the property, north of Mill Creek.

As shown on **Drawing WN102, Tidal Wetland Adjacent Area Coverage-Existing Conditions** (see **Appendix C**), a significant portion of the upland habitat on-site functions as a wetland buffer, or Tidal Wetland Adjacent Area, approved by the New York State Department of Environmental Conservation (NYSDEC). According to the *2021 CEQR Technical Manual*, buffers play a critical role protecting wetlands and uplands from impacts. Among other things, buffers attenuate waves and floodwaters, infiltrate stormwater, provide wildlife habitat and filter sediments and nutrients from the water. The effectiveness of adjacent areas for the protection of wetland functions and values is highly dependent on-site specific conditions such as slope, vegetative cover, soil type, overland flow type, vegetative structure, landscape position, and width.

Figure 4-2 Aerial Photograph



As shown on **Drawing WN102**, a significant portion of the upland habitat onsite functions as a wetland buffer, or Tidal Wetland Adjacent Area as previously approved by the NYSDEC.

Wildlife

Undeveloped portions of the site comprise the open field south of the Mill Creek corridor, which is underlain by the GCL cap, Mill Creek, small areas of manmade wetlands along Mill Creek, and a small portion of undeveloped upland field north of Mill Creek. Undeveloped portions of the site may provide habitat for transient wildlife, as outlined below, but given the low diversity of the upland vegetation onsite and resultant limited habitat value, the upland vegetative community is not anticipated to support significant local populations of wildlife. Mill Creek and adjacent manmade wetlands provide habitat and a travel corridor for aquatic/marine biota, avian species and potentially reptiles and mammals.

Birds

The 2000–2005 New York State Breeding Bird Atlas documented 69 species as possible, probable, or confirmed breeders in Census Block 5548B (**Table 4-3**). Census blocks span 3 square miles; Block 5548B includes a portion of southwestern Staten Island along the Arthur Kill, as well as the Maurer, Sewaren, and Woodbridge Township portions of New Jersey, including the terrestrial and aquatic Study Areas. Forest, tidal/freshwater wetlands, and other undisturbed habitat types are present in this census block; however, due to the urbanized nature of the Study Area, these are either not present or are degraded based on the previous remedial activities and the development present on and adjacent to the site. The overall site occupies approximately 18 acres, 8 of which are paved, leaving 10 acres of vegetated, remediated upland on top of an impermeable GCL cap, Mill Creek and narrow strips of manmade tidal wetlands along Mill Creek.

The upland portion of the site was observed to be used by loafing Canada Geese. No other avian species were observed during our site visit although various songbirds and other neo-tropical migrants may be expected to be found onsite. Urban-tolerant bird species may utilize the site during transient life stages and waterfowl, such as mallard duck and Canada Goose, as well as wading birds, are expected to use and have been observed in the nearby Arthur Kill and the shelter offered along the Mill Creek corridor.

Given the relatively small size of the undeveloped upland portion of the site and available habitat, the disturbed nature of both undeveloped and developed portions of the site, and the abundance of similar, disturbed, urban habitats in the vicinity of the site, most of the bird species documented by the Atlas within this census block are not anticipated to rely heavily on the habitat provided by the Study Area.

Table 4-3 Bird Species Confirmed Breeding within Census Block 5548B

Common Name	Scientific Name
Canada Goose	<i>Branta Canadensis</i>
Mute Swan	<i>Cygnus olor</i>
Gadwall	<i>Anas strepera</i>
American Black Duck	<i>Anas rubripes</i>
Mallard	<i>Anas platyrhynchos</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Green Heron	<i>Butorides virescens</i>
Osprey	<i>Pandion haliaetus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
American Kestrel	<i>Falco sparverius</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Clapper Rail	<i>Rallus longirostris</i>
Killdeer	<i>Charadrius vociferus</i>
Spotted Sandpiper	<i>Actitis macularius</i>
American Woodcock	<i>Scolopax minor</i>
Rock Pigeon	<i>Columba livia</i>
Mourning Dove	<i>Zenaida macroura</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Barn Owl	<i>Tyto alba</i>
Eastern Screech-Owl	<i>Magascops asio</i>
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>
Chimney Swift	<i>Chaetura pelagica</i>
Belted Kingfisher	<i>Megaceryle alcyon</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Eastern Wood-Pewee	<i>Contopus virens</i>
Willow Flycatcher	<i>Empidonax traillii</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
White-eyed Vireo	<i>Vireo griseus</i>
Red-eyed Vireo	<i>Vireo olivaceus</i>
Blue Jay	<i>Cyanocitta cristata</i>
American Crow	<i>Corvus brachyrhynchos</i>
Fish Crow	<i>Corvus ossifragus</i>

Table 4-3 Bird Species Confirmed Breeding within Census Block 5548B

Common Name	Scientific Name
Tree Swallow	<i>Tachycineta bicolor</i>
Barn Swallow	<i>Hirundo rustica</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
Tufted Titmouse	<i>Baeolophus bicolor</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
House Wren	<i>Troglodytes aedon</i>
Marsh Wren	<i>Cistothorus palustris</i>
Wood Thrush	<i>Hylocichla mustelina</i>
American Robin	<i>Turdus migratorius</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Brown Thrasher	<i>Toxostoma rufum</i>
European Starling	<i>Sturnus vulgaris</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Northern Parula	<i>Parula americana</i>
Yellow Warbler	<i>Dendroica petechia</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Eastern Towhee	<i>Pipilo erythrophthalmus</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Saltmarsh Sharp-tailed Sparrow	<i>Ammodramus caudacutus</i>
Song Sparrow	<i>Melospiza melodia</i>
Swamp Sparrow	<i>Melospiza georgiana</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Indigo Bunting	<i>Passerina cyanea</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Common Grackle	<i>Quiscalus quiscula</i>
Boat-tailed Grackle	<i>Quiscalus major</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Baltimore Oriole	<i>Icterus galbula</i>
House Finch	<i>Carpodacus mexicanus</i>
American Goldfinch	<i>Carduelis tristis</i>
House Sparrow	<i>Passer domesticus</i>

Source: 2000–2005 New York Breeding Bird Atlas for Block 5548B

Mammals

Mammals anticipated to occur onsite include common species of small rodents, vermin, and other small mammals commonly found in developed areas. These would include but are not limited to gray squirrel, Norway rat, mice, raccoon, possum and possibly cottontail rabbit in the field area. The only mammal observed in or near the terrestrial Study Area during the 2021 site visit was the Eastern gray squirrel in the trees along Arthur Kill Road.

Reptiles and Amphibians

Upland and transitional habitat suitable to support most reptiles and essentially all amphibians of the region is largely absent from the Terrestrial Study Area, save for habitats that are degraded due to the previous remedial activities and the development present on and adjacent to the site. As previously discussed in this report, hydrologic features onsite are exclusively saline. Amphibians rely on freshwater for survival (USFWS, 2015), and as such are unlikely to utilize waters on the Site. Reptiles tolerant of disturbed conditions may be found onsite. Additional reptiles, such as diamondback terrapin (*Malaclemys terrapin*), common garter snake (*Thamnophis sirtalis*), and northern brown snake (*Storeria dekayi*) may be found in or along the edges of the Mill Creek (NYSDEC, 2007).

Aquatic Biota

The New York–New Jersey Harbor Estuary, which includes the nearby Arthur Kill, supports a diverse aquatic community of over 200 species of fish (Pirani et. al., 2018) and a variety of phytoplankton and zooplankton (AKRF, 2013). The following sections provide a general discussion of the aquatic biota found in the New York–New Jersey Harbor Estuary.

Primary Producers

Phytoplankton

Phytoplankton are microscopic plants whose movements within the system are largely governed by prevailing tides and currents. Light penetration, turbidity, and nutrient concentrations are important factors in determining phytoplankton productivity and biomass. Diatoms, such as *Skeletonema costatum* and *Thalassiosira* spp., generally dominate the phytoplankton community, with lesser contributions from dinoflagellates and green algae (Brosnan and O'Shea, 1995). While nutrient concentrations in most areas of the New York–New Jersey Harbor Estuary are very high, low light penetration has often precluded the occurrence of phytoplankton blooms.

Submerged Aquatic Vegetation and Benthic Macroalgae

Submerged aquatic vegetation (SAV) are rooted aquatic plants that are often found in shallow areas of estuaries. These organisms are important because they provide nursery and refuge habitat for fish. Light penetration, turbidity, and nutrient concentrations are all important factors in determining SAV and benthic algae productivity and biomass. Due to the limited light penetration observed in the Arthur Kill, as indicated by the low secchi transparency reported by the DEP Harbor Surveys (See [Table 4-5](#) below), the extensive development of the shorelines and

swift currents, SAV habitat is not present within the Arthur Kill. Moreover, this section of Mill Creek does not have sufficient water depths to support SAV.

Zooplankton

Zooplankton are an integral component of aquatic food webs; they are primary grazers on phytoplankton and detritus material and are themselves used by organisms of higher trophic levels as food. The higher-level consumers of zooplankton typically include forage fish, such as bay anchovy (*Anchoa mitchilli*), as well as commercially and recreationally important species, such as striped bass (*Morone saxatilis*) and white perch (*Morono Americana*) during their early life stages (AKRF, 2013).

Benthic Invertebrates

Invertebrate organisms that inhabit estuary bottom sediments as well as surfaces of submerged objects (such as rocks, pilings, or debris) are commonly referred to as benthic invertebrates. These organisms are important to an ecosystem’s energy flow because they convert detrital and suspended organic material into carbon (or living material); they are also integral components of the diets of ecologically and commercially important fish and waterfowl species. Benthic invertebrates are essential in promoting the exchange of nutrients between the sediment and water column. Substrate type (e.g., rocks, pilings, and sediment grain size), salinity, and dissolved oxygen (DO) levels are the primary factors influencing benthic invertebrate communities; secondary factors include currents, wave action, predation, succession, and disturbance. Sampling in the Arthur Kill has found benthic macroinvertebrates of nine taxa, including annelids, arthropods, and mollusks (AKRF, 2013). Annelids, arthropods, and mollusks found in the highest densities were the annelid *Haploscoloplos robustus* and mollusks *Melampus bidentatus* and *Mulinia lateralis*.

Fish

New York City, including Staten Island, is at the convergence of several major river systems, all of which connect to the New York Bight portion of the Atlantic Ocean. This convergence has resulted in a mixture of habitats in the New York–New Jersey Harbor Estuary that support marine fish, estuarine fish, anadromous fish (i.e., fish that migrate up rivers from the sea to breed in freshwater), and catadromous fish (i.e., fish that live in freshwater but migrate to marine waters to breed). **Table 4-4** lists fish species known to occur within the Arthur Kill Complex within the New York Bight Watershed, and therefore have the potential to occur in the vicinity of the Study Area.

Table 4-4 Fish Species with the Potential to Occur in the Vicinity of Study Area

Common Name	Scientific Name
Smooth Dogfish	<i>Mustelus canis</i>
American Eel	<i>Anguilla rostrata</i>
Inland Silverside	<i>Menidia beryllina</i>
Atlantic Silverside	<i>Menidia menidia</i>
Oyster Toadfish	<i>Opsanus tau</i>
Atlantic Needlefish	<i>Strongylura marina</i>
Summer Flounder	<i>Paralichthys dentatus</i>

Table 4-4 Fish Species with the Potential to Occur in the Vicinity of Study Area

Common Name	Scientific Name
Windowpane	<i>Scophthalmus aquosus</i>
Blueback Herring	<i>Alosa aestivalis</i>
Alewife	<i>Alosa pseudoharengus</i>
American Shad	<i>Alosa sapidissima</i>
Atlantic Menhaden	<i>Brevoortia tyrannus</i>
Grubby Sculpin	<i>Myoxcephalus aeneus</i>
Banded Killifish	<i>Fundulus diaphanus</i>
Mummichog	<i>Fundulus heteroclitus</i>
Bay Anchovy	<i>Anchoa mitchilli</i>
Silver Hake	<i>Merluccius bilinearis</i>
Atlantic Tomcod	<i>Microgadus tomcod</i>
Pollack	<i>Pollachius virens</i>
Red Hake	<i>Urophycis chuss</i>
Seaboard Goby	<i>Gobiosoma ginsburgi</i>
Tautog	<i>Tautoga onitis</i>
Cunner	<i>Tautoglabrus adspersus</i>
Striped Mullet	<i>Mugil cephalus</i>
White Perch	<i>Morone americana</i>
Striped Bass	<i>Morone saxatilis</i>
Winter Flounder	<i>Pleuronectes americanus</i>
Bluefish	<i>Pomatomus saltatrix</i>
Weakfish	<i>Cynoscion regalis</i>
Spot	<i>Leiostomas xanthurus</i>
Black Sea Bass	<i>Centropristis striata</i>
Hogchoker	<i>Trinectes maculatus</i>
Scup	<i>Stenotomus chrysops</i>
Butterfish	<i>Peprilus triacanthus</i>
Northern Pipefish	<i>Syngnathus fuscus</i>
Northern Searobin	<i>Prionotus carolinus</i>
Striped Searobin	<i>Prionotus evolans</i>

Source: Dowhan et. al., 1997

Rare/Protected Species and Communities

USFWS's IPaC system identifies the federally listed threatened (state listed endangered) piping plover (*Charadrius melodus*) and federally listed endangered (state listed endangered) roseate tern (*Sterna dougallii-dougallii*) as having the potential to occur within the boundary of the terrestrial Study Area. IPaC also confirms the absence of designated, critical habitat onsite. A letter received from the NYSDEC New York Natural Heritage Program (NYNHP), discussed in more detail below, did not list piping plover or roseate tern as having known occurrences on or within one mile of the site.

The breeding population of piping plovers in New York City is limited to the Rockaway Peninsula in Queens County (Fowle and Kerlinger, 2001). The Development Site lacks wide, open expanses of unvegetated beach that the piping plover uses and requires for its habitat. Therefore, it is unlikely piping plovers would occur within the Study Area. Roseate terns do not nest anywhere in New York City or its neighboring counties, and any occurrence of roseate terns in the Study Area would be limited to rare and brief passages of birds offshore that are associated with nesting colonies elsewhere, such as eastern Long Island (Boretti et al., 2007; Mitra and Saar, 2008). The Development Site does not provide the habitat requirements needed for this species to survive.

None of the species documented by the Breeding Bird Atlas in the census blocks in which the terrestrial Study Area lies are federally listed species. The peregrine falcon is a State endangered species that is documented in the same census block as the terrestrial Study Area. Peregrine falcons build nests on high ledges, 50 to 200 feet above the ground. There are no tall buildings in the immediate study area. No nesting locations are documented within the Development Site. No federally or state-listed species were observed during the field visit in 2021.

An inquiry was submitted to NYSDEC NYNHP requesting records and/or documentation on the occurrence of threatened and/or endangered species in the Study Area. An NYSDEC NYNHP letter dated May 27, 2021 (see [Appendix D](#)) indicates there are no known occurrences of threatened and/or endangered species in the Study Area; however, peregrine falcon, bald eagle, swamp marsh pennywort and willow oak are noted with the potential to occur within one mile of the site.

Peregrine Falcon may be found nesting in nearby tall, manmade structures such as the Outerbridge Crossing but would not be expected to be nesting near the site. The Falcon may use the site as hunting habitat.

Similarly, Bald Eagles prefer to nest in tall, strong trees or manmade towers situated close to waterbodies that provide fish as a food source. The site does not provide such trees or structures. The eagle may however be encountered flying over the site in search of fish in Mill Creek.

Swamp marsh pennywort or Dollarweed, is a native, herbaceous, perennial weed typically found in moist, open areas, along roadside ditches, and swamps. It is an aquatic plant. As there are no freshwater resources found onsite, the site does not offer suitable habitat for this plant. Swamp Marsh Pennywort was not observed during our field inspection in March 2021.

Willow Oak is a large tree that typically grows in lowland floodplain and primarily freshwater wetland areas. Based on our field inspection there were no Willow oaks observed onsite and because it mainly occurs near freshwater systems it is not expected that it would become established on the site. Additionally, trees are not permitted within the bounds of the impervious cap area.

The NOAA ESA Section 7 mapper was also accessed to evaluate the potential presence of threatened and/or endangered species in the Study Area. The Study Area is located outside of any NOAA ESA Section 7 Consultation Areas, as shown on the attached NOAA ESA Section 7 mapper report (see [Appendix D](#)).

Figure 4-3 NYSDEC Tidal Wetlands

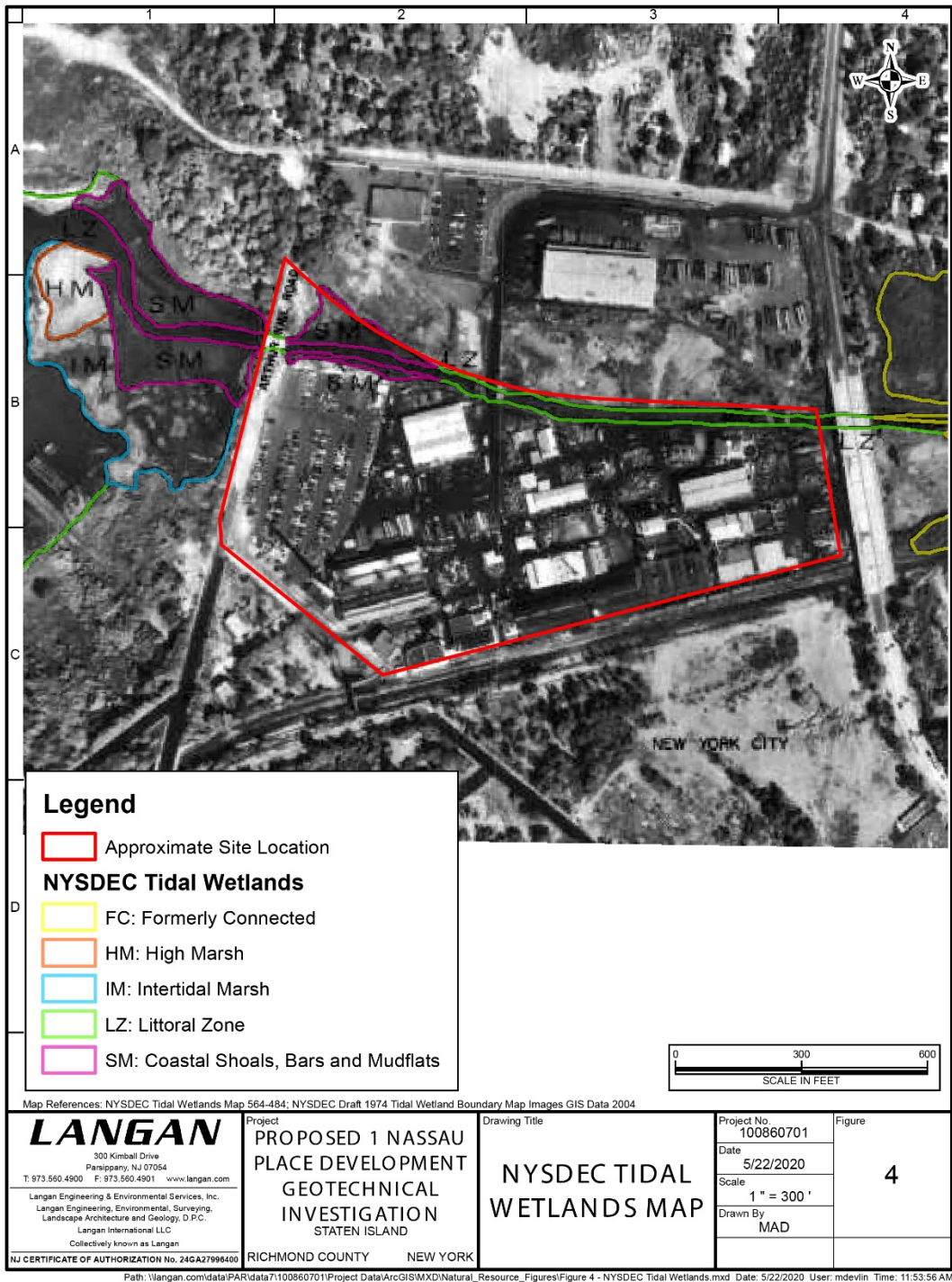
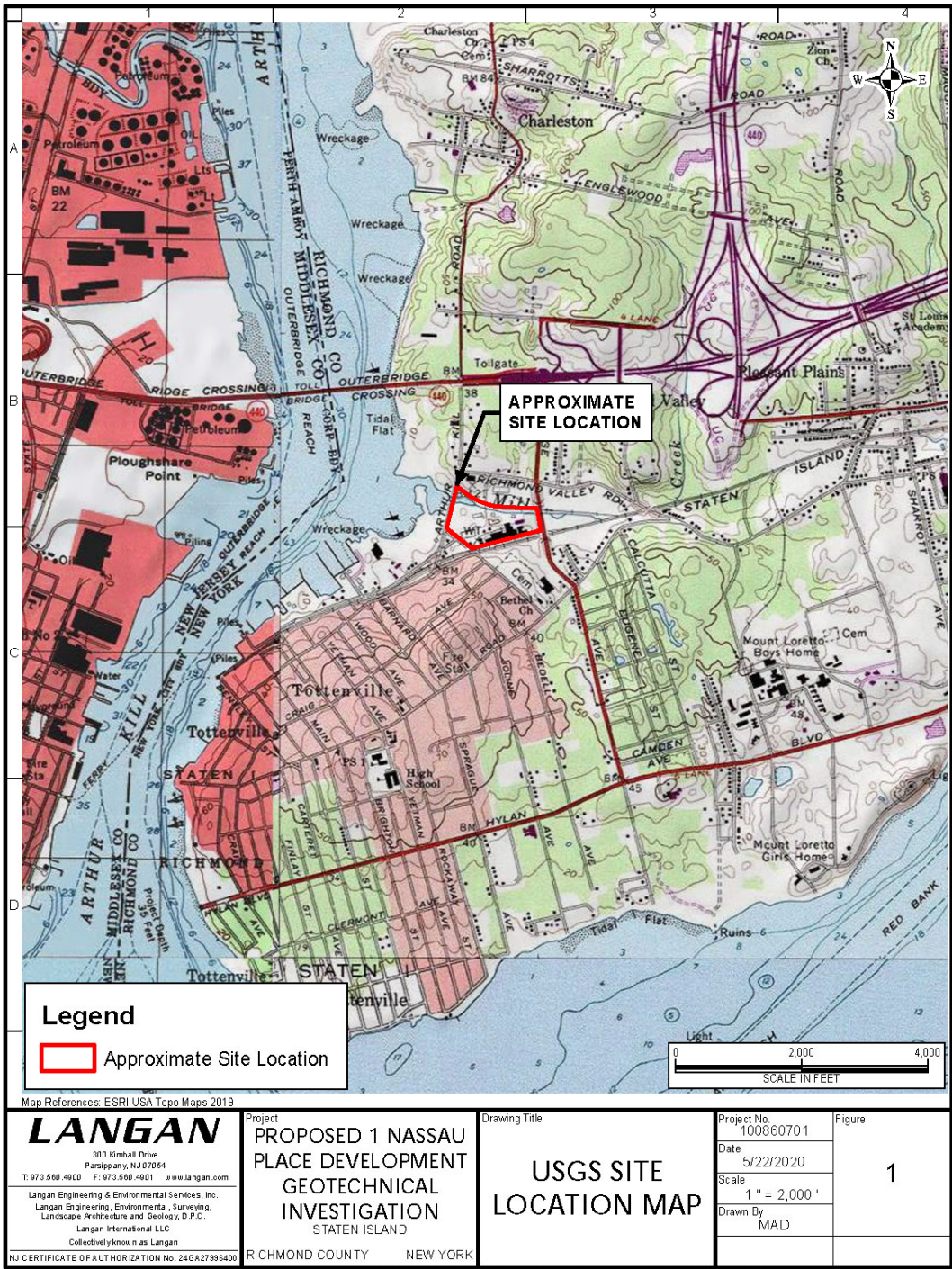


Figure 4-4 USGS Site Location Map



Wetlands and Surface Waters

Wetlands

Tidal wetlands are present onsite along the Mill Creek corridor that generally parallels the northern site boundary. The NYSDEC has mapped Tidal Wetland-Littoral Zone (LZ) in the northeastern portion of the property and Coastal Shoals, Bars and Mudflats in the northwestern portion of the site (see **Figure 4-3**). The landward limit of the tidal wetland/waters along Mill Creek was determined by NYSDEC to be the limit of the wetlands shown on the 1974 Wetlands Map (see **Figure 4-3**) and/or the mean high-water elevation, whichever is most landward.

Surface Water Quality and Stormwater

Mill Creek and the Arthur Kill compose the surface waters within the aquatic Study Area (see **Figure 4-4**). The Arthur Kill is a tidal strait connecting Kill Van Kull and Newark Bay to the north with Raritan Bay and Raritan River to the south. The salinity of Mill Creek and the Arthur Kill varies daily with the tidal cycle and seasonally with the volume of freshwater entering from the upper reaches of the watershed.

The *2021 CEQR Technical Manual* identifies stormwater hydrology as a field of study that addresses how precipitation runoff from impervious surfaces contributes to wetland systems and that stormwater hydrology is an important factor to consider when assessing water resources and wetlands because, depending on the land use of the source, stormwater runoff can contain pollutants that could negatively affect water quality of surrounding waterbodies and wetland systems, especially if runoff is untreated. As discussed elsewhere in this EAS, the project site was previously remediated and capped to contain subsurface contaminants and prevent any remaining contamination from migrating offsite either through infiltration of stormwater into the aquifer or as contaminated runoff draining into Mill Creek, the Arthur Kill and downstream waters. A portion of the project site is occupied by an asphalt vehicle storage lot where new cars are temporarily stored. In the existing condition, stormwater runoff from this vehicle storage lot is directed to one of several rip-rap lined channels which carry the untreated runoff to Mill Creek, discharging at three existing rip rap outfalls (See **Drawing WN104, Stormwater Outfall Insets**, located in **Appendix C**). The remainder of the site stormwater runoff drains overland across the vegetated environmental cap. None of the stormwater runoff generated by the site is able to infiltrate into the ground due to the environmental cap, which is partially vegetated and partially asphalt.

Title 6 of NYCRR Part 703 includes surface water standards for each use class of New York surface waters. Both Mill Creek and the Arthur Kill are classified by the NYSDEC as Class I waters, which have the best usage as secondary contact recreation and fishing. Class I waters should be suitable for fish, shellfish, and wildlife propagation and survival. In addition, the water quality should be suitable for primary contact recreation, although other factors may limit the use for this purpose.

Recent water quality data (2017 to 2021) from the NYCDEP Harbor Survey station in the Arthur Kill along the Tottensville, Staten Island shoreline (Station K5), the station closest to the Development Site, indicate that the water quality in this area generally meets the water quality standards for Use Classification I waters (see **Table 4-5**).

Table 4-5 NYCDEP Harbor Survey Water Quality Data for Sampling Station K5 (2017 to 2021)

Parameter [Use Class I Standard]	Surface Waters			Bottom Waters		
	Min	Max	Avg	Min	Max	Avg
Temperature (F) [No standard]	37.3	82.1	51.7	37.3	67.0	44.9
Salinity (psu) [No standard]	14.2	25.8	21.3	21.4	26.9	24.8
Fecal coliform (colonies per 100 mL) [Monthly geometric mean less than or equal to 2,000 colonies/100mL from five or more samples]	2.0	1,364	69.7	–	–	–
DO (mg/L) [Never less than 4 mg/L]	3.8	13.8	7.0	2.2	14.2	6.3
Secchi transparency (ft) [No standard]	1.5	6.0	3.8	–	–	–
Active Chlorophyll-a (µg/L) [No standard]	0.8	182	17.5	–	–	–

Note: Compliance with the fecal coliform standard is based on a monthly geometric mean (for which the data are not available to calculate) and not on the basis of the maximum fecal coliform value presented here, which is the maximum fecal coliform value obtained during weekly sampling events.

Source: NYCDEP, 2021.

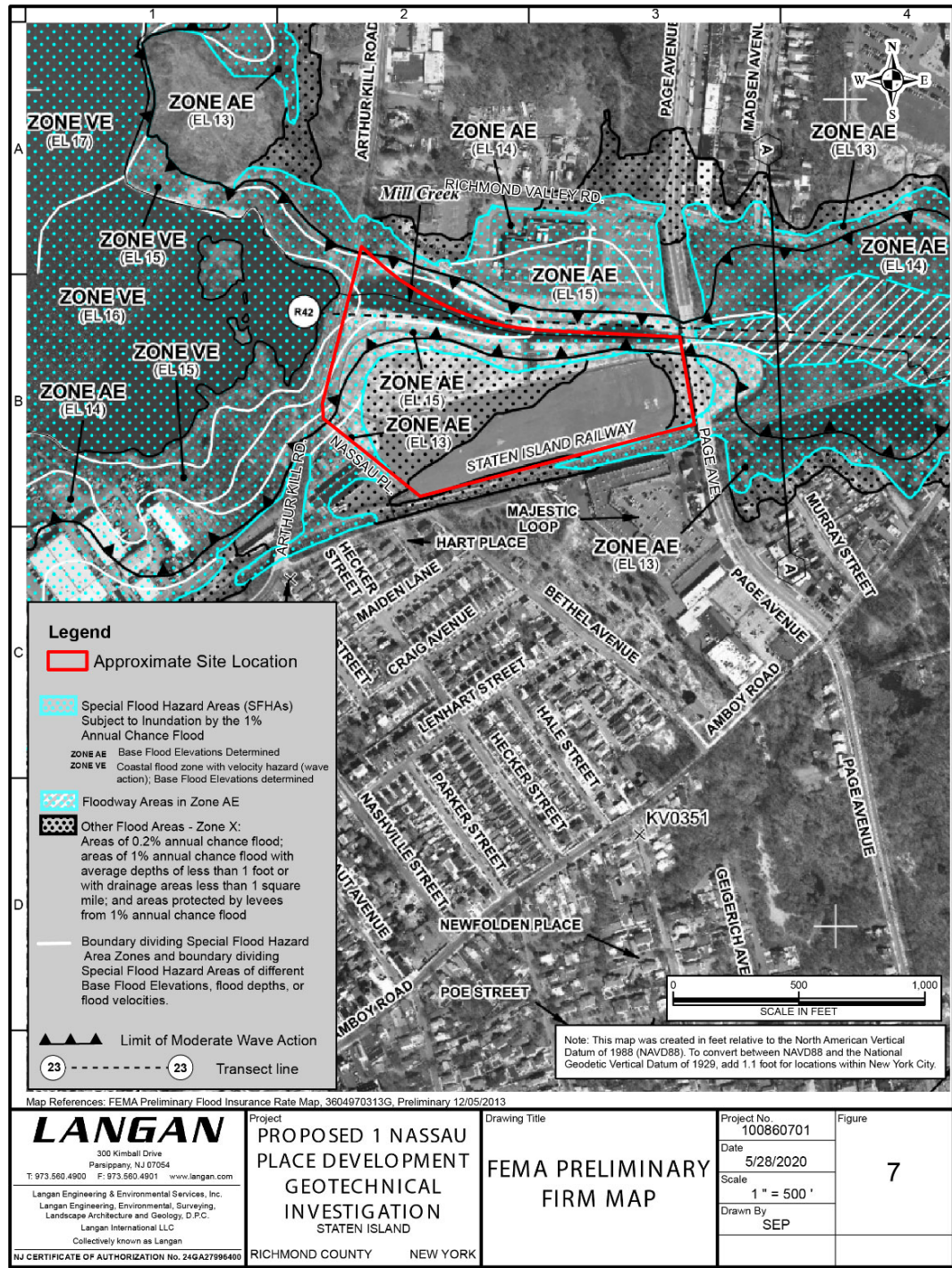
Floodplains

Floodplains occur along streams, rivers, and coastal zones. Officially designated floodplains and floodways established and delineated by FEMA are areas where substantial flooding may result in property damage or threaten public safety. A FEMA-designated floodplain is the area that would be subject to inundation by the 1 percent Annual Chance Flood. This area is referred to as Zone AE. Zone X is the area that would be subject to inundation by the 0.2 percent Annual Chance Flood.

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 designate coastal high hazard areas and floodways and make federal flood insurance available to buildings and structures within these areas that are constructed so as to minimize danger to human lives. FEMA regulates floodplains for channels that have a watershed (area that drains to them) greater than one square mile. Properties located in smaller watersheds are not part of the FEMA mapping program.

As shown on **Figure 4-5**, the northern and western portions of the Development Site/Study Area are located within a mapped Zone AE flood hazard area as delineated by the FEMA Preliminary FIRM map (Map 3604970313, 12/5/2013). The base flood elevation (BFE) for the majority of the Development Site is elevation 15.0 feet NAVD88. A small portion at the western end of Mill Creek on the site is within FEMA Preliminary FIRM Zone VE where storm-induced waves may exceed 3 feet with a BFE of 16 feet NAVD88. In addition, the Limit of Moderate Wave Action (LiMWA) boundary is generally shown extending along the southern side of Mill Creek.

Figure 4-5 FEMA Preliminary Firm Map



The Future without the Proposed Actions

Under the No-Action condition, the warehouse project would not be built, and the site would be left in its current condition, which is partially developed with an asphalt vehicle storage lot and the remainder covered by an environmental cap. As part of the approval process to remediate the site, it was always envisioned that the area south of Mill Creek would be redeveloped within the former limits of the industrial facility shown on the 1974 Tidal Wetland Map. The soil-GCL cap was installed as part of the remediation in a manner to permit future development on/above it. Wetland mitigation was even provided in the original permit application in anticipation of future wetland impacts along the shoreline of Mill Creek required for redevelopment of the site. The No-Action condition would be inconsistent with the remediation of the site which included a means to redevelop the site for an industrial use.

The Future with the Proposed Actions

In the With-Action Scenario, the Development Site would be improved with a one-story, multi-tenant 331,700 square foot warehouse building with 60 loading docks and 178 parking spaces. Additional site improvements include an ingress/egress driveway to Nassau Place to the south and a truck exit to Arthur Kill Road to the northwest. A retaining wall and rip-rap revetment would be constructed generally parallel to Mill Creek to protect the site from flooding and the erosive forces of wave action. The Proposed Development would be constructed within the limits of the existing GCL cap and existing pavement and would remain in compliance with the existing NYSDEC approved remedy.

Habitats/Vegetation/Wildlife

Undeveloped portions of the site are comprised of the open field south of the Mill Creek corridor, which is underlain by the GCL cap, Mill Creek, a small area of wetlands, and a small portion of undeveloped uplands north of Mill Creek. Mill Creek and adjacent manmade wetlands provide potential habitat for aquatic and marine species as well as fish and avian species. Undeveloped, vegetated upland portions of the site may provide habitat for transient wildlife, as outlined above, but these areas are not expected to support any significant or local populations of wildlife. Importantly, the vegetated upland portion of the site that occurs on-site today, was designed to be an interim condition (and underlain by impervious cap) which followed the remediation of the site. This area was previously fully developed with an intensive industrial development with significantly degraded natural resources.

The Project includes redevelopment of the site, south of Mill Creek and within the limits of the existing asphalt area and GCL cap. Upon completion of the project, vegetated upland areas would comprise +/-2.9 acres; impervious surfaces (buildings and pavement) would occupy +/-13.9 acres; and Mill Creek and adjacent tidal wetlands would comprise +/-1.8 acres. Mill Creek and adjacent wetlands would not be directly disturbed by the project and the undeveloped upland area in the northwestern portion of the site would remain. The Project would avoid impacts to sensitive areas that provide the most value and opportunity for wildlife use (i.e., Mill Creek and adjacent wetlands). The on-site Mill Creek and adjacent wetlands would remain undisturbed and would continue to provide habitat and a corridor for wildlife use/travel to upstream and downstream portions of Mill Creek. As a result, the project is not expected to

result in adverse impacts to sensitive wetland/water habitat and/or associated, dependent fish and wildlife.

Ornamental trees species would be planted in enclosed/raised planters. The ornamental tree species proposed were selected for urban tolerance and because of their location in enclosed/raised planters, which are required because of the environmental cap that is installed across the site and the site conditions/location. The selected tree species are permitted per the NYC "Landscaping Selection Lists – Perimeter Trees" and zoning code section of Article 10, Chapter 7, Special South Richmond Development District, Appendix B, "Tree Selection Tables." The ornamental trees were selected from these sources as they are expected to do well in this site's unique situation.

Rare/Protected Species and Communities

As discussed above, IPaC records indicate there are two federally listed species that should be considered in an effects analysis of project activities at the Development Site. The listed species include the piping plover and roseate tern, federally listed as threatened and endangered, respectively. As discussed above, it is unlikely that piping plover or roseate tern would utilize the Development Site as habitat. Furthermore, the NYNHP letter received for the site did not list piping plover or roseate tern as having known occurrences on or within one mile of the site. Moreover, the Proposed Development would be restricted to upland areas south of Mill Creek and would not disturb any wetlands or surface waters onsite. As such, the Proposed Development is not anticipated to result in an adverse impact to rare, threatened, or endangered species.

Wetlands Stormwater and Surface Waters

Mill Creek and adjacent tidal wetlands occur along the northern site boundary. The project does not include any encroachment or disturbance in these areas. See **Drawing WN103, Tidal Wetland Adjacent Area Coverage-Proposed Conditions** in **Appendix C** for the location of the wetlands in relation to the Proposed Development. The proposed design allows for at least a 30-foot setback from the tidal wetland along Mill Creek, which would be partially stabilized with a revetment slope. The remaining areas would be seeded with meadow mix or lawn, as shown on **Drawing LP101, Landscape Plan** (see **Appendix C**). The "meadow mix" consists of a mix of Autumn Bentgrass (38.5 percent), Fowl Bluegrass (38.5 percent) and Annual Ryegrass (23 percent) all of which are native species.

The revetments, shown in detail in **Drawing B-101, Proposed Shoreline Plan** (see **Appendix C**), consist of earthen embankments with erosion protection. The erosion protection generally consists of riprap armoring over bedding stone in the lower portion of the slopes and turf reinforcement mats in the upper portion of the slopes. The proposed revetment areas start as low as elevation ± 2.1 (Mean High Water at the site is at elevation 2.0). The revetment is designed to protect the upland areas from erosion, which is a preventative measure to protect the wetlands and Mill Creek. These upland areas are within the Limit of Moderate Wave Action. Without the revetment, waves could erode the uplands over time and the migrating soil could adversely impact the wetlands and Mill Creek.

In addition, all appropriate stormwater management standards have been implemented as part of the site design to minimize the potential for adverse impacts to the water quality of

Mill Creek and downstream waters. As shown on the **Drawing CG201, Land Use Drainage Plan**, proposed stormwater runoff would be managed by an extensive subsurface conveyance system that includes five (5) Aqua-Swirl water quality treatment units. These units have been approved for use in New York and would treat the runoff from the internal road network, automobile parking lots, loading bays and roof drainage from the proposed warehouse. One Aquaswirl unit is proposed at each discharge point for the site. These discharge points consist of two proposed connections to the NYCDEP storm sewer and three discharge points at the existing rip rap outfalls along Mill Creek. The total site area to be treated would be ± 14.3 acres. As previously discussed, in the No-Action condition stormwater runoff from the site's existing automobile vehicle storage lot, which is in excess of 8 acres and is exposed to contaminants typically associated with such lots, drains untreated directly to Mill Creek. The Proposed Development would discharge stormwater to the existing Mill Creek rip rap outfalls, upstream of the wetlands, and the rip rap at the discharge points would be designed to provide non-erosive discharge velocities. The proposed drainage patterns are also intended to generally mimic the existing drainage patterns (see **Drawing DA-01, Initial Phase Construction Drainage Area Plan**, and **Drawing DA-02 Final Phase Construction Drainage Area Plan** in **Appendix C**). For these reasons, the proposed condition is not expected to negatively impact the water quality of Mill Creek.

The on-site wetlands are regulated by the NYSDEC Tidal Wetlands Land Use regulations (6 NYCRR Part 661) which include consideration of a regulated "adjacent area" (buffer). A Tidal Wetlands Permit application has been submitted to the NYSDEC for authorization of work within the Tidal Wetland Adjacent Area. That work includes replacement of portions of the vegetated, impervious GCL cap with an asphalt surface, truck loading areas and rip rap revetment. It is anticipated NYSDEC would ultimately approve the requested Tidal Wetland permit. As such, the permit conditions, requirements, prohibitions, and avoidance/minimization/mitigation measures, if any, would be followed and implemented and would effectively protect the tidal wetlands from potential adverse impacts.

Conclusion

Based on the results of this assessment, the Proposed Development would not result in adverse impacts on terrestrial resources, wetlands, or threatened and endangered species. Therefore, no further assessment is required.

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5

Hazardous Materials¹

This section assesses whether the Proposed Actions may increase the exposure of people or the environment to hazardous materials, and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.

Introduction

A hazardous material is any substance that poses a threat to human health or the environment. Substances of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds (VOCs/SVOCs), methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive or toxic).

According to the *2021 CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when:

- › hazardous materials exist on a site;
- › an action would increase pathways to their exposure; or
- › an action would introduce new activities or processes using hazardous materials.

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Actions.

¹ This chapter was prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, O.P.C

Methodology

The potential for hazardous materials was evaluated based on the following documents:

- › Final Engineering Report (FER); dated 7 February 2011, prepared by Roux Associates, Inc. The FER documented the remediation on the Development Site in accordance with the NYSDEC approved work plans and associated addendums.
- › Site Management Plan (SMP); dated 17 September 2010, prepared by Remedial Engineering, P.C. and Roux Associates, Inc. The SMP was developed to manage remaining contamination at the Development Site by addressing the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are part of the final remedy for the Development Site.
- › Periodic Review Report (PRR); dated November 2020, prepared by Tenen Environmental, LLC. The PRR was prepared in accordance with the OU-1 SMP. The work completed includes groundwater sampling and inspections of engineering controls to determine the effectiveness of the SMP.

As indicated in **Part I: Project Description**, the proposed actions would facilitate the construction of a one-story approximately 332,009 gsf high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and 175 employee parking spaces at grade. The proposed warehouse is being designed to accommodate up to three tenants. The proposed building would be one-story and approximately 43-feet tall.

Preliminary Assessment

Existing Conditions

The Development Site was operated as a metals manufacturing facility beginning in the early 1900's. Several entities have operated as manufacturers at the Development Site, but metals manufacturing was a consistent use on the site until all operations were discontinued in 1999. Impacts to soil and groundwater, primarily from heavy metals, were identified as a result of the historic use of the Development Site. The Development Site was entered into the New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Program (VCP) first in 1998 and again in January 2002 as Site No. V-00159-2. During investigation activities, three separate operable units were identified. The proposed 1 Nassau Place redevelopment portion of the Former Nassau Metals Corporation Site has been identified as Operable Unit 1 (OU-1). OU-1 encompasses the entire Development Site and a larger area to the east (Staten Island Block 7971, Lot 100), and north (part of Staten Island Block 7971, Lot 1) of the Development Site.

Final Engineering Report and Site Management Plan

Remediation activities were conducted on the Development Site between September 2006 and August 2008 under NYSDEC approved work plans and associated addendums. Completion of remediation was documented in the Final Engineering Report referenced above, which documented actions taken to complete the NYSDEC approved final remedy. The remedy consisted primarily of dredging metals impacted sediments and on-site placement of the dredged materials; restoration of Mill Creek (which bisects OU-1) and

associated wetlands with a soil capping system; installation of a soil cap with a Geosynthetic Clay Liner (Soil-GCL Cap) in upland areas; and the construction of an asphalt cap primarily in the location of the former buildings. The composite cover system, which includes the cap associated with the wetland restoration, the soil-GCL cap and the asphalt cap, constitute the ECs that were part of the NYSDEC approved final remedy. In addition to these ECs that are in place to address the remaining contamination at the site, ICs including a deed restriction prohibiting residential use were also required by the Declaration of Covenants and Restrictions as part of the VCP process for the Development Site.

The Development Site is currently governed by the NYSDEC approved SMP, Main Site, OU-1 dated 17 September 2010. The SMP was developed to manage remaining contamination at the Development Site by addressing the implementation of the ICs and ECs that are part of the final remedy for the site. While the SMP does not require additional remediation, it does place use restrictions on the Development Site. It also requires periodic inspection and reporting of the integrity of the composite cover system and requires notification to NYSDEC for any change in use² or disturbance of the composite cover system. SMP restrictions and requirements will remain in place indefinitely. Therefore, any future use of the Development Site or any potential redevelopment would require a Work Plan to be submitted and approved by the NYSDEC prior to any site disturbing activities.

Periodic Review Report (November 2020)

The most recent PRR was prepared in November 2020 in accordance with the OU-1 SMP and includes groundwater sampling and inspections of engineering controls to determine the effectiveness of the SMP.

In accordance with the original SMP, quarterly monitoring and inspection were performed once the remedial action was complete. After approximately two years of quarterly inspections, and with NYSDEC concurrence, the monitoring schedule was revised to annual inspections beginning in July 2012. Concurrent with this schedule revision, NYSDEC also confirmed that sand cap monitoring is no longer required at OU-1.

The composite cover system is a permanent control, and the quality and integrity of this system has been inspected annually in accordance with the OU-1 SMP. The PRR concluded the composite cover system remains in place and is maintained with no observed breaches or evidence of excavation below the cap.

In October 2020, groundwater sampling was completed at the Development Site in accordance with the SMP. Cadmium, iron, magnesium, manganese, sodium, lead, thallium, and zinc were detected above the Class GA Standards. The results of the October 2020 sampling in comparison to the October 2019 sampling indicate both increasing and decreasing trends, based on each specific well, for metals detected above the Class GA Standards. No major fluctuations in groundwater concentrations were detected. The PRR concluded that residual metal concentrations continue to be present in the groundwater and the results of the October 2020 sampling indicate that while concentrations in individual wells have increased or decreased, metals detected above the Class GA Standards are stable overall.

² On June 30, 2016, Langan submitted a Change of Use notice to NYSDEC reflecting the intention to use the asphalt cap portion of OU-1 for purposes of vehicle parking.

The Declaration of Covenants and Restrictions remains in place on the Development Site. As determined in the PRR, all ECs are effective and currently operational. ICs requiring monitoring of groundwater and inspections of the engineering controls were completed as part of the November 2020 PRR. Groundwater monitoring and the inspection of engineering controls will continue to be governed by the SMP and will be conducted on an annual basis.

Future No-Action Condition

In the No-Action condition, the Development Site would remain in its existing condition. As indicated above, the Development Site is currently used for vehicle storage in an open parking lot. No new construction would occur in the absence of the Proposed Actions.

In the No-Action Condition, the Development Site would continue to be governed by the NYSDEC approved SMP, Main Site, OU-1 dated 17 September 2010 including periodic inspection and reporting of the integrity of the existing composite cover system. As required by the SMP, a PRR would be prepared annually to summarize groundwater monitoring and the inspection of engineering controls.

Future With-Action Condition

In the With-Action condition, the Applicant would construct a one-story approximately 332,009 gsf high cube warehouse (UG 16 warehouse distribution center) on the Development Site, with 60 loading docks and a 175-space surface parking lot for use by employees. The proposed building would be one-story and approximately 43-feet tall.

Development in the With-Action Condition would adhere to the existing NYSDEC approved SMP, Main Site, OU-1 dated 17 September 2010 and the Soil Excavation Work Plan contained therein, or a future addendum of the Soil Excavation Work Plan subject to NYSDEC approval. The SMP would serve as a control to provide regulatory oversight for any site disturbing activities. While no further remediation is necessary on the Development Site, periodic inspection and reporting on the integrity of the existing composite cover system would continue to be required and notification to NYSDEC would be required for a proposed change in use of the Development Site. As required by the SMP, a PRR would be prepared annually to summarize groundwater monitoring and the inspection of engineering controls. By adhering to the existing SMP requirements, the With-Action Condition would not result in significant adverse impacts to hazardous materials.

Conclusion

The Development Site has previously been investigated and remediated under NYSDEC oversight as VCP Site No. V-00159-2. ECs and ICs were incorporated into the final remedy that remain in place and the Proposed Development would be completed in compliance with the NYSDEC approved SMP requirements. While no further remediation is necessary on the Development Site, periodic inspection and reporting on the integrity of the existing composite cover system would continue to be required and notification to NYSDEC would be required for a proposed change in use or disturbance of the composite cover system. In 2016, Langan submitted a Change of Use Notice to NYSDEC reflecting the intention of use a portion of the asphalt cap for vehicle parking. As required by the SMP, PRRs would continue

to be prepared annually to summarize groundwater monitoring and the inspection of engineering controls.

Given these conditions, the Proposed Actions would not result in significant adverse impacts relating to hazardous materials.



6

Water and Sewer Infrastructure¹

This section assesses whether the proposed action may adversely affect the City's water distribution or sewer system by evaluating the potential effects of the Proposed Development on the City's water supply, wastewater treatment, and stormwater management infrastructure, in accordance with the *2021 CEQR Technical Manual*.

Introduction

New York City's water and sewer network is fundamental to the operation, health, safety, and quality of life of the City and its surrounding environment; to function well, it must be sized to accommodate users and surface conditions. Ensuring these systems have adequate capacity to accommodate land use or density changes and new development is critical to avoiding environmental and health problems such as sewer back-ups, street flooding, or pressure reductions.

As described in **Part I: Project Description**, the Proposed Development would consist of a one-story, approximately 332,009 gross square foot (gsf) high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and a 175-space surface parking lot for use by employees on the Development Site.

According to the *2021 CEQR Technical Manual*, actions that increase density or change drainage conditions warrant a water and sewer infrastructure analysis. Specifically,

¹ This chapter was prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, O.P.C

developments that would result in an exceptionally large demand for water (more than one million gallons per day ["mgd"]) or that are located in an area that experiences low water pressure require an analysis of potential impacts on the water supply system.

Methodology

Water Supply

The Development Site is not within an area that experiences low water pressure and would not incrementally require an additional million gallons of water a day. Therefore, a preliminary water infrastructure analysis is not necessary. However, the total water demand that could result from the Proposed Actions has been calculated below to determine potential sewage generation as a result of the Proposed Actions.

Wastewater and Stormwater Conveyance and Treatment

A preliminary sewer analysis would be warranted if three criteria are met: the proposed development is located in a separately sewered area, in an M-designated zoning district, and there would be 100,000 sf of incremental development above the No-Action scenario. The Proposed Development would consist of a one-story 332,009 gsf high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and a 175-space surface parking lot for use by employees on the Development Site. The Development Site is located in a separately sewered area, in an M-designated zoning district, and there would be more than 100,000 sf of incremental development above the No-Action scenario. Therefore, a preliminary assessment of wastewater and stormwater conveyance and treatment is required.

Existing and future water demand and sanitary sewage generation are calculated based on rates provided in the *2021 CEQR Technical Manual*; however, as the manual does not include rates for industrial and warehouse uses, rates from the Bay Street Corridor Rezoning and Related Actions FEIS (*CEQR No. 16DCP156R*) were used for this assessment.

This site is not within the rezoning area and does not propose a change to zoning. The referenced rates were used because those rates were already reviewed and approved by the City for a different project. The New York City Department of Environmental Protection (NYCDEP) Flow Volume Calculation Matrix is used to calculate the overall sanitary sewage and stormwater runoff volume discharged to the sewer systems for four rainfall volume scenarios with varying durations. To assess the ability of the City's sewer infrastructure to handle anticipated demand from the Proposed Development, existing sewage generation rates are estimated and then compared to future No-Action and future With-Action conditions.

Assessment

Existing Conditions

Historically, the site operated as a metals manufacturing facility beginning in the early 1900's, until operations were discontinued in 1999. As part of the approval process to

remediate the site, it was previously envisioned that the area south of Mill Creek would be redeveloped within the former limits of the industrial facility.

Water Supply

Most of New York City obtains water from three surface water supply systems operated by NYCDEP that form a network of reservoirs, aqueducts, and tunnels extending as far as 125 miles north of the City. The watersheds of the three systems cover almost 2,000 square miles, with 19 reservoirs and three controlled lakes, which have a storage capacity of approximately 550 billion gallons. Two of the three surface water systems, the Delaware and Catskill systems, collect water from watershed areas in the Catskill Mountains and deliver it to the Hillview Reservoir in Yonkers. The third surface water system, the Croton system, collects water from watershed areas in Dutchess, Putnam, and Westchester Counties and delivers it to the Jerome Park Reservoir in the Bronx. Water flows to the City through aqueducts, reaching most consumers by gravity alone; about four percent of the City's water must be pumped to its final destination.

Within the City, a grid of underground distribution mains brings water to consumers. Large mains—up to 96 inches in diameter—feed smaller mains (such as 20-, 12- and 8-inch mains) that distribute water to individual locations. These mains also provide water to fire hydrants along many of the City's streets. Water pressure throughout the City water supply system is controlled by pressure regulators.

Stormwater and Sanitary Sewage Conveyance System

Sewers beneath the City's streets collect sewage from buildings as well as stormwater from buildings and catch basins in streets. Collection sewers are typically smaller in diameter on side streets, and larger in diameter under other roadways. They connect to trunk sewers, generally five to seven feet in diameter, which bring the sewage to interceptor sewers. These large interceptor sewers (typically 11 or 12 feet in diameter) bring the wastewater collected from the various smaller mains to the Waste Water Treatment Plant (WWTP) for treatment.

While the majority of New York City is managed by combined sewers and treated by WWTPs, portions of Brooklyn, Queens, and Staten Island are managed by separate storm sewers or they are unsewered. The entire Development Site is located in a separately sewer area where stormwater is discharged directly to Mill Creek or to separate storm sewers. The sanitary sewers in the Development Site are treated downstream by the Oakwood Beach WWTP, which has been operating since 1956 and is designed to treat 40 million gallons per day. In 2020, Oakwood Beach WWTP received an average flow of 26.3 mgd as shown in **Table 6-1**. As a result, the WWTP maintains an excess capacity of approximately 13.7 mgd (approximately 34 percent of its total capacity).

Table 6-1 2020 Monthly Average Dry Weather Flows to Oakwood Beach WWTP

Month	Oakwood Beach WPCP (mgd)
January	26.6
February	26.6
March	26.9
April	28.5
May	26.3
June	24.5
July	26.2
August	25.3
September	24.5
October	26.0
November	26.0
December	28.2
Average	26.3

Source: New York City Department of Environmental Protection (NYCDEP).

Notes:

¹ mgd = million gallons per day.

According to NYCDEP Sewer Mapping, an existing 10-inch sanitary sewer is located under Nassau Place, which connects to a 36-inch intercepting sewer. The intercepting sewer flows west along Nassau Place. The sanitary discharge for the Development Site will connect into this system.

The Development Site previously contained an industrial manufacturing development which has since been demolished and replaced with a required impermeable environmental cap in 2008 and an existing parking lot, as such there is currently no sanitary sewer wastewater generated on the Development Site.

The volume of stormwater runoff at a site typically varies depending on the type of land cover, which can either be pervious or impervious. The NYCDEP defines runoff coefficients that correlate with the pervious or impervious qualities of various land covers. Grass and softscape have a runoff coefficient of 0.20 because of their ability to absorb a portion of the rainfall, whereas roof area and pavement have much higher runoff coefficients of 1.00 and 0.85 respectively, due to their inability to absorb or sequester rainfall.

The majority of the Development Site, except for the northwest corner that is north of Mill Creek, is currently impervious because of the combination of paved impervious surfaces and the impervious environmental cap placed beneath the softscape areas.

As shown in **Table 6-2**, under existing conditions the weight runoff coefficient is 0.85.

Table 6-2 Existing Conditions – Weighted Runoff Coefficient (C)

Surface Type	Roof	Pavement/Walks	Grass/Softscape	Total
Area (%)	0	100	0	100
Surface Area (sf)	0	795,222	0	795,222
Runoff Coefficient	1.00	0.85	0.20	0.85*

Notes: Runoff coefficients for each surface type as per NYCDEP, as provided in the CEQR NYCDEP Flow Volume Calculation Matrix.

* Weighted runoff coefficient calculations are based on the NYCDEP Flow Volume Calculation Matrix provided in the 2021 CEQR Technical Manual.

As shown in **Table 6-3**, standard NYCDEP runoff coefficients were used to determine the approximate amount of stormwater runoff generated during a variety of rainfall events over specified periods of time, ranging from 3.8 to 19.5 hours. Depending on the intensity and continuity during storm events with up to 2.5 inches of rainfall, the Development Site may generate up to 1.05 million gallons (mg) of stormwater runoff, the majority of which would drain to Mill Creek. The existing survey dated September 2019 shows that there are currently no connections to the City stormwater system from the Development Site.

Table 6-3 NYCDEP Flow Volume Matrix – Existing Conditions, Sewage and Stormwater Generation During Different Storm Events

Rainfall Volume (in.)	Rainfall Duration (hr.)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Sewage to Sewer System (MG)	Stormwater Runoff (MG)
0.00	3.80	18.26	0.85	0.00	0.00
0.40	3.80	18.26	0.85	0.00	0.17
1.20	11.30	18.26	0.85	0.00	0.51
2.50	19.50	18.26	0.85	0.00	1.05

Source: Rainfall volume and durations taken from NYCDEP Volume Calculation Matrix as provided in the 2021 CEQR Technical Manual, Chapter 13.

Future No-Action Condition

In the No-Action condition, the Development Site would remain in its existing condition. As described previously, the Development Site is currently used for vehicle storage in an open parking lot. No new construction would occur in the absence of the Proposed Actions and untreated stormwater generated on the Development Site would continue to discharge directly into Mill Creek.

Future With-Action Condition

The Proposed Action would enable the development of a one-story 332,009 gsf high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and a 175-space surface parking lot for use by employees on the Development Site.

As part of the Proposed Development, there will be new stormwater, sanitary, and water infrastructure constructed to support the warehouse use. In the With-Action condition, stormwater would be retained, treated, and slowly released. The site will be drained via new conventional catch basins and underground piping, which will either discharge to Mill Creek or to the existing separate NYC storm sewer in Nassau Place. Sanitary sewage from the building will be routed through new underground sanitary piping, which will connect to the existing NYC sanitary sewer in Nassau Place. For the portions of the site that drain to the NYC separate storm sewer, underground stormwater detention would be sized to adhere to NYCDEP water quantity requirements. Additionally, the Proposed Development would utilize NYSDEC approved manufactured treatment devices, such as hydrodynamic separators, to improve water quality. New water service will be brought to the building via a new connection to the existing NYC water main in Nassau Place. This water service will provide domestic and fire service for the development.

In the With-Action condition, an approximately 17-acre portion of the Development Site's stormwater runoff would be discharged directly into Mill Creek using new conventional catch basins and underground piping. The remaining approximately 1.26-acre portion of the Development Site's stormwater runoff would be conveyed to the existing separate NYC storm sewer in Nassau Place.

Water and Sanitary Flows

The wastewater generated from the development in the With-Action condition would be treated by the Oakwood Beach WWTP.

Future development in the With-Action condition on the Development Site is expected to generate approximately 76,219 gpd of wastewater, which is an increase of 76,219 gpd over the No-Action condition. The anticipated water demand and wastewater generation was derived using the industrial/warehouse water consumption and wastewater generation rates in the Bay Street Corridor Rezoning and Related Actions FEIS (*CEQR No. 16DCP156R*). Rates from the referenced FEIS report were used because specific rates for warehousing and distribution uses are not provided in the *2021 CEQR Technical Manual* and the referenced rates were previously reviewed and approved by the City. This Development Site is not in a rezoned area, and this project does not propose to change the zoning. **Table 6-4** below summarizes these calculations.

Table 6-4 Future With-Action Condition, Water Consumption, and Wastewater Generation

Land Use	Rate	Water Consumption and Wastewater Generation				
		Unit	Size	Water/ Wastewater (gpd)	Air Conditioning (gpd)	Total (gpd)
Industrial/ Warehouse	Domestic: 10,000 gpd/acre; Air Conditioning: 0.17 gpd/sf	SF	332,009	76,219	56,442	132,660
Total Water Consumption						132,660
Total Sewage Generation						76,219

Source: Industrial/ warehouse water consumption and wastewater generation rates as described in the Bay Street Corridor Rezoning and Related Actions FEIS (CEQR No. 16DCP156R).

The Oakwood Beach WWTP has an operational capacity of approximately 40 mgd and currently operates with an average dry weather flow of approximately 40 mgd, maintaining an excess capacity of approximately 13.7 mgd. The incremental 76,219 gpd (0.08 mgd) of wastewater generated by the development in the With-Action condition would represent less than one percent of Oakwood Beach WWTP's total capacity. Development in the With-Action condition would result in an increased flow of approximately 0.08 mgd; therefore, it is anticipated Oakwood Beach WWTP would process approximately 26.38 mgd of wastewater with an excess capacity of approximately 13.62 mgd.

The wastewater generated by the development in the With-Action condition would not cause the Oakwood Beach WWTP to operate over capacity; therefore, the Proposed Action is not anticipated to result in any potentially significant adverse impacts to the City's wastewater treatment infrastructure.

Stormwater Flows

There would be no incremental increase in impervious surfaces in the With-Action condition. The entire property is considered impervious in the existing condition and will remain so in the With-Action condition. However, in the With-Action condition, the runoff coefficient would increase as a result of the roof area of the Proposed Development. As shown in **Table 6-5**, roof area would comprise 42 percent of the Development Site in the With-Action condition and the weighted coefficient would be 0.91.

Table 6-5 With-Action Condition – Weighted Runoff Coefficient (C)

Surface Type	Roof	Pavement/Walks ¹	Grass/Softscape	Total
Area (%)	42	58	0	100
Surface Area (sf)	332,009	463,213	0	795,222
Runoff Coefficient	1.00	0.85	0.20	0.91*

Notes:

Runoff coefficients for each surface type as per NYCDEP, as provided in the CEQR NYCDEP Flow Volume Calculation Matrix.

* Weighted runoff coefficient calculations are based on the NYCDEP Flow Volume Calculation Matrix provided in the 2021 CEQR Technical Manual.

In the With-Action condition, an approximately 17-acre portion of the Development Site's stormwater runoff would be discharged directly into Mill Creek. The remaining approximately 1.26-acre portion of the Development Site's stormwater runoff would be conveyed to the existing separate NYC storm sewer in Nassau Place. **Table 6-6** and **Table 6-7** provide the stormwater generation from the Development Site for the With-Action condition during different storm events, broken down between the areas that will drain to the City sewer versus the areas that will drain to the Mill Creek.

Table 6-6 NYCDEP Flow Volume Matrix – With-Action Condition, Sewage and Stormwater Generation During Different Storm Events to NYC Storm Sewer

Rainfall Volume (in.)	Rainfall Duration (hr.)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Sewage to Separate Sewer System (MG)	Stormwater Runoff (MG)
0.00	3.80	1.26	0.85	0.08	0.00
0.40	3.80	1.26	0.85	0.08	0.01
1.20	11.30	1.26	0.85	0.08	0.03
2.50	19.50	1.26	0.85	0.08	0.07

Table 6-7 NYCDEP Flow Volume Matrix – With-Action Condition, Stormwater Generation During Different Storm Events to Mill Creek

Rainfall Volume (in.)	Rainfall Duration (hr.)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Sewage to Separate Sewer System (MG)	Stormwater Runoff (MG)
0.00	3.80	17	0.91	0.000	0.00
0.40	3.80	17	0.91	0.000	0.17
1.20	11.30	17	0.91	0.000	0.50
2.50	19.50	17	0.91	0.000	1.05

Currently, all new developments that drain to City sewers are required to comply with Chapter 31 of Title 15 of the Rules of the City of New York (RCNY). These regulations require stormwater release from a development site to the NYC stormwater sewers be less than or

equal to the allowable flow using NYCDEP calculations. Development in the With-Action condition would require new connections to the City's sewer system and would adhere to the NYCDEP dictated allowable flow volumes. For the portions of the site that drain to the NYC separate storm sewer, subsurface detention systems are proposed to restrict the flow rate from the development to be less than or equal to the NYCDEP allowable storm flow. A pre-application meeting was held with NYCDEP on June 11, 2020 during which NYCDEP confirmed the allowable flow rate for the site. A site connection proposal application was prepared in conformance with that allowable flow rate and is currently under review by NYCDEP. As part of NYCDEP's ongoing review of the site connection proposal, NYCDEP confirmed that a hydraulic analysis is not required for this site. Additionally, the Proposed Development would utilize NYSDEC approved manufactured treatment devices, such as hydrodynamic separators, to improve water quality. Once the specific tenant is known for this development, the potential need for a NYCDEP Wastewater Quality Control permit will be evaluated and would be submitted if required. Therefore, the Proposed Actions would not result in significant adverse stormwater impacts to New York City's stormwater infrastructure or treatment facilities.

Mill Creek is a tidally influenced waterbody and pursuant to Chapter 4 of the New York State Department of Environmental Conservation's (NYSDEC) Stormwater Management Design Manual, water quantity requirements do not apply to tidally influenced waterbodies. Additionally, all stormwater generated on the Development Site will be treated in accordance with the NYSDEC's Special Pollutant Discharge Elimination System (SPDES) General Permit Regulations. The treatment practices will include NYSDEC approved manufactured treatment devices, such as hydrodynamic separators. These treatment practices will be designed to remove or reduce suspended solids from the storm water runoff prior to being discharged to Mill Creek and the city sewers. With these measures in place, the Proposed Actions are not expected to result in any potentially significant adverse impacts to stormwater infrastructure.

Conclusion

As described previously, the Development Site is not within an area that experiences low water pressure and would not incrementally require an additional million gallons of water a day; therefore, a preliminary water infrastructure analysis was not warranted.

Development in the With-Action condition would generate approximately 76,219 gpd of wastewater, which is a net increase of approximately 76,219 gpd (0.08 mgd) over the No-Action condition. This incremental generation of wastewater represents approximately 0.2 percent of the Oakwood Beach WWTP wastewater capacity. The incremental wastewater generated by the Proposed Actions would not cause the Oakwood Beach WWTP to exceed its operational capacity; therefore, the Proposed Action would not result in significant adverse impacts to New York City's wastewater infrastructure or treatment facilities.

An approximately 17-acre portion of the Development Site's stormwater runoff would be discharged directly into Mill Creek using new conventional catch basins and underground piping. The remaining approximately 1.26-acre portion of the Development Site's stormwater runoff would be conveyed to the existing separate NYC storm sewer in Nassau Place. For the portions of the site that drain to the NYC separate storm sewer, underground

stormwater detention would be sized to adhere to NYCDEP water quantity requirements. Mill Creek is a tidally influenced waterbody and is therefore not subject to water quantity requirements. All stormwater generated on the Development Site will be treated in accordance with the NYSDEC SPDES General Permit Regulations. The Proposed Development would utilize NYSDEC approved manufactured treatment devices, such as hydrodynamic separators, to improve water quality. These treatment practices will be designed to remove or reduce suspended solids from the storm water runoff prior to being discharged to Mill Creek and the city sewers. Based on this information, the Proposed Action is not anticipated to result in any potentially significant adverse impacts on New York City's stormwater infrastructure or treatment facilities.



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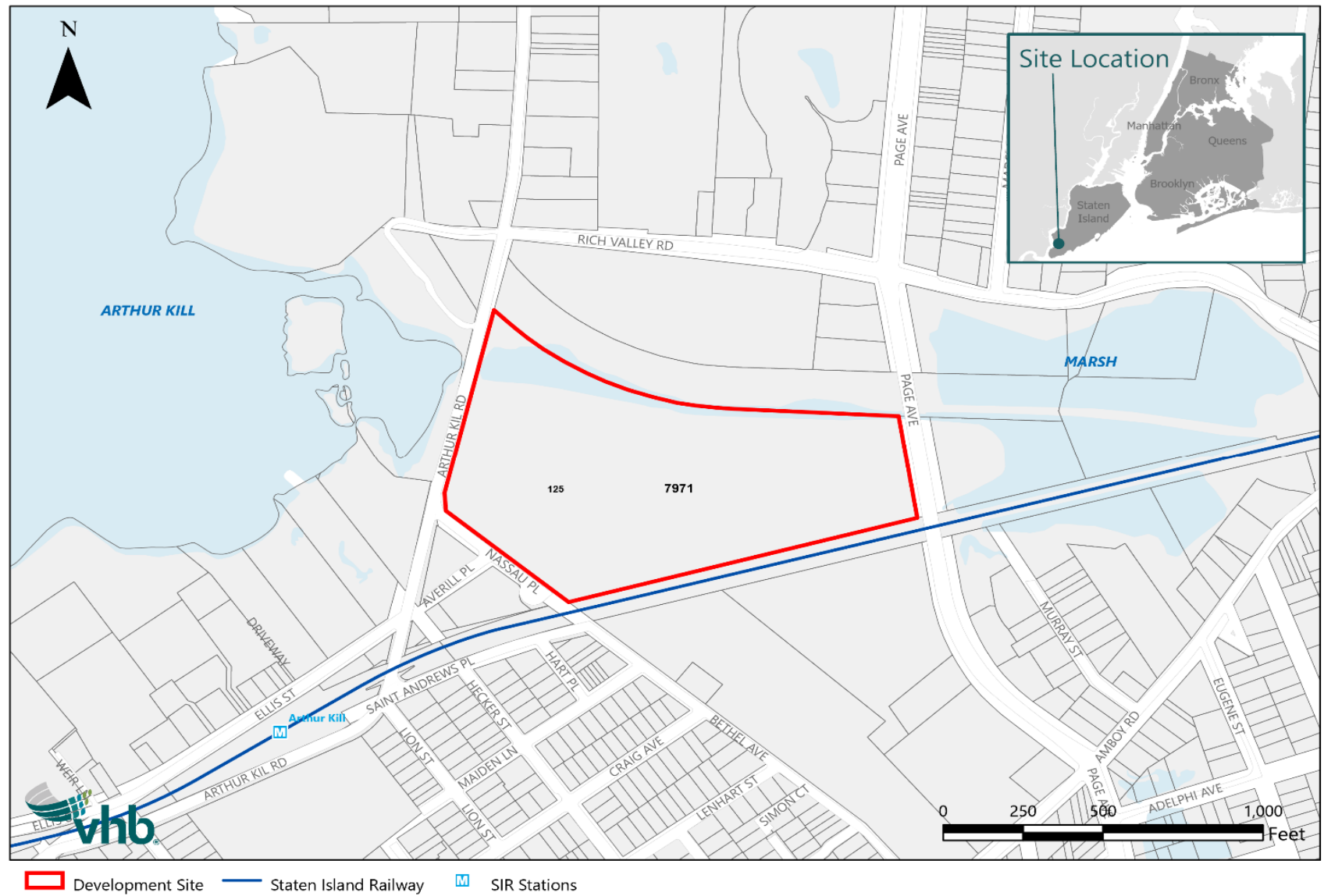
Transportation

This section assesses the potential for the Proposed Development to result in significant adverse impacts on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, cyclists, transit users, and motorists), and on- and off-street parking.

Introduction

The Proposed Development is located along the east side of Arthur Kill Road between Nassau Place and Richmond Valley Road in the Tottenville section of Staten Island. **Figure 7-1** shows the location of the Development Site. The Development Site is currently vacant and used for vehicle storage. The Proposed Development is a 332,009 square foot (sf) high-cube warehouse and would include 175 surface parking spaces and 60 loading dock berths located on the north end of the proposed building. Two driveways are proposed, one on Nassau Place and a second exit-only driveway on Arthur Kill Road.

Figure 7-1 Site Location



Methodology

According to the *2021 CEQR Technical Manual* procedures for transportation analysis, a two-tiered screening process is undertaken to determine whether a quantified analysis is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the volume of peak hour person and vehicle trips generated by the Proposed Development would remain below the minimum thresholds for further study. These thresholds are:

- › 50 peak hour vehicle trip ends;
- › 200 peak hour subway/rail or bus transit riders; and
- › 200 peak hour pedestrian trips.

If the Proposed Development results in increments that would exceed any of these thresholds, a Level 2 (Trip Assignment) screening assessment is performed. Under this assessment, project-generated trips that exceed Level 1 thresholds are assigned to and from the site through their respective networks (streets, bus and subway lines, sidewalks, etc.) based on expected origin-destination patterns and travel routes.

Level 1 Screening Assessment

The travel demand factors used to calculate the projected number of trips were based on information provided by the New York City Department of Transportation (NYC DOT) and American Community Survey (ACS) census data. **Table 7-1** provides the travel demand assumptions used for the weekday AM, midday, PM, and Saturday peak hours.

Table 7-1 Travel Demand Assumptions

	Person Trips	Truck Trips
Weekday Trip Gen Rate	3.54 ¹	0.65 ¹
	per 1,000 SF	per 1,000 SF
Saturday Trip Gen Rate	0.79 ¹	0.14 ¹
	per 1,000 SF	per 1,000 SF
Temporal Distribution		
AM Peak Hour	9% ¹	5% ¹
Midday Peak Hour	5% ¹	7% ¹
PM Peak Hour	9% ¹	5% ¹
Saturday Peak Hour	38% ¹	28% ¹
Modal Split		
Auto	91% ²	-
Transit	6% ²	-
Walk	3% ²	-
Vehicle Occupancy	1.06 ²	-
Directional Split (In/Out)		
AM Peak Hour	68%/32% ¹	41%/59% ¹
Midday Peak Hour	38%/62% ¹	59%/41% ¹
PM Peak Hour	35%/65% ¹	44%/56% ¹
Saturday Peak Hour	41%/59% ¹	42%/58% ¹

Source:

¹ Information provided by NYC DOT² 2012 – 2016 ACS reverse journey to work data for Staten Island census tracts 226, 244.01, and 248; ferry trips were assumed to travel via auto to/from the project site.

Travel Demand Assumptions

The trip generation rates and temporal and directional distributions for the high-cube warehouse were based on information provided by NYC DOT which was developed based on data from the *ITE Trip Generation* publication, *11th Edition*, for a mix of warehouse uses and adjusted for New York City travel characteristics based on NYC DOT's surveys of similar uses.

A weekday person trip generation rate of 3.54 person trips per 1,000 sf and 0.65 truck delivery trips per 1,000 sf, and a Saturday person trip generation rate of 0.79 person trips per 1,000 sf and 0.14 truck delivery trips per 1,000 sf was used. For the person trips, temporal distributions of 9 percent for the weekday AM and PM peak hours, 5 percent for the weekday midday peak hour, and 38 percent for the Saturday peak hour were used. Delivery temporal distributions of 5 percent for the weekday AM and PM peak hours, 7 percent for the weekday midday peak hour, and 28 percent for the Saturday peak hour were used. Directional distributions of 68 percent "in" during the weekday AM peak hour, 38 percent "in" during the weekday midday peak hour, 35 percent "in" during the weekday PM peak

hour, and 41 percent “in” during the Saturday peak hour were used for person trips, and directional distributions of 41 percent “in” during the weekday AM peak hour, 59 percent “in” during the weekday midday peak hour, 44 percent “in” during the weekday PM peak hour, and 42 percent “in” during the Saturday peak hour were used for delivery trips. The person trip modal splits of 91 percent by auto (ferry trips were assumed to connect with the project site via auto) and 9 percent by non-auto modes (bus, Staten Island Railroad, or walk), and vehicle occupancy rates of 1.06 person per auto were obtained from the 2012–2016 ACS reverse journey to work data for Staten Island census tracts 226, 244.01, and 248. These travel demand factors were approved by NYC DOT.

Level 1 Screening Results

Transit and Pedestrians

The number of person trips generated by the Proposed Development are summarized in **Table 7-2** below. Fewer than ten pedestrian trips (walk plus bus and rail transit trips) are expected to be generated during the analyzed peak hours. The project-generated pedestrian trips would thus not be expected to exceed the *2021 CEQR Technical Manual* Level 1 screening thresholds of 200 pedestrian trips per hour during any of the peak hours and further analyses are not needed.

Table 7-2 Trip Generation Summary – Person Trips

Mode	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	65	31	96	20	33	53	34	63	97	37	53	90
Transit	4	2	6	1	2	3	2	4	6	2	4	6
Walk	2	1	3	1	1	2	1	2	3	1	2	3
Total	71	34	105	22	36	58	37	69	106	40	59	99

Traffic and Parking

Table 7-3 summarizes the total peak hour vehicular volumes (“ins” plus “outs”) for the Proposed Development. The Proposed Development would result in an hourly trip increment of 101 vehicle trips (112 passenger car equivalents [PCEs]¹) during the weekday AM peak hour, 65 vehicle trips (80 PCEs) during the weekday midday peak hour, 102 vehicle trips (113 PCEs) during the weekday PM peak hour, and 98 vehicle trips (111 PCEs) during the Saturday peak hour. Since the volume of vehicle trips generated by the Proposed Development would exceed the 50-vehicle trip threshold during the four analysis peak hours, a Level 2 trip assignment was conducted.

¹ Because there is a significant number of truck delivery trips generated by the Proposed Development, vehicle trips were converted to passenger car equivalents per the *2021 CEQR Technical Manual* guidelines. The analysis assumed 2.0 PCEs per truck delivery trip.

Table 7-3 Trip Generation Summary – Vehicle Trips

Mode	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Autos	61	29	90	19	31	50	32	59	91	35	50	85
Trucks	4	7	11	9	6	15	5	6	11	5	8	13
Total Vehicles	101			65			102			98		
Total PCEs	112			80			113			111		

Level 2 Screening Assessment

As shown above, the number of trips generated by the Proposed Development would exceed the 2021 CEQR Technical Manual Level 1 screening thresholds for vehicular trips during the weekday AM, midday, PM, and Saturday peak hours. Project-generated trips were assigned through the surrounding street network based on expected routes to and from the Development Site.

Vehicle trips were assigned along the key roadways in the study area such as Arthur Kill Road, Richmond Valley Road, and Page Avenue, and to the nearby highway network which includes connections to the West Shore Expressway (Route 440), Korean War Veterans Parkway, and the Outerbridge Crossing. Origin-destination assumptions were based on the assignments for the traffic study conducted for the Matrix Global Logistic Park development campus, which is also located in Staten Island and, similar to this project, is situated near a highway (Staten Island Expressway) and a Staten Island-New Jersey bridge connection (Goethals Bridge).

Approximately 43 percent of the Proposed Development's auto trips were assumed to arrive from the northeast and would utilize the Staten Island Expressway and then Route 440 to travel to the Development Site. Approximately 40 percent of the auto trips were assumed to arrive from the west via the Outerbridge Crossing. The remaining trips would arrive from the west via the Goethals Bridge (five percent) or the Bayonne Bridge (five percent) and travel to the site using Route 440, and seven percent would travel to the site using local roadways. The vast majority of the truck trips are expected to utilize the regional highway network – 43 percent were assigned to travel through the Outerbridge Crossing, 23 percent from the Staten Island Expressway from the northeast, 19 percent from the Goethals Bridge, and 10 percent from the Bayonne Bridge. A small amount of truck trips (five percent) were assumed to use local roadways.

As detailed above, the Proposed Development would provide two driveways – one along Nassau Place and one along Arthur Kill Road. The Nassau Place driveway is bi-directional, and the Arthur Kill Road driveway is exit only. Auto trips were assigned in and out of the Nassau Place driveway to the employee surface parking lots. Truck trips were assigned to enter through the Nassau Place driveway and were assigned to exit through the Arthur Kill driveway. The Arthur Kill Road driveway would be restricted to only allow right-turn exits. The majority of trips exiting this driveway would be trucks, but a small number of autos

parked in the back of the warehouse would also be expected to exit via the Arthur Kill Road driveway. Due to the geometry of the intersection of Arthur Kill Road and Nassau Place, trucks would be prohibited from turning right from northbound Arthur Kill Road to Nassau Place, as requested by NYC DOT.

Project-generated volumes for the weekday AM, midday, PM, and Saturday peak hours are shown in **Figure 7-2** through **Figure 7-5**.

Figure 7-2 Project Generated Vehicle Trips- Weekday AM Peak Hour

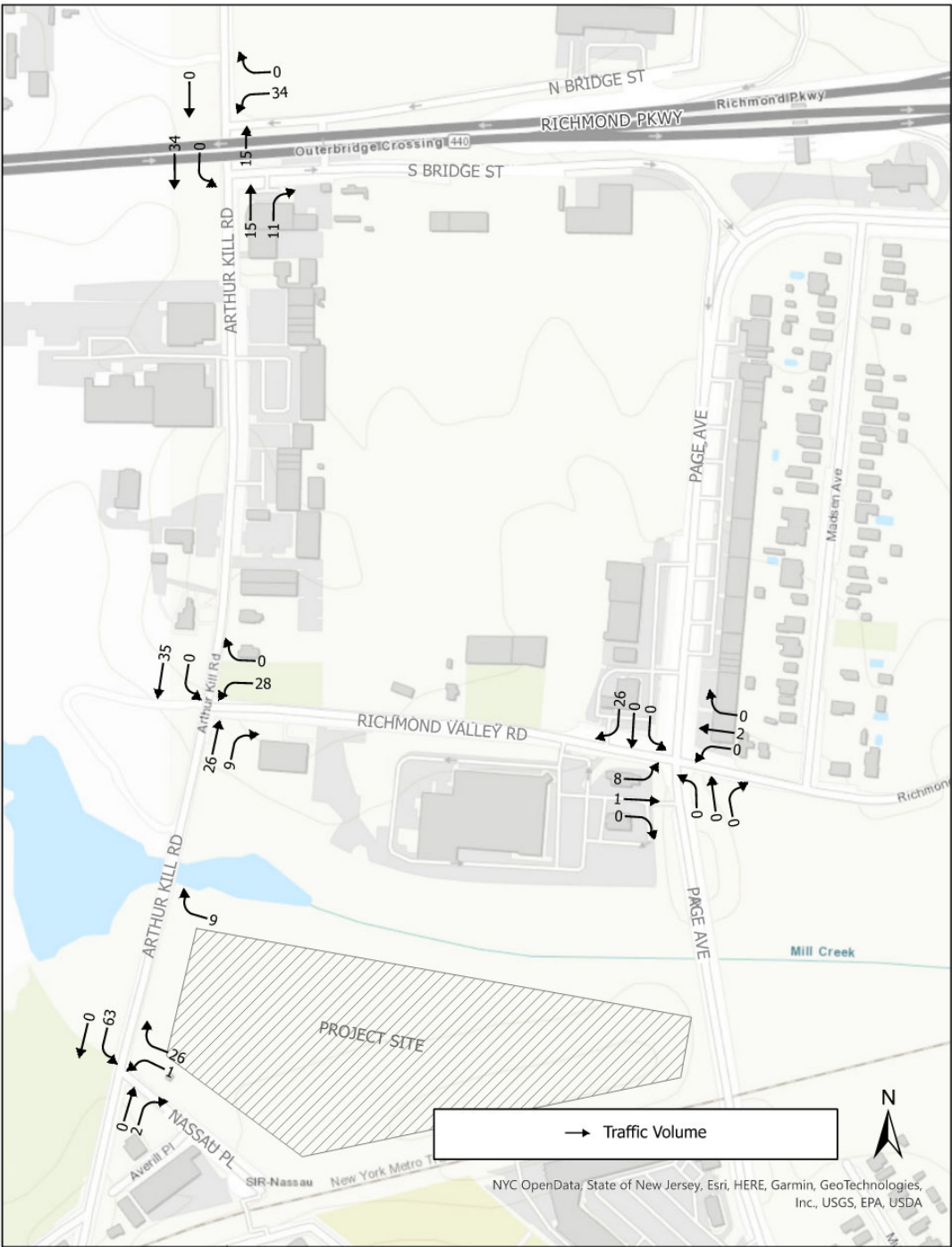


Figure 7-3 Project Generated Vehicle Trips- Weekday Midday Peak Hour

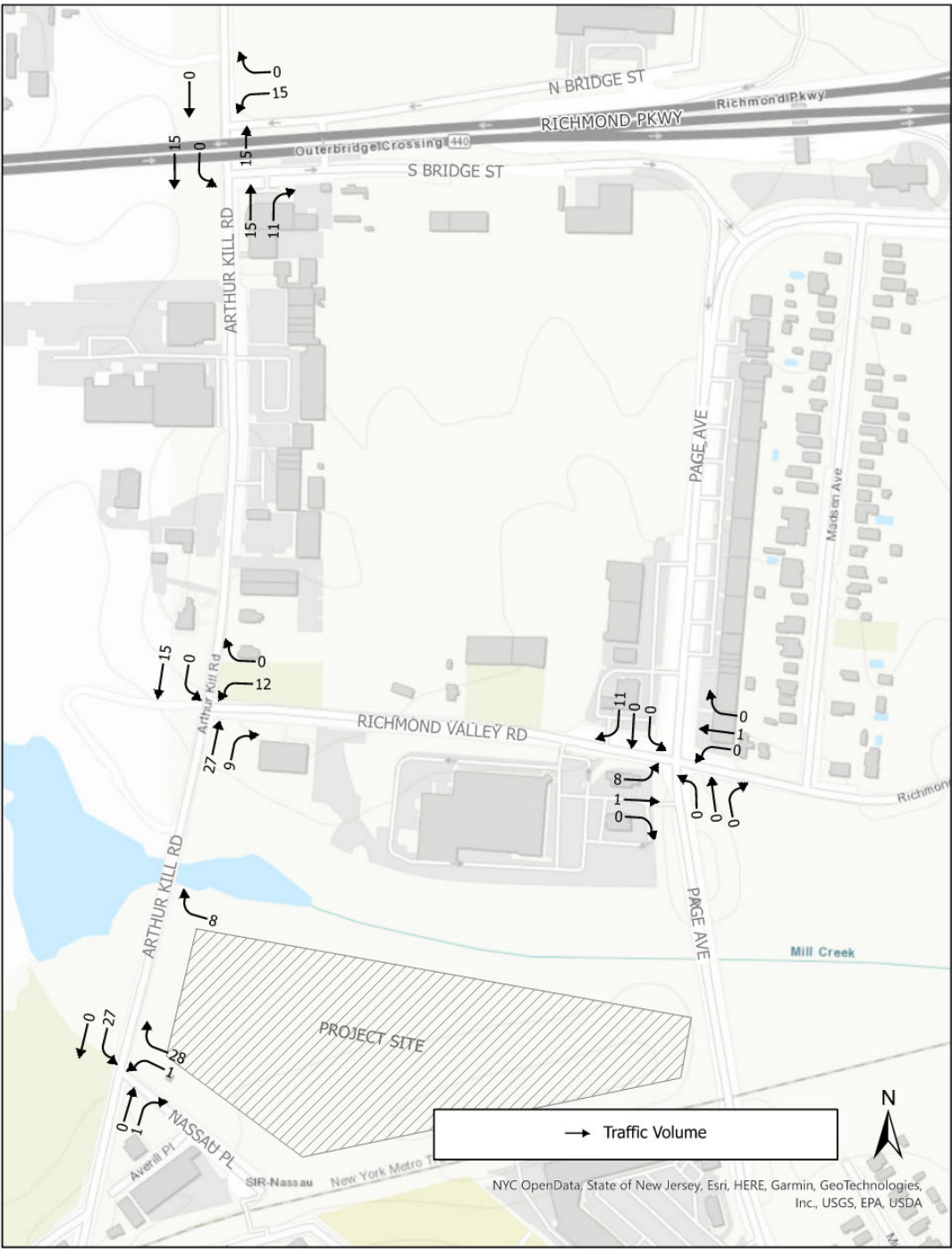


Figure 7-4 Project Generated Vehicle Trips- Weekday PM Peak Hour

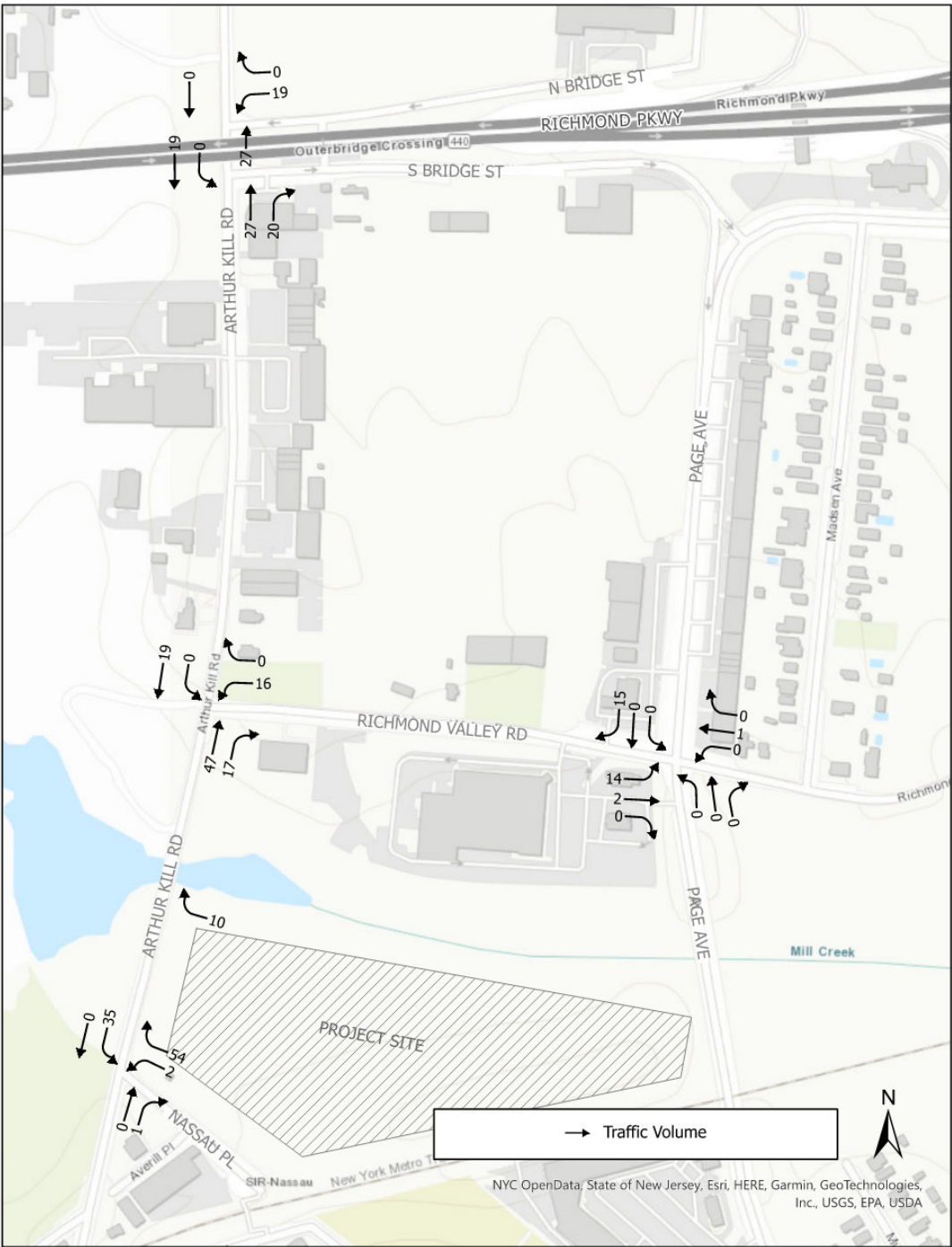
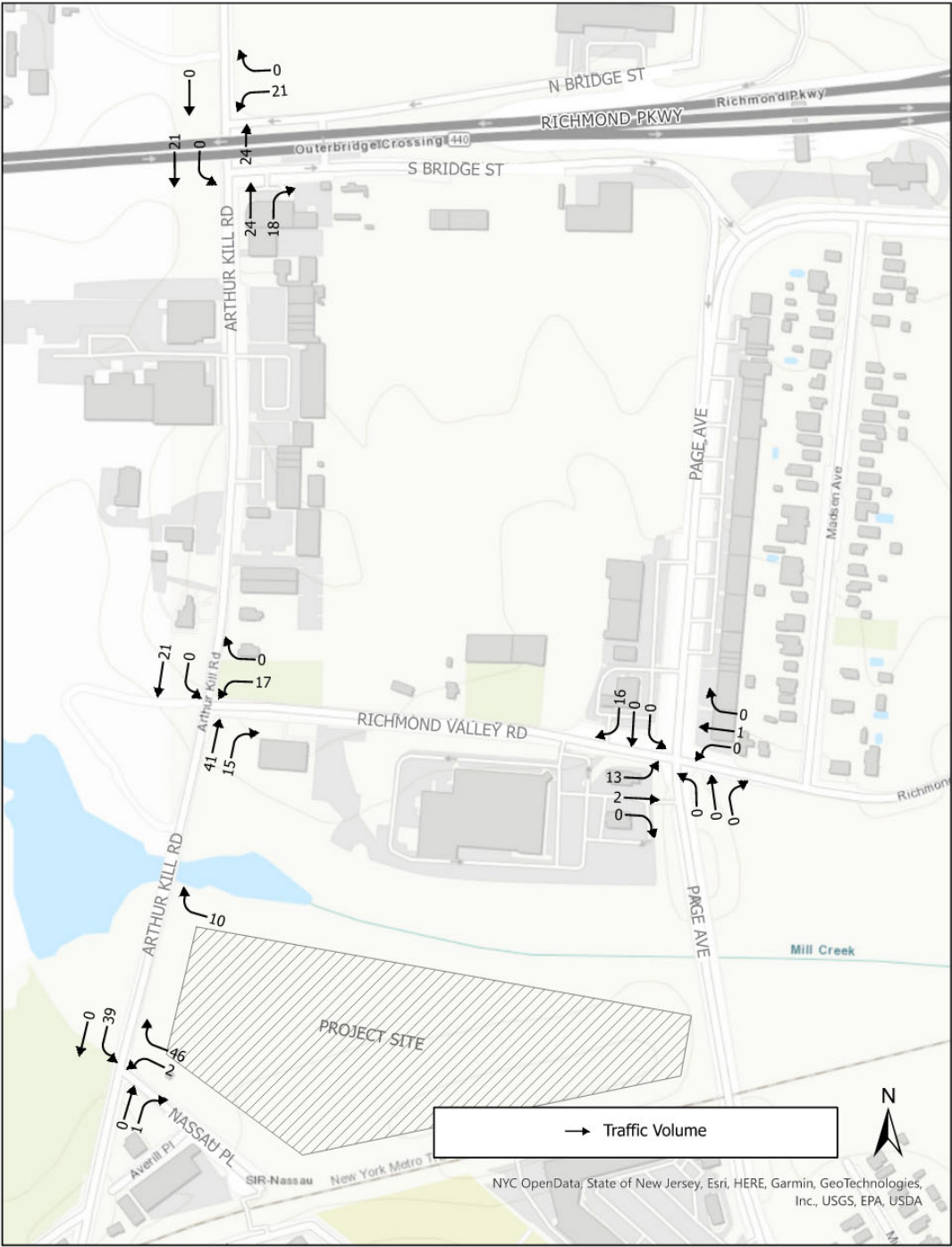


Figure 7-5 Project Generated Vehicle Trips- Saturday Peak Hour



Level 2 Screening Results

Based on guidance provided in the *2021 CEQR Technical Manual*, and discussions with and guidance provided by NYC DOT, five intersections were identified for detailed level of service analyses during the weekday AM, midday, and PM peak hours. A sixth intersection, the proposed driveway along Arthur Kill Road, was also included for analysis. Although project-generated vehicle trips during the Saturday peak hour would also exceed the CEQR thresholds for analysis, it is expected that the potential for traffic impacts during this peak hour would be no worse than the weekday PM peak hour. This determination was based on the trip generation results (the projected number of vehicle trips during the Saturday peak hour is less than during the weekday PM peak hour and feature similar directional trends) and existing conditions information. Existing conditions volumes during the Saturday peak hour were found to be approximately 15 percent lower than during the weekday PM peak hour, and the signal timing and roadway capacities (e.g., the number of travel lanes at the study area locations) are the same. It was therefore determined that detailed traffic level of service analyses for Saturday conditions would not be needed. The five existing traffic study analysis locations, analyzed for weekday AM, midday, and PM peak hour conditions, are listed below.

- › Arthur Kill Road and Nassau Place
- › Arthur Kill Road and Richmond Valley Road
- › Richmond Valley Road and Page Avenue
- › Arthur Kill Road and North Bridge Street
- › Arthur Kill Road and South Bridge Street

Detailed Analysis Methodology

Traffic

Detailed analyses were conducted using methodologies described in the *2021 CEQR Technical Manual* and are described below.

The operation of all signalized and unsignalized intersection analysis locations were assessed using Synchro software which are based on methodologies presented in the *Highway Capacity Manual (HCM)*. The HCM procedures evaluate the levels of service (LOS) for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle, as described below.

- › LOS A describes operations with very low delays, i.e., 10.0 seconds or less per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
- › LOS B describes operations with delays in excess of 10.0 seconds up to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- › LOS C describes operations with delays in excess of 20.0 seconds up to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle

lengths. The number of vehicles stopping is noticeable at this level, although many still pass through the intersection without stopping.

- › LOS D describes operations with delays in excess of 35.0 seconds up to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.
- › LOS E describes operations with delays in excess of 55.0 seconds up to 80.0 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.
- › LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

Based on the *2021 CEQR Technical Manual* guidelines, LOS A, B, and C are considered acceptable, LOS D is generally considered tolerably acceptable in dense urban environments, and LOS E and F indicate congestion. These guidelines are applicable to individual traffic movements and overall intersection levels of service.

For unsignalized intersections, delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line: LOS A describes operations with very low delay, i.e., 10.0 seconds or less per vehicle; LOS B describes operations with delays in excess of 10.0 seconds up to 15.0 seconds; LOS C has delays in excess of 15.0 seconds up to 25.0 seconds; LOS D, excess of 25.0 seconds up to 35.0 seconds per vehicle; and LOS E, excess of 35.0 seconds up to 50.0 seconds per vehicle. LOS F describes operation with delays in excess of 50.0 seconds per vehicle. This condition exists when there are insufficient gaps of suitable size in a major vehicular traffic stream to allow side street traffic to cross safely. Based on *2021 CEQR Technical Manual* guidelines, LOS A, B, C, and D are considered acceptable for unsignalized intersections.

Significant Impact Criteria

The assessment of potential significant traffic impacts of a proposed project is based on significant impact criteria defined in the *2021 CEQR Technical Manual*. If a lane group in the future With-Action condition is within acceptable LOS A, B, C, or D, the impact is not considered significant.

For a lane group at With-Action LOS E, an increase in projected delay of 5.0 or more seconds compared to the No-Action condition is considered a significant impact. For a lane group at With-Action LOS F, an increase in projected delay of 4.0 or more seconds compared to the No-Action condition is considered a significant impact. For unsignalized intersections, for the minor street to generate a significant impact, 90 passenger car equivalents (PCEs) must be identified in the With-Action condition in any peak hour.

Parking

The parking analysis first determines whether the site plan will be providing a sufficient amount of parking spaces to accommodate projected parking by employees. If the site plan does not, the parking analysis needs to go further and identify the extent to which off-street parking is available and utilized under existing and future conditions. It would take into consideration anticipated changes in area parking supply and provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Development. This analysis typically encompasses a study area within a quarter mile of the Development Site. If the analysis concludes that there would be a shortfall in parking within the quarter-mile study area, the study area may be extended to a half-mile to identify additional parking supply.

Vehicle and Pedestrian Safety

An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas that have been identified as high-crash locations, where five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent three-year period for which data are available or at locations along a Vision Zero Priority Corridor or Intersection. For these locations, crash trends are identified to determine whether projected vehicular and pedestrian traffic would further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where the Proposed Development is located, traffic volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified.

Existing Conditions

Traffic

Roadway Network

The Development Site is located along the east side of Arthur Kill Road between Nassau Place and Richmond Valley Road in the Tottenville section of Staten Island. Roadway access approaching the Development Site is provided via Arthur Kill Road, a two-way roadway with one travel lane in each direction. Arthur Kill Road extends from the north, from the middle of Staten Island, to Tottenville and provides connections from the Outerbridge Crossing and West Shore Expressway (Route 440) to the Development Site.

Arthur Kill Road is a two-way north-south roadway along the west side of the Development Site. Arthur Kill Road consists of one travel lane in each direction with no parking. The S78 bus route runs along Arthur Kill Road.

Richmond Valley Road is a two-way east-west roadway consisting of one travel lane in each direction with no parking between Arthur Kill Road and Page Avenue. Richmond Valley Road starts from Amboy Road to the east and terminates at Arthur Kill Road on its western end.

Nassau Place is a lightly trafficked two-way roadway located along the Development Site that extends from Arthur Kill Road to the Staten Railway tracks. Nassau Place consists of one travel lane in each direction with no parking.

Traffic Volumes

Turning movement and 24-hour Automatic Traffic Recorder (ATR) counts were conducted in May 2019 and supplemented with 2016 traffic count data from the *Riverside Galleria DEIS (2017)* in order to develop the 2019 existing conditions traffic volumes. The count data were used to determine the weekday peak hours of 7:30 AM to 8:30 AM, 12:45 PM to 1:45 PM, and 5:30 PM to 6:30 PM.

Traffic volumes along northbound Arthur Kill Road range from 625 to 820 vehicles per hour (vph) during the three weekday peak hours between Nassau Place and South Bridge Street. A substantial portion of northbound Arthur Kill Road traffic turns right onto South Bridge Street (approximately 210 to 300 vph) to access the regional highway network. In the southbound direction, Arthur Kill Road traffic volumes range from 580 vph to 810 vph between South Bridge Street and Nassau Place. Along Richmond Valley Road, traffic volumes in the eastbound direction are approximately 280 vph to 345 vph during the peak hours analyzed and range from 330 to 370 vph in the westbound direction during the weekday AM peak hour and 415 vph to 535 vph during the weekday midday and PM peak hours. Traffic volumes along Nassau Place are low with no more than 50 vph in either direction during the peak hours analyzed.

The 2019 existing conditions traffic volumes for the weekday AM, midday, and PM peak hours are shown in **Figure 7-6** through **Figure 7-8**.

Levels of Service

Details on levels of service, v/c ratios, and average vehicle delays for the existing conditions are presented in **Table 7-4**. Overall, the capacity analysis indicates most of the study area's intersection approaches/lane groups operate at acceptable LOS D or better for the analysis peak hours and only one intersection would operate at overall LOS D – the intersection of Arthur Kill Road and Richmond Valley during the weekday PM peak hour. One movement at the intersection of Arthur Kill Road and Richmond Valley Road operates at unacceptable LOS E – the westbound Richmond Valley Road approach during the weekday PM peak hour.

Figure 7-6 Existing Traffic Volumes- Weekday AM Peak Hour

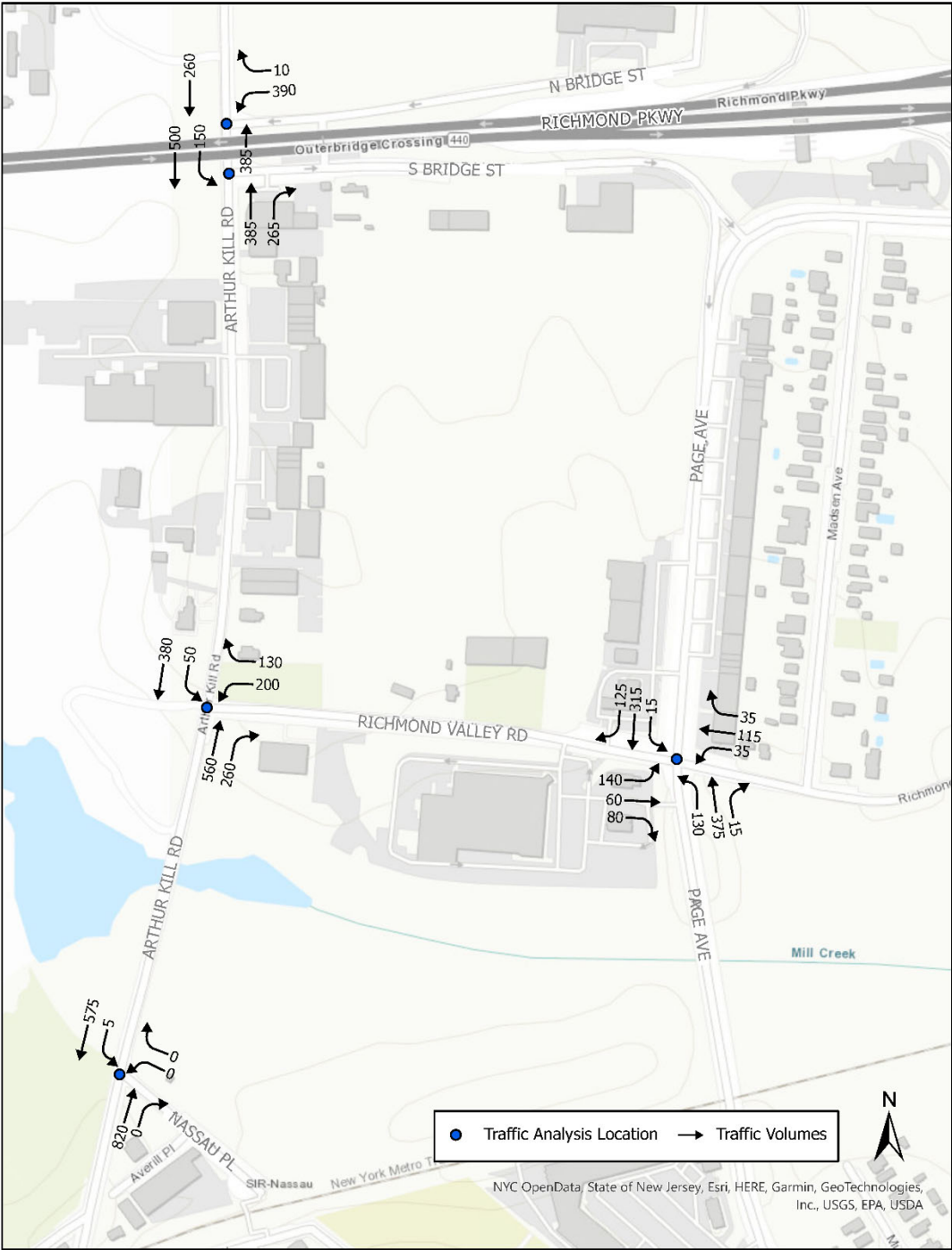


Figure 7-7 Existing Traffic Volumes- Weekday Midday Peak Hour

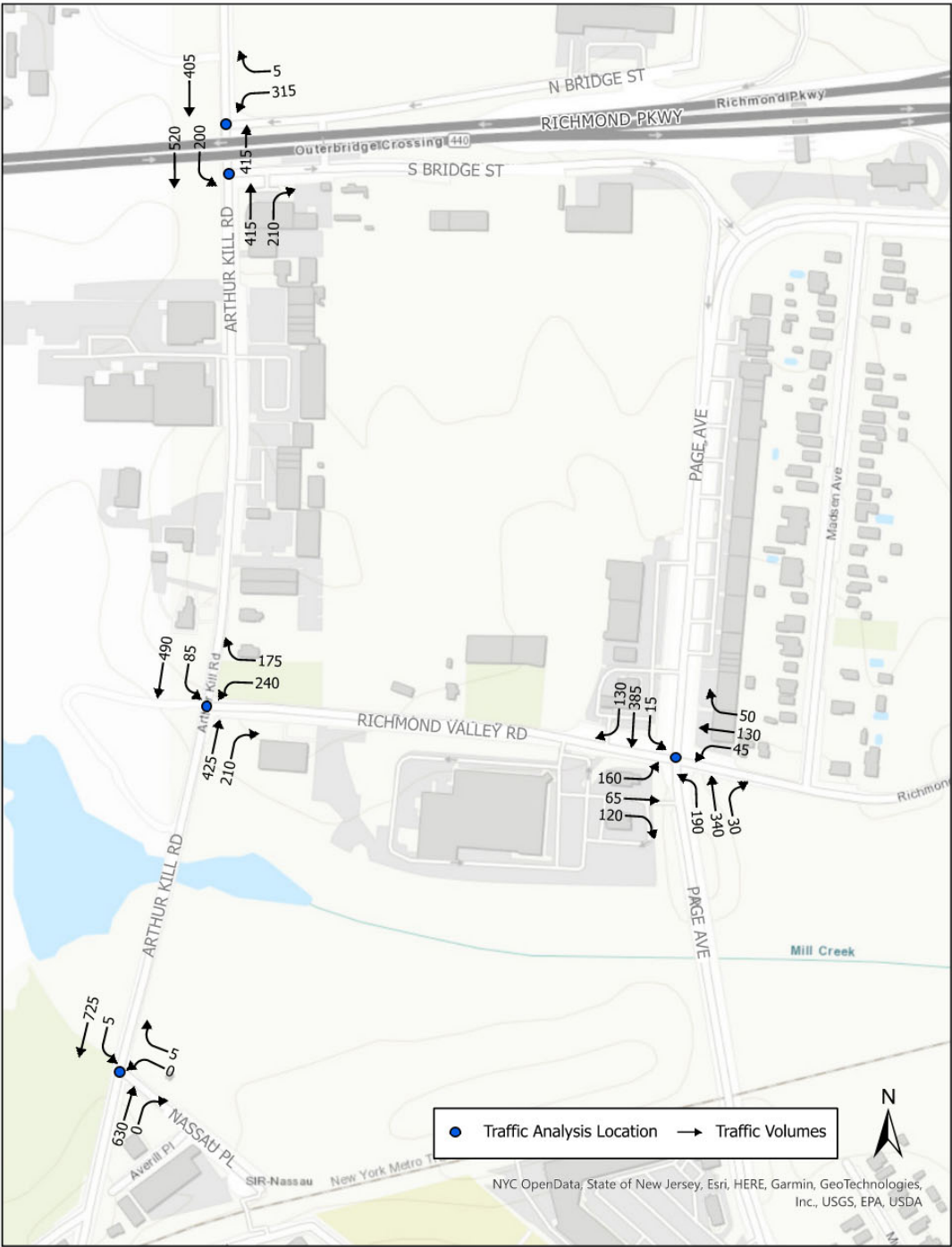


Figure 7-8 Existing Traffic Volumes- Weekday PM Peak Hour

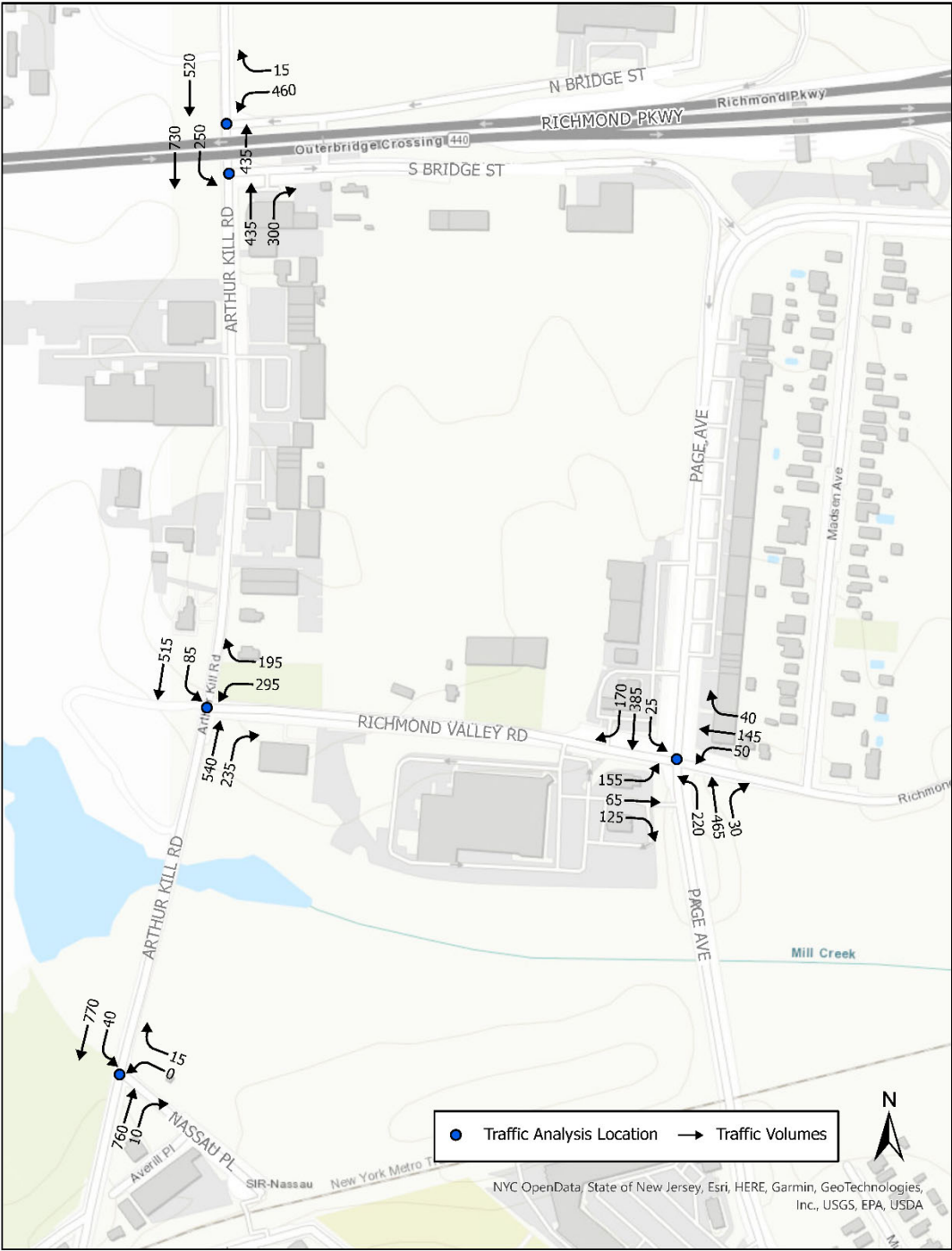


Table 7-4 Existing Traffic Levels of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
UNSIGNALIZED INTERSECTION													
Arthur Kill Road and Nassau Place													
Nassau Place	WB	LR	-	0.0	A	LR	-	13.9	B	LR	-	15.6	C
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	0.2	A	T	-	0.2	A	LT	-	1.7	A
Overall Intersection ²		-	-	0.1	A	-	-	0.2	A	-	-	1.0	A
Arthur Kill Road and South Bridge Street													
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	4.6	A	LT	-	5.5	A	LT	-	9.2	A
Overall Intersection ²		-	-	2.3	A	-	-	2.9	A	-	-	5.2	A
SIGNALIZED INTERSECTIONS													
Arthur Kill Road and Richmond Valley Road													
Richmond Valley Road	WB	LR	0.82	34.7	C	L	0.97	54.9	D	L	1.05	77.7	E
Arthur Kill Road	NB	TR	0.87	20.9	C	TR	0.67	12.8	B	TR	0.83	18.7	B
	SB	LT	0.80	21.7	C	LT	0.86	22.3	C	LT	1.03	53.8	D
Overall Intersection ²		-	-	24.2	C	-	-	27.4	C	-	-	45.2	D

Table 7-4 Existing Traffic Levels of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
Page Avenue and Richmond Valley Road													
Richmond Valley Road	EB	L	0.42	26.2	C	L	0.56	30.8	C	L	0.55	30.8	C
		TR	0.29	22.8	C	TR	0.37	23.9	C	TR	0.38	24.1	C
	WB	LTR	0.34	23.4	C	LTR	0.44	25.0	C	LTR	0.46	25.4	C
Page Avenue	NB	L	0.40	15.0	B	L	0.58	20.1	C	L	0.67	24.3	C
		TR	0.44	13.6	B	TR	0.39	12.9	B	TR	0.52	14.7	B
	SB	LTR	0.32	12.0	B	LTR	0.36	12.3	B	LTR	0.38	12.5	B
Overall Intersection²		-	-	16.7	B	-	-	18.4	B	-	-	19.1	B
Arthur Kill Road and North Bridge Street													
North Bridge Street	WB	LR	0.63	21.3	C	LR	0.58	20.1	C	LR	0.76	25.8	C
Arthur Kill Road	NB	T	0.44	6.9	A	T	0.44	8.8	A	T	0.45	6.9	A
	SB	T	0.30	9.6	A	T	0.41	10.6	B	T	0.54	12.2	B
Overall Intersection²		-	-	12.6	B	-	-	12.8	B	-	-	15.0	B

¹ Control delay is measured in seconds per vehicle.² Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Vehicular and Pedestrian Safety

Crash data were obtained for the study area intersections from NYCDOT for the most recent three-year period for which such data are available (2017 through 2019). This information is based on data provided by the New York State Department of Transportation (NYSDOT), New York State Department of Motor Vehicles (NYSDMV), and New York City Police Department (NYPD).

The crash data detail reported crashes (crashes resulting in death, injury, or property damage in excess of \$1,000), fatalities, injuries, and pedestrian and bicycle injuries annually.

According to the *2021 CEQR Technical Manual*, an intersection is considered a high-crash location when there are five or more pedestrian/bicyclist injury crashes in any consecutive 12 months during the most recent three-year period for which data are available, or if an intersection is located along a Vision Zero Priority Corridor or Intersection (none of the study area intersection are identified as a Vision Zero Priority Intersection or are located along a Priority Corridor).

Table 7-5 presents a summary of total crashes at the study area intersections during the three-year period of 2017 through 2019, and also shows total fatalities, injuries, and pedestrian and bicycle crashes. No high-crash locations were identified within the study area and no additional analysis is needed.

Table 7-5 Vehicle and Pedestrian Crash Summary

Intersection		Total Crashes					Pedestrian Crashes			Bicycle Crashes		
North-South Roadway	East-West Roadway	2017	2018	2019	Total Fatalities	Total Injuries	2017	2018	2019	2017	2018	2019
Arthur Kill Road	Nassau Place	0	2	0	0	0	0	0	0	0	0	0
Arthur Kill Road	Richmond Valley Road	6	1	5	0	5	0	0	0	0	0	0
Page Avenue	Richmond Valley Road	8	14	9	0	21	0	0	0	1	0	0
Arthur Kill Road	North Bridge Street	1	4	1	0	2	0	0	0	0	0	0
Arthur Kill Road	South Bridge Street	2	1	2	0	3	0	0	0	0	0	0

Source: NYSDOT/NYS DMV (2017-2019)

No-Action Condition

Traffic

Traffic Volumes

This section establishes the baseline (No-Action) condition against which potential impacts of the project can be identified. Future year conditions were analyzed for the year 2024. The No-Action condition volumes were developed by increasing existing (2019) traffic volumes by the expected growth in overall travel through and within the study area. An annual background growth rate of 1.00 percent was assumed (year 2019 to the Proposed Development’s 2024 With-Action year) based on the *2021 CEQR Technical Manual* guidelines. Three development projects (see **Table 7-6**) identified in the *Riverside Galleria DEIS (2017)* that are expected to be developed by 2024 were incorporated into the No-Action condition analysis. The other projects identified in the *Riverside Galleria DEIS* have been completed prior to the May 2019 counts. The 2024 No-Action traffic volumes for the weekday AM, midday, and PM peak hours are provided in **Figure 7-9** through **Figure 7-11**.

Table 7-6 Background Development Projects

No.	Project Name/Address	Development Program	Project Status
1	Charleston Mixed-Use Development (Fairview Park)	195,000 sf retail, 15,000 sf library, 23 acres open space	Under construction, 56,000 sf of retail completed prior to the existing condition counts
2	3040 Veterans Road West	51,020 sf retail	Under construction
3	4885-4895 Arthur Kill Road	11,707 sf retail	Under construction

Source: Riverside Galleria DEIS 2017

Figure 7-10 2024 No-Action Traffic Volume- Weekday Midday Peak Hour

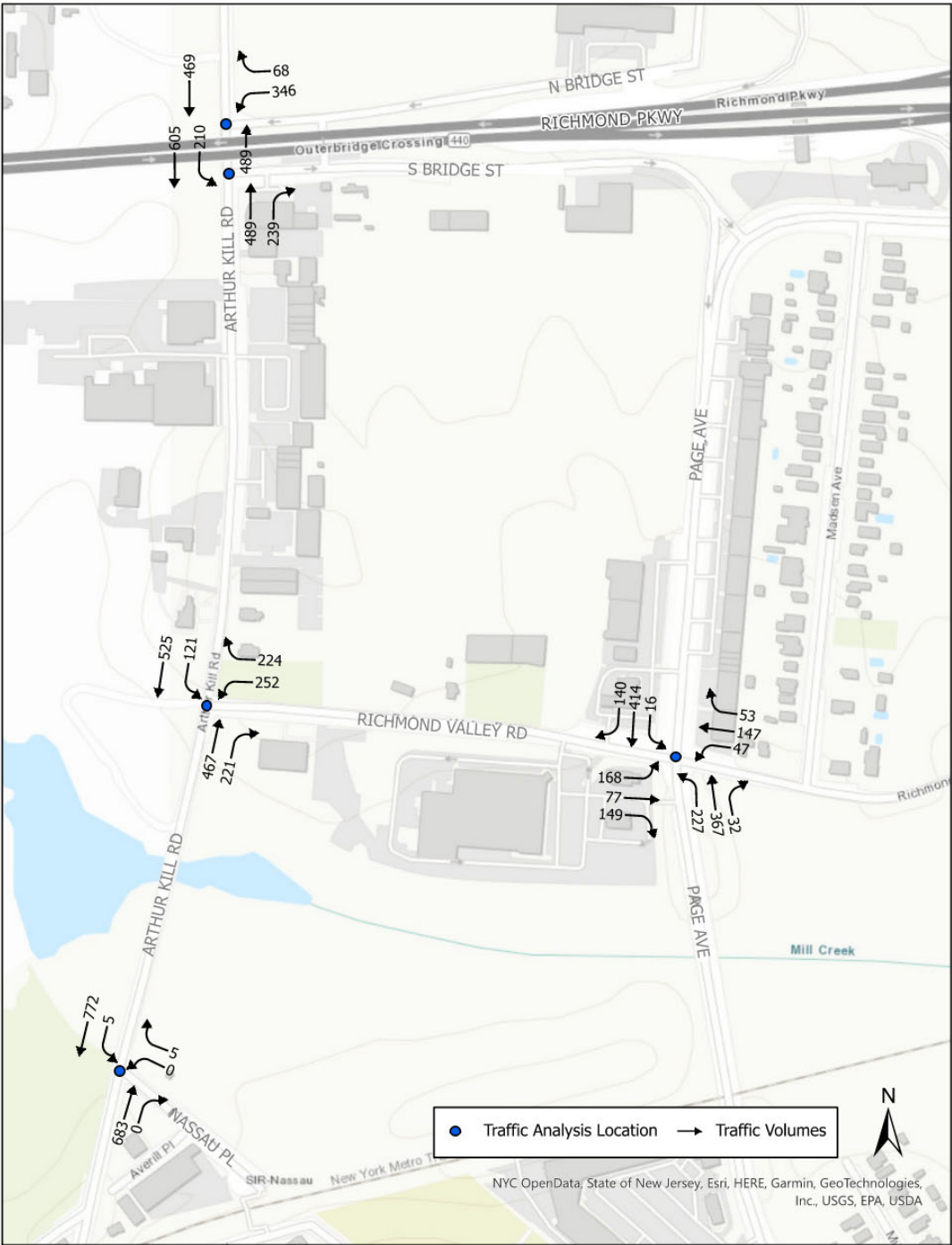
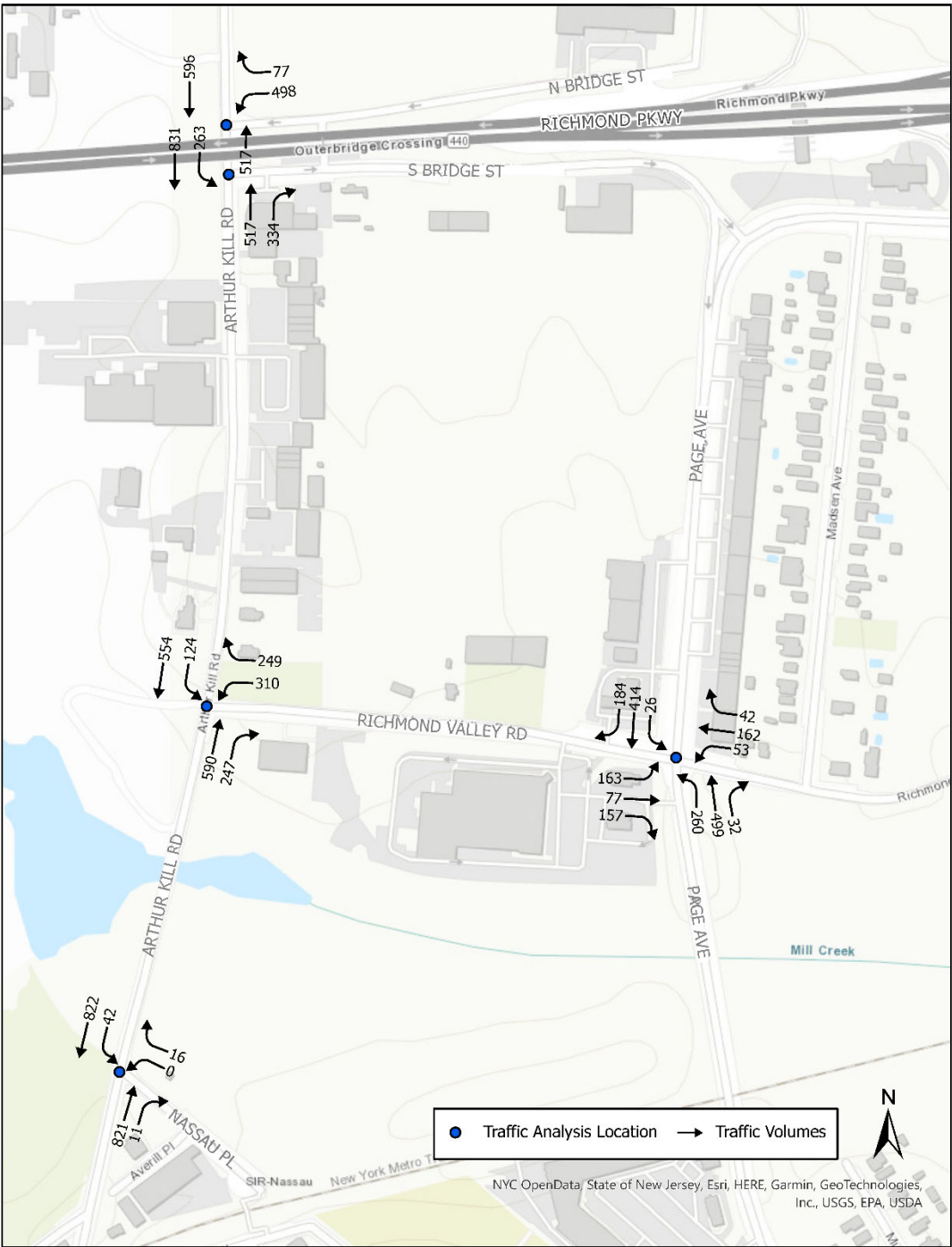


Figure 7-11 2024 No-Action Traffic Volume- Weekday PM Peak Hour



Roadway Improvements

One roadway improvement project was identified per consultation with NYC DOT along Richmond Valley Road between Arthur Kill Road to Page Avenue. This project will add one travel lane and bike lane along Richmond Valley Road in each direction. The westbound Richmond Valley Road approach at Arthur Kill Road will be restriped from one travel lane to one left turn lane and one right turn lane with a curbside bike lane. This improvement was incorporated into the No-Action and With-Action condition analyses.

NYC DOT implemented signal timing changes at the intersections of Richmond Valley Road with Arthur Kill Road and with Page Avenue after the existing counts were conducted. These changes were also incorporated into the No-Action and With-Action condition analyses.

Levels of Service

Based on the traffic volume mentioned above, the 2024 No-Action traffic levels of service were determined for the three analysis locations. Detailed traffic levels of service are provided in **Table 7-7**.

Traffic movements at four of the five intersections would operate at acceptable levels of service during all peak hours similar to the existing conditions. At the intersection of Arthur Kill Road and Richmond Valley Road, however, the overall intersection level of service would deteriorate to unacceptable LOS F during the peak hours analyzed as a result of the increased traffic volumes from the background development projects and capacity constraints at this intersection; the intersection operates at acceptable levels of service during the weekday AM, midday, and PM peak hours under existing conditions. Although the westbound Richmond Valley Road approach would be expected to improve from unacceptable LOS E to acceptable levels of service during the weekday PM peak hour, the southbound Arthur Kill Road approach would deteriorate to LOS F during all peak hours analyzed (this approach operates at acceptable level of service during the weekday AM, midday, and PM peak hours under existing conditions).

Table 7-7 No-Action Traffic Levels of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
UNSIGNALIZED INTERSECTION													
Arthur Kill Road and Nassau Place													
Nassau Place	WB	LR	-	0.0	A	LR	-	14.6	B	LR	-	16.7	C
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	0.2	A	LT	-	0.2	A	LT	-	2.0	A
Overall Intersection²		-	-	0.1	A	-	-	0.2	A	-	-	1.2	A
Arthur Kill Road and South Bridge Street													
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	5.6	A	LT	-	6.7	A	LT	-	12.7	B
Overall Intersection²		-	-	2.8	A	-	-	3.5	A	-	-	7.1	A
SIGNALIZED INTERSECTIONS													
Arthur Kill Road and Richmond Valley Road													
Richmond Valley Road	WB	L	0.52	22.1	C	L	0.59	23.8	C	L	0.68	26.7	C
		R	0.57	24.5	C	R	0.67	27.4	C	R	0.68	28.2	C
Arthur Kill Road	NB	TR	0.97	34.7	C	TR	0.75	15.7	B	TR	0.93	28.0	C
	SB	LT	1.97	462.9	F	LT	1.39	196.0	F	LT	2.30	601.4	F
Overall Intersection²		-	-	156.9	F	-	-	85.1	F	-	-	211.7	F

Table 7-7 No-Action Traffic Levels of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
Page Avenue and Richmond Valley Road													
Richmond Valley Road	EB	L	0.47	27.8	C	L	0.64	34.8	C	L	0.63	34.7	C
		TR	0.41	25.0	C	TR	0.50	26.5	C	TR	0.53	27.2	C
	WB	LTR	0.37	23.9	C	LTR	0.48	25.9	C	LTR	0.53	27.2	C
Page Avenue	NB	L	0.55	18.8	B	L	0.73	28.4	C	L	0.84	39.5	D
		TR	0.47	14.0	B	TR	0.42	13.3	B	TR	0.56	15.4	B
	SB	LTR	0.35	12.2	B	LTR	0.39	12.6	B	LTR	0.41	12.9	B
Overall Intersection ²		-	-	17.8	B	-	-	20.5	C	-	-	22.3	C
Arthur Kill Road and North Bridge Street													
North Bridge Street	WB	LR	0.72	24.1	C	LR	0.76	25.9	C	LR	0.95	43.7	D
Arthur Kill Road	NB	T	0.54	8.2	A	T	0.52	10.6	B	T	0.53	8.7	A
	SB	T	0.38	10.3	B	T	0.47	11.3	B	T	0.61	13.5	B
Overall Intersection ²		-	-	14.0	B	-	-	15.8	B	-	-	22.3	C

¹ Control delay is measured in seconds per vehicle.² Overall intersection v/c ratio is the critical lane groups' v/c ratio.

With-Action Condition

Traffic

Traffic Volumes

The With-Action condition traffic volumes were developed by overlaying project-generated trips onto the No-Action condition traffic volumes. One additional intersection was analyzed – the proposed driveway along Arthur Kill Road which would only allow right turn exits from the Development Site. Project-generated auto trips were assigned to and from the Proposed Development's parking areas located along the Nassau Place frontage in the eastern end of the Development Site, or in the back of the Development Site near the driveway at Arthur Kill Road. Project-generated truck trips were assigned to enter from the Nassau Place driveway and exit from the Arthur Kill Road driveway.

As part of the project, the southbound Arthur Kill Road approach would be restriped to provide a left turn lane at the intersection of Nassau Place, as recommended by NYC DOT. The project would reconstruct the sidewalks along the Development Site's Arthur Kill Road and Nassau Place frontages and provide a pedestrian ramp at the northeast corner of Arthur Kill Road and Nassau Place. Construction of a pedestrian ramp on the northwest corner of this intersection would be explored in coordination with NYC DOT during the design process.

The With-Action traffic volumes for the weekday AM, midday, and PM peak hours are shown in **Figure 7-12** through **Figure 7-14**.

Figure 7-12 2024 With-Action Traffic Volume- Weekday AM Peak Hour

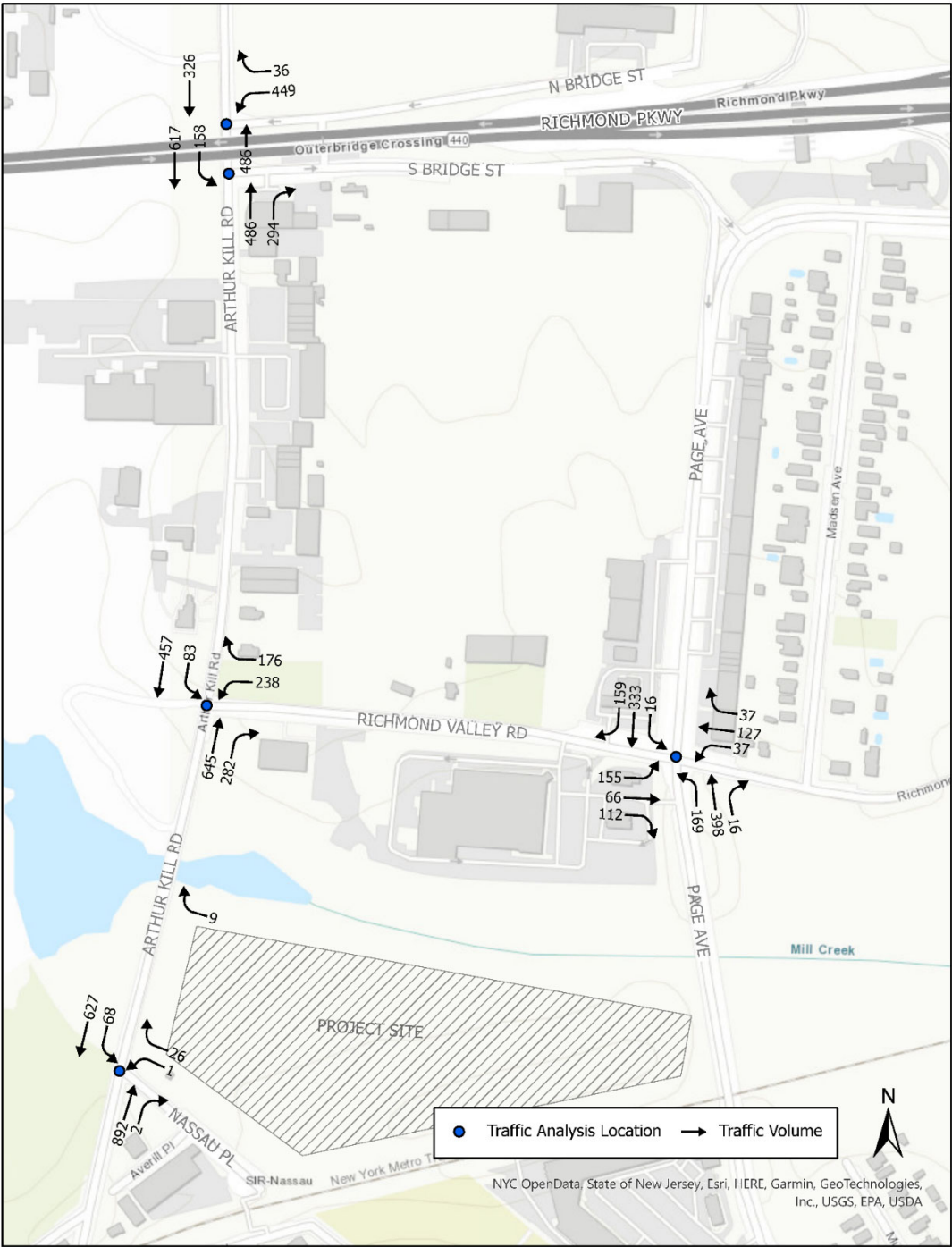


Figure 7-13 2024 With-Action Traffic Volume- Weekday Midday Peak Hour

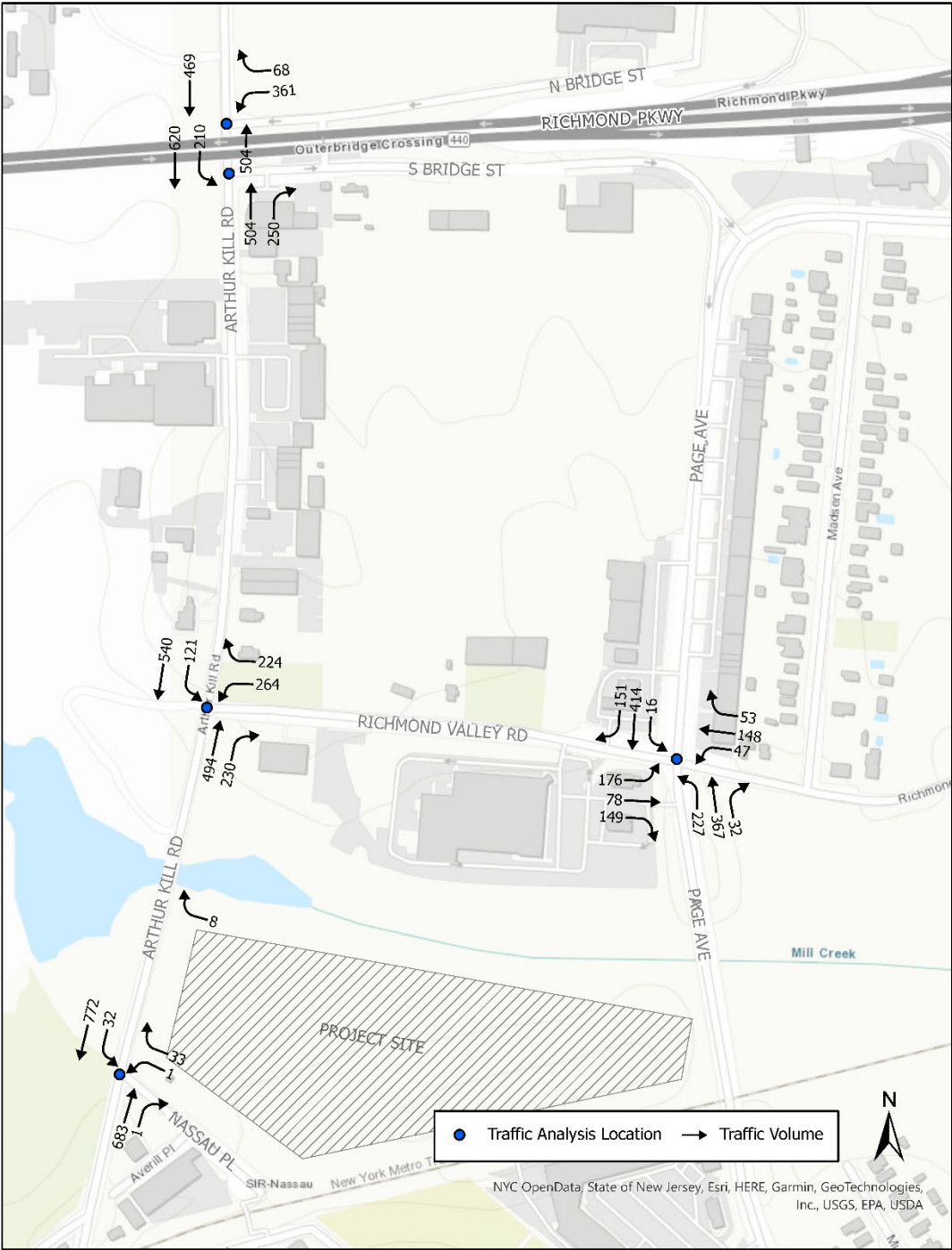
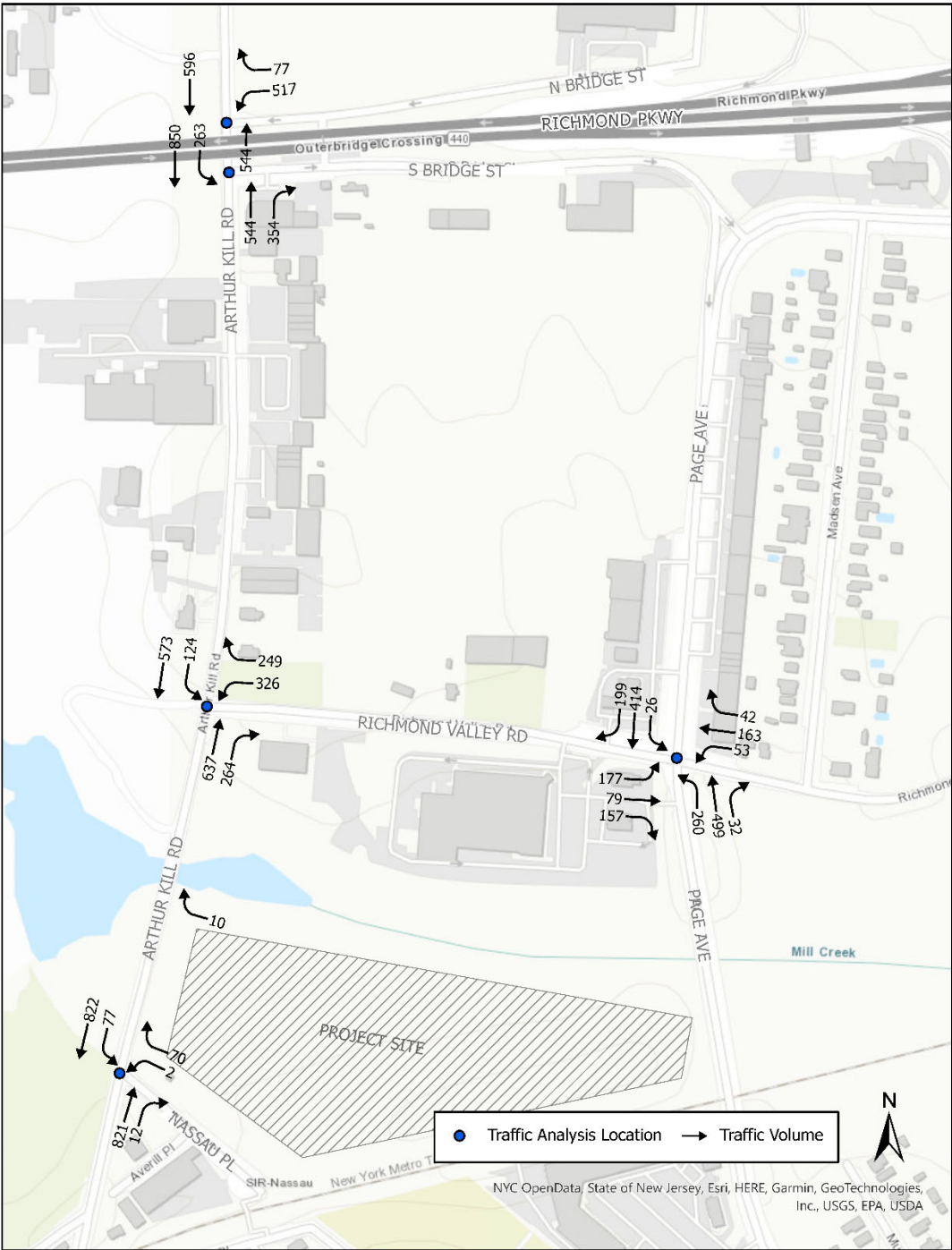


Figure 7-14 2024 With-Action Traffic Volume- Weekday PM Peak Hour



Levels of Service

Based on the traffic increases mentioned above, the 2024 With-Action traffic levels of service were determined for the six analysis locations (the five existing intersections plus the proposed exit-only driveway from the site onto northbound Arthur Kill Road). In addition to the restriping of Arthur Kill Road detailed above, signal timing modifications were identified at the intersection of Arthur Kill Road and Richmond Valley Road to facilitate project-generated trips to and from the Development Site and to preclude the occurrence of significant traffic impacts at this intersection.

- › For the AM and midday peak hours, shift two seconds of green time from the westbound phase to the northbound and southbound phase. The northbound and southbound green time would shift from 33 seconds to 35 seconds; the westbound green time would shift from 17 seconds to 15 seconds; all phases would have 3 seconds of amber and 2 seconds of all red time.
- › For the PM peak hour, shift three seconds of green time from the westbound phase to the northbound and southbound phase. The northbound and southbound green time would shift from 33 seconds to 36 seconds; the westbound green time would shift from 17 seconds to 14 seconds; all phases would have 3 seconds of amber and 2 seconds of all red time.

Similar to the No-Action condition, all movements at the other analysis intersections would continue to operate at an acceptable level of service in the With-Action condition. The intersection of Arthur Kill Road with the proposed driveway exit was also analyzed, and all movements are expected to operate at acceptable levels of service. One traffic movement – the southbound Arthur Kill Road approach at the intersection of Arthur Kill Road and Richmond Valley Road – would operate at LOS F during all peak hours analyzed, similar to the No-Action condition.

Table 7-8 through **Table 7-10** provides a comparison of the v/c ratios, delays, and levels of service with implementation of the traffic improvements. Implementation of the recommended improvements are within the jurisdiction of NYC DOT.

Table 7-8 No-Action vs. With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2024 No-Action				2024 With-Action			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
UNSIGNALIZED INTERSECTIONS									
Arthur Kill Road and Nassau Place									
Nassau Place	EB	LR	-	0.0	A	LR	-	19.0	C
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A
	SB	-	-	-	-	L	-	10.5	B
		LT	-	0.2	A	T	-	0.0	A
Overall Intersection²		-	-	0.1	A	-	-	0.9	A
Arthur Kill Road and South Bridge Street									
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	5.6	A	LT	-	5.9	A
Overall intersection²		-	-	2.8	A	-	-	2.9	A
Arthur Kill Road and Development Site North Exit									
Development Site North Exit	WB	-	-	-	-	R	-	21.3	C
Arthur Kill Road	NB	-	-	-	-	T	-	0.0	A
	SB	-	-	-	-	T	-	0.0	A
Overall intersection²		-	-	-	-	-	-	0.1	A
SIGNALIZED INTERSECTIONS									
Arthur Kill Road and Richmond Valley Road					<i>(with signal timing improvements)</i>				
Richmond Valley Road	WB	L	0.52	22.1	C	L	0.67	28.5	C
		R	0.57	24.5	C	R	0.65	29.6	C
Arthur Kill Road	NB	TR	0.97	34.7	C	TR	0.95	29.4	C
	SB	LT	1.97	462.9	F	LT	1.76	365.5	F
Overall Intersection²		-	-	156.9	F	-	-	128.5	F

Table 7-8 No-Action vs. With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2024 No-Action				2024 With-Action			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
Page Avenue and Richmond Valley Road									
Richmond Valley Road	EB	L	0.47	27.8	C	L	0.50	28.6	C
		TR	0.41	25.0	C	TR	0.41	25.0	C
	WB	LTR	0.37	23.9	C	LTR	0.37	23.9	C
Page Avenue	NB	L	0.55	18.8	B	L	0.57	19.7	C
		TR	0.47	14.0	B	TR	0.47	14.0	B
	SB	LTR	0.35	12.2	B	LTR	0.36	12.3	B
Overall Intersection²		-	-	17.8	B	-	-	18.1	B
Arthur Kill Road and North Bridge Street									
North Bridge Street	WB	LR	0.72	24.1	C	LR	0.77	26.4	C
Arthur Kill Road	NB	T	0.54	8.2	A	T	0.56	8.2	A
	SB	T	0.38	10.3	B	T	0.38	10.3	B
Overall intersection²		-	-	14.0	B	-	-	15.0	B

¹ Control delay is measured in seconds per vehicle.² Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Table 7-9 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

Intersection & Approach		2024 No-Action				2024 With-Action			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
UNSIGNALIZED INTERSECTIONS									
Arthur Kill Road and Nassau Place									
Nassau Place	EB	LR	-	14.6	B	LR	-	16.7	C
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A
	SB	-	-	-	-	L	-	9.3	A
		LT	-	0.2	A	T	-	0.0	A
Overall Intersection²		-	-	0.2	A	-	-	0.7	A
Arthur Kill Road and South Bridge Street									
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	6.7	A	LT	-	7.0	A
Overall Intersection²		-	-	3.5	A	-	-	3.7	A
Arthur Kill Road and Development Site North Exit									
Development Site North Exit	WB	-	-	-	-	R	-	17.1	C
Arthur Kill Road	NB	-	-	-	-	T	-	0.0	A
	SB	-	-	-	-	T	-	0.0	A
Overall intersection²		-	-	-	-	-	-	0.1	A
SIGNALIZED INTERSECTIONS									
Arthur Kill Road and Richmond Valley Road					<i>(with signal timing improvements)</i>				
Richmond Valley Road	WB	L	0.59	23.8	C	L	0.70	29.8	C
		R	0.67	27.4	C	R	0.76	34.7	C
Arthur Kill Road	NB	TR	0.75	15.7	B	TR	0.75	14.2	B
	SB	LT	1.39	196.0	F	LT	1.29	154.1	F
Overall Intersection²		-	-	85.1	F	-	-	70.2	E

Table 7-9 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

Intersection & Approach		2024 No-Action				2024 With-Action			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
Page Avenue and Richmond Valley Road									
Richmond Valley Road	EB	L	0.64	34.8	C	L	0.67	36.6	D
		TR	0.50	26.5	C	TR	0.50	26.6	C
	WB	LTR	0.48	25.9	C	LTR	0.48	25.9	C
Page Avenue	NB	L	0.73	28.4	C	L	0.75	29.5	C
		TR	0.42	13.3	B	TR	0.42	13.3	B
	SB	LTR	0.39	12.6	B	LTR	0.39	12.6	B
Overall Intersection²		-	-	20.5	C	-	-	20.9	C
Arthur Kill Road and North Bridge Street									
North Bridge Street	WB	LR	0.76	25.9	C	LR	0.79	27.3	C
Arthur Kill Road	NB	T	0.52	10.6	B	T	0.54	10.9	B
	SB	T	0.47	11.3	B	T	0.47	11.3	B
Overall Intersection²		-	-	15.8	B	-	-	16.4	B

¹ Control delay is measured in seconds per vehicle.² Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Table 7-10 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

Intersection & Approach		2024 No-Action				2024 With-Action			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
UNSIGNALIZED INTERSECTIONS									
Arthur Kill Road and Nassau Place									
Nassau Place	EB	LR	-	16.7	C	LR	-	23.3	C
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A
	SB	-	-	-	-	L	-	10.7	B
		LT	-	2.0	A	T	-	0.0	A
Overall Intersection²		-	-	1.2	A	-	-	1.6	A
Arthur Kill Road and South Bridge Street									
Arthur Kill Road	NB	TR	-	0.0	A	TR	-	0.0	A
	SB	LT	-	12.7	B	LT	-	13.9	B
Overall Intersection²		-	-	7.1	A	-	-	7.7	A
Arthur Kill Road and Development Site North Exit									
Development Site North Exit	WB	-	-	-	-	R	-	22.0	C
Arthur Kill Road	NB	-	-	-	-	T	-	0.0	A
	SB	-	-	-	-	T	-	0.0	A
Overall intersection²		-	-	-	-	-	-	0.1	A
SIGNALIZED INTERSECTIONS									
Arthur Kill Road and Richmond Valley Road					<i>(with signal timing improvements)</i>				
Richmond Valley Road	WB	L	0.68	26.7	C	L	0.87	44.4	D
		R	0.68	28.2	C	R	0.83	43.1	D
Arthur Kill Road	NB	TR	0.93	28.0	C	TR	0.92	24.2	C
	SB	LT	2.30	601.4	F	LT	1.97	454.5	F
Overall Intersection²		-	-	211.7	F	-	-	164.7	F

Table 7-10 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

Intersection & Approach		2024 No-Action				2024 With-Action			
		Mvt	V/C	Ctrl Delay ¹	LOS	Mvt	V/C	Ctrl Delay ¹	LOS
Page Avenue and Richmond Valley Road									
Richmond Valley Road	EB	L	0.63	34.7	C	L	0.68	37.9	D
		TR	0.53	27.2	C	TR	0.53	27.3	C
	WB	LTR	0.53	27.2	C	LTR	0.54	27.3	C
Page Avenue	NB	L	0.84	39.5	D	L	0.86	42.3	D
		TR	0.56	15.4	B	TR	0.56	15.4	B
	SB	LTR	0.41	12.9	B	LTR	0.42	13.0	B
Overall Intersection²		-	-	22.3	C	-	-	23.0	C
Arthur Kill Road and North Bridge Street									
North Bridge Street	WB	LR	0.95	43.7	D	LR	0.98	50.0	D
Arthur Kill Road	NB	T	0.53	8.7	A	T	0.56	8.5	A
	SB	T	0.61	13.5	B	T	0.61	13.5	B
Overall Intersection²		-	-	22.3	C	-	-	24.5	C

¹ Control delay is measured in seconds per vehicle.² Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Parking

The Proposed Development would provide 175 surface parking spaces. **Table 7-11** below shows the project's hourly weekday parking demand. The peak parking demand of 156 spaces would be expected to occur between 11 AM and 12 PM. Based on the findings of this parking analysis, the Proposed Development would provide enough spaces to sufficiently accommodate the project-generated parking demand on-site.

Table 7-11 Weekday Peak Period Parking Accumulation

Hour			Auto In	Auto Out	Total Auto	Parking Demand
12 AM	-	01 AM	2	5	7	33
01 AM	-	02 AM	3	18	21	18
02 AM	-	03 AM	10	22	32	6
03 AM	-	04 AM	41	7	48	40
04 AM	-	05 AM	35	12	47	63
05 AM	-	06 AM	10	8	18	65
06 AM	-	07 AM	29	17	46	77
07 AM	-	08 AM	41	50	91	68
08 AM	-	09 AM	61	29	90	100
09 AM	-	10 AM	35	13	48	122
10 AM	-	11 AM	50	17	67	155
11 AM	-	12 PM	11	10	21	156
12 PM	-	01 PM	7	31	38	132
01 PM	-	02 PM	19	31	50	120
02 PM	-	03 PM	4	19	23	105
03 PM	-	04 PM	6	15	21	96
04 PM	-	05 PM	10	40	50	66
05 PM	-	06 PM	32	59	91	39
06 PM	-	07 PM	36	25	61	50
07 PM	-	08 PM	12	23	35	39
08 PM	-	09 PM	8	12	20	35
09 PM	-	10 PM	9	30	39	14
10 PM	-	11 PM	18	7	25	25
11 PM	-	12 AM	15	4	19	36

Conclusion

The number of transit and pedestrian trips generated by the Proposed Development would not exceed the CEQR Level 1 screening thresholds and no further analysis is needed. The Proposed Development would generate traffic volumes exceeding the screening thresholds and therefore a detailed traffic analysis was performed at six intersections. As part of the project, the southbound Arthur Kill Road approach would be re-stripped to provide a left turn

lane at the intersection of Nassau Place, as recommended by NYC DOT. The analysis also showed that, with modest signal timing modifications at the intersection of Arthur Kill Road and Richmond Valley Road, the Proposed Development would not result in significant adverse traffic impacts. A parking analysis was conducted and determined that the project would provide sufficient parking on-site.



8

Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, referred to as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project.

Introduction

This section examines the potential for air quality impacts from the Proposed Development. The proposed approximately 332,009 gross square-foot (gsf) high cube warehouse would include 60 loading docks and 175 employee parking spaces at grade. A total of 52,665 sf of lot area is allocated for parking spaces; 31,618 sf on the Development Site's south side, 1,832 sf on the northwest side and 19,215 sf on the east side. The proposed new building would be one-story and approximately 43-feet tall. The warehouse is being designed to accommodate up to three tenants, with units having areas of 110,730 gsf, 128,550 gsf, and 92,420 gsf, respectively. Loading docks would be located on the north side of the warehouse facing Mill Creek. Two curb cuts would be located on Nassau Place and a third, an exit only driveway, would be located on Arthur Kill Road, near the northern limits of the site.

Consistent with the *2021 CEQR Technical Manual*, air quality analyses for a proposed project focus on the following areas of potential concern:

- › Potential impacts from mobile sources introduced by a project;

- › Potential for impacts from the parking introduced by the project;
- › Potential impacts from stationary sources introduced by a project, such as emissions from a project's heating, ventilation, and air conditioning (HVAC) systems; and
- › Potential impacts on the Proposed Development from either manufacturing/processing or large/major sources in the close vicinity of the project.

The Proposed Development would be a Use Group 16 warehouse and distribution center, and therefore, an assessment of air quality impacts on this facility is not warranted. As such, no industrial, large or major source impacts on the proposed warehouse are provided.

Therefore, this analysis focuses on the following:

- › An assessment of the potential for air quality impacts from mobile sources generated by the project.
- › Potential impacts from the parking lot as a result of the project.
- › Potential impacts from the HVAC systems emissions on the existing residential uses.

Air Quality Standards

In accordance with the requirements of the Clean Air Act (CAA), as amended 1990, the U.S. Environmental Protection Agency (EPA) has promulgated National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as sick, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called "criteria" pollutants. These six pollutants are ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in diameter (PM₁₀) and less than 2.5 microns in diameter (PM_{2.5}), and lead (Pb). These standards are reviewed from time to time and may be revised.

The State of New York has adopted similar standards as those set by the EPA, with the exception of sulfur dioxide, particulates, fluorides, and hydrogen sulfide. The NAAQS are presented in **Table 8-1**.

In addition to criteria pollutants, there are other pollutants, air toxics, not included by the EPA in the list of principal pollutants. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources. These pollutants are sometimes referred to as hazardous air pollutants (HAP) and when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). No federal ambient air quality standards have been promulgated for toxic air pollutants. However, EPA and New York State Department of Environmental Conservation (NYSDEC) have issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure.

Table 8-1 National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Level	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead (Pb)	Primary and secondary	Rolling 3-month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded
Nitrogen Dioxide (NO₂)	Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	53 ppb ⁽²⁾	Annual mean
Ozone (O₃)	Primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum concentration, averaged over 3 years
Particulate Matter (PM_{2.5})	Primary	1 year	12.0 µg/m ³	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 µg/m ³	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
Particulate Matter (PM₁₀)	Primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO₂)	Primary	1 hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Notes:

⁽¹⁾ In areas designated non-attainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect.

⁽²⁾ The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

⁽³⁾ Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

⁽⁴⁾ The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a SIP call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is a USEPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Source: EPA NAAQS Table, <https://www.epa.gov/criteria-air-pollutants/naaqs-table>, accessed March 2022.

Regulatory Context

The 1990 CAA with Amendments resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment,

unclassified, or non-attainment depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. Maintenance areas are former non-attainment that achieved attainment. An unclassified area is a region where data are insufficient to make a determination and is generally considered as an attainment area for administrative purposes. A single area can be in attainment of the standards for some pollutants while being in non-attainment for others.

Richmond County is designated as a serious non-attainment area for the 2008 8-hour ozone standard and a moderate non-attainment area for the 2015 8-hour ozone standard. Both designations are part of a larger New York-Northern New Jersey-Long Island, NY-NJ-CT non-attainment areas. The county has been designated as a maintenance area for CO as of May 20, 2002, and for the 2006 PM_{2.5} standard as of April 18, 2014. Richmond County is in attainment for all other criteria pollutants (PM₁₀, Pb, NO₂, and SO₂).

Pollutants of Concern

Air pollution is of concern because of its demonstrated effects on human health. Of special concern are the respiratory effects of the pollutants and their potential toxic effects, as described below.

Carbon monoxide (CO) is a colorless and odorless gas that is a product of incomplete combustion. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin to reduce the oxygen carrying capacity of the blood. At low concentrations, CO has been shown to aggravate the symptoms of cardiovascular disease. It can cause headaches, nausea, and at sustained high concentration levels, can lead to coma and death.

Particulate matter (PM) is made up of small solid particles and liquid droplets. PM₁₀ refers to particulate matter with a nominal aerodynamic diameter of 10 micrometers or less, and PM_{2.5} refers to particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Particulates can enter the body through the respiratory system. Particulates over 10 micrometers in size are generally captured in the nose and throat and are readily expelled from the body. Particulates smaller than 10 micrometers, and especially particles smaller than 2.5 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

Nitrogen oxides (NO_x), the most significant of which are nitric oxide (NO) and nitrogen dioxide (NO₂), can occur when combustion temperatures are extremely high (such as in engines) and atmosphere nitrogen gas combines with oxygen gas. NO is relatively harmless to humans but quickly converts to NO₂. Nitrogen dioxide has been found to be a lung irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

Sulfur Dioxide (SO₂) emissions are the main components of the "oxides of sulfur," a group of highly reactive gases from fossil fuel combustion at power plants, other industrial facilities, industrial processes, and burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. High concentrations of SO₂ will lead to formation of other sulfur oxides. By reducing the SO₂ emissions, other forms of sulfur oxides are also expected to decrease. When oxides of sulfur react with other compounds in the atmosphere, small

particles that can affect the lungs can be formed. This can lead to respiratory disease and aggravate existing heart disease.

The Proposed Development may impact CO or PM emissions, if mobile sources are of concern. PM, SO₂ and NO_x may be of concern from the HVAC emissions.

Impact Criteria

The predicted concentrations of pollutants of concern associated with a proposed project are compared with either the NAAQS for criteria air pollutants or ambient guideline concentrations for non-criteria pollutants. In general, if a project would cause the standards for any pollutant to be exceeded, it would likely result in a significant adverse air quality impact. In addition, the City's *de minimis* criteria are also used to determine significance of impacts for CO and PM_{2.5}.

CO De Minimis Criteria

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of project-generated mobile sources, as set forth in the *2021 CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant adverse environmental impact. Significant increases of CO concentrations in New York City are defined as:

- › An increase of 0.5 ppm or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between 8.0 and 9.0 ppm; or
- › An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

PM_{2.5} De Minimis Criteria

New York City uses *de minimis* criteria to determine a project's potential to result in a significant adverse PM_{2.5} impact under CEQR. The *de minimis* criteria are as follows:

- › Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- › Annual average PM_{2.5} concentration increments which are predicted to be greater than 0.1 µg/m³ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- › Annual average PM_{2.5} concentration increments which are predicted to be greater than 0.3 µg/m³ at a discrete receptor location (elevated or ground level) for stationary sources.

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other emission sources from the area and not associated with the Proposed Development. The latest three years of monitoring data (2018 to 2020) from the representative monitoring stations were used to develop background concentrations for pollutants of concern (see **Table 8-2**). Monitored levels for PM_{2.5} were collected from the post office station at 364 Port Richmond Avenue in Staten Island, while observations for all other pollutants were collected from the Queens College monitoring station at 65-30 Kissena Boulevard. Background levels were estimated using the form of the NAAQS (see **Table 8-1**, column "Form" for information).

Table 8-2 Background Concentrations

Pollutant	Averaging Time	Background Concentration	Unit
Carbon Monoxide	1-Hour	2.1	ppm
	8-Hour	1.6	
Nitrogen Dioxide	1-Hour	53	ppb
	Annual	13.7	
Particulate Matter (PM _{2.5})	24-Hour	21.0	µg/m ³
	Annual	7.6	
Particulate Matter (PM ₁₀)	24-Hour	34	µg/m ³
Sulfur Dioxide (SO ₂)	1-Hour	6	ppb

Notes: ppm: parts per million; ppb: parts per billion

The 2021 CEQR Technical Manual *de minimis* threshold for the 24-hour PM_{2.5} concentrations was based on the post office data and estimated to be 7.0 µg/m³.

Methodology

Mobile Sources

The impacts of trips generated by the project and impacts of the increased trips at the parking lot were analyzed using the 2021 CEQR Technical Manual screening approach.

Screening Analysis of Project-Generated Mobile Trips

A screening analysis of mobile source CO emissions on ambient pollutant levels in the study area was conducted per 2021 CEQR Technical Manual guidance as described in Chapter 17, Sections 210 and 311 of the 2021 CEQR Technical Manual. The threshold for conducting an analysis of CO emissions is 170 project-generated vehicles at a given intersection in the peak hour. The number of heavy-duty diesel vehicle or equivalent trips in the peak hour is compared to the PM thresholds using the 2021 CEQR Technical Manual spreadsheet to determine a need for more detailed PM analysis. The PM thresholds depend on the average daily traffic on a particular type of roadway.

Detailed Particulate Matter Mobile Source Analysis

The CEQR threshold for particulate matter was exceeded and called for detailed microscale analysis of particulate matter from the Proposed Development.

Vehicle Emissions

Vehicular PM₁₀ and PM_{2.5} emission factors utilized in the dispersion modeling were computed using the EPA's Motor Vehicle Emission Simulator, MOVES3. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or compressed natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as an inspection maintenance programs.

MOVES input files (i.e., fuel data, county-specific hourly temperature and relative humidity data, inspection/maintenance coverage, etc.) for Richmond County were obtained from NYSDEC. Source type age distribution data were obtained from the NYSDEC and processed using the EPA's *Age Distribution Projection Tool for MOVES3*.¹

In addition to exhaust, tire and brake-wear emission factors estimated by MOVES3, fugitive dust emissions at the Nassau Place and Arthur Kill Road were estimated using EPA's Compilation of Air Emissions Factors (AP-42)² guidance for paved roads. Fugitive dust emissions were used in the short-term, 24-hour modeling of PM_{2.5}. Consistent with NYCDEP's conclusion that fugitive dust has insignificant contribution on the neighborhood scale, fugitive dust emissions were not used in the annual PM_{2.5} modeling (i.e., neighborhood scale analysis).

Following the EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas*,^{3,4} MOVES runs were conducted for the winter season (January), the highest of the four seasons and for the AM, midday, PM, and overnight time periods. The midday traffic parameters were conservatively used as a surrogate for the overnight period. The runs were made for the No-Action and With-Action conditions for each link used in the intersection model utilizing link-specific parameters and data.

PM Dispersion Model

The latest version of the EPA AERMOD model (version 21112) was used in the analyses of PM₁₀ and PM_{2.5} at the intersection. The intersection links were modeled using line source option in the model and following the EPA's PM Transportation Conformity Guidance. Initial vertical and horizontal dimensions and source release heights were determined based on the source types in the fleet as described in Appendix J.3 to the EPA PM Guidance. Variable hourly emission rates and dispersion characteristics were used for each link.

¹ USEPA. Age Distribution Projection Tool for MOVES3.xlsx < <https://www.epa.gov/moves/tools-develop-or-convert-moves-inputs> >

² USEPA. AP-42, chapter 13.2.1 Paved Roads. https://www.epa.gov/sites/production/files/2020-10/documents/13.2.1_paved_roads.pdf

³ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1013C6A.pdf>

⁴ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1013CBL.pdf>

Receptor Placement

Sensitive receptors near the intersections were placed at the existing sidewalks and at the sidewalks mapped by the project under No-Action and With-Action conditions at 1.8 meters above grade. For the short-term impacts, receptors were placed at the sidewalks around the intersection at 6 feet from the curb. For compliance with the annual neighborhood PM_{2.5} criterion, receptors were placed at 15 meters away from the curb.

Analysis Year

The mobile sources analyses were performed for 2024, the estimated first year of operation for the Proposed Development, coinciding with the available traffic analysis.

Parking Facilities

The project will introduce 175 employee parking spaces in a surface parking lot and 60 loading docks at-grade next to the proposed warehouse. The site entrance at Nassau Place would be used by all vehicles; employee cars would exit from this location. Trucks would enter from Nassau Place, travel around to the rear (north side) of the building, load or unload at the loading docks and exit onto Arthur Kill Road. The potential impacts from the parking lot emissions were estimated using the *2021 CEQR Technical Manual* approach at the Nassau Place site driveway and at the Arthur Kill truck exit.

Stationary Sources

HVAC Analysis

The Proposed Development would result in an approximately 332,009 gsf high cube warehouse. The proposed warehouse HVAC systems may use fuel oil or natural gas. Use of fuel oil was assumed for conservative analysis purposes. An air quality analysis was conducted to determine the potential impact of emissions from the proposed HVAC systems on existing residential houses located near the Development Site. The analysis used *2021 CEQR Technical Manual* graphical screening to assess potential air quality impacts from the HVAC emissions.

The *2021 CEQR Technical Manual* provides screening nomographs based on fuel type, development land use, minimum distance from the source to the nearest receptor buildings with similar or greater heights, and floor area of the development resulting from the Proposed Development. If the distance from a projected development to the nearest buildings/sensitive land uses of similar or greater height are less than the minimum required distances determined, there is the potential for a significant air quality impact from the project's boilers, and further analysis needs to be conducted using the USEPA's AERMOD model. Otherwise, emissions of the Proposed Development's HVAC are considered to have no adverse significant air quality impact.

Assessment

Mobile Sources

Screening Analysis

Under future With-Action conditions, project-generated trips would be by trucks and employee cars. The number of generated trips at any intersection would be below the CEQR threshold for Staten Island, 170 trips. As such, no adverse carbon monoxide impacts are anticipated from the project and no further analysis is needed for mobile source CO.

The potential impacts of equivalent heavy-duty truck emissions were estimated using the CEQR worksheet. The number of AM peak hour equivalent trucks were above the CEQR threshold for Nassau Place, the roadway that leads to the site, which is classified as a local road. Therefore, a detailed PM analysis for the intersection of Nassau Place with Arthur Kill Road was deemed necessary to assess the potential for the Proposed Development to result in impacts related to particulate matter emissions.

Detailed Microscale Analysis

Emissions from the project-generated truck and employee car trips have the potential to adversely impact PM levels at the intersection of Nassau Place and the Arthur Kill Road. Therefore, the No-Action and With-Action PM concentrations were estimated at sidewalk receptors located near the intersection of Arthur Kill Road and Nassau Place. The analysis inputs included traffic volumes that were forecasted for the project as described in **Chapter 7, Transportation**. Speed data was developed based on the local data collected on Arthur Kill Road and Nassau Place for the air quality analysis. The intersection of Nassau Place and Arthur Kill Road is unsignalized and the Nassau Place approach is controlled by a stop sign. There is no flow control on Arthur Kill Road. The intersection will use the same flow control in the future No-Action and With-Action conditions.

PM emissions are estimated for the worst season of the year (January) pursuant to the current EPA guidance. The air quality analysis was conducted using hourly emissions and dispersion parameters for the four modeled time periods of the day. Since the traffic analysis was conducted for three time periods, AM, midday, and PM peak periods, the daily inputs were compiled for these three periods conservatively assuming that the overnight condition would use the same traffic characteristics as the midday. Hourly emissions on each link used in the dispersion modeling analysis were estimated using the MOVES3 mobile source emission model. Links were determined by traffic parameters, volume, speed, fleet classification (source type) and by geometric considerations, direction, grade, intersection, etc. An example of emission rates for the AM peak period for each modeled link is presented in **Table 8-3**.

Table 8-3 AM Peak Emissions on Intersection Links under With Action Condition

Link Name	Length (ft)	Grade (%)	Volume (vph)	Speed (mph)	PM _{2.5} Factor (g/s-m ²)	Fugitive dust (g/s-m ²)
Arthur Kill SB-1	351.0	-4.3	695	25.2	8.8E-07	2.6E-06
Arthur Kill SB-2	686.6	-0.1	695	25.2	9.8E-07	2.3E-06
Arthur Kill SB-3	338.1	4.7	628	15.2	1.8E-06	2.0E-06
Arthur Kill SB-4	318.8	1.6	628	15.2	1.3E-06	2.0E-06
Arthur Kill SB-5	127.3	-4.7	628	23.2	7.0E-07	1.9E-06
Arthur Kill SB-6	334.5	-1.8	628	23.2	8.3E-07	2.0E-06
Arthur Kill NB-1	354.6	4.2	918	25.9	2.3E-06	3.9E-06
Arthur Kill NB-2	688.6	0.1	918	25.9	1.0E-06	2.7E-06
Arthur Kill NB-3	427.7	-4.9	894	22.8	9.0E-07	2.6E-06
Arthur Kill NB-4	228.4	0.0	894	9.6	1.6E-06	2.6E-06
Arthur Kill NB-5	137.2	4.4	894	25.0	1.6E-06	2.5E-06
Arthur Kill NB-6	334.1	1.8	894	25.0	1.2E-06	2.6E-06
Nassau PI WB	456.9	-1.8	27	5.3	5.6E-08	2.8E-07
Nassau PI EB	456.3	1.8	70	9.0	2.1E-07	1.0E-06

As shown in **Table 8-3**, the fugitive dust component is either similar in strength or at several links higher than total PM_{2.5} emissions from moving vehicles. That is the result of rather conservative fugitive dust estimates that followed *2021 CEQR Technical Manual* Section 321.1 and EPA's AP-42 guidance and also from significant reduction in PM_{2.5} emissions from vehicles achieved in the modern fleet and reflected in the EPA's MOVES emission model. However, since New York City Department of Environmental Protection (NYC DEP) considers fugitive dust emission contributions insignificant at the neighborhood scale, fugitive dust emissions were not considered for the compliance with neighborhood PM_{2.5} *de minimis* criterion.

Dispersion analysis for the intersection was performed using the AERMOD line source option to obtain 24-hour PM₁₀ and PM_{2.5} and annual PM_{2.5} concentrations under No-Action and With-Action conditions. **Tables 8-4** and **8-5** present the results of this analysis in comparison to the NAAQS for the PM₁₀ total concentrations including the background and to *de minimis* criteria for the incremental PM_{2.5} concentrations. As shown in the tables, all predicted concentrations and increments over the No-Action condition were below the respective criteria. As a result, no significant adverse air quality impacts are expected from the traffic generated by the Proposed Development.

Table 8-4 Highest PM_{2.5} Impact at the Intersection of Arthur Kill Road and Nassau Place (µg/m³)

Pollutant	Time Period	No-Action	With-Action	Impact	CEQR De Minimis
PM _{2.5}	24 Hours	2.5	4.6	2.1	7.0
	Annual	0.70	0.76	0.06	0.1

Table 8-5 Highest PM₁₀ Concentration at the Intersection of Arthur Kill Road and Nassau Place (µg/m³)

Pollutant	Time Period	No Action	With Action	Impact	NAAQS
PM ₁₀	24 Hours	72	73	1	150

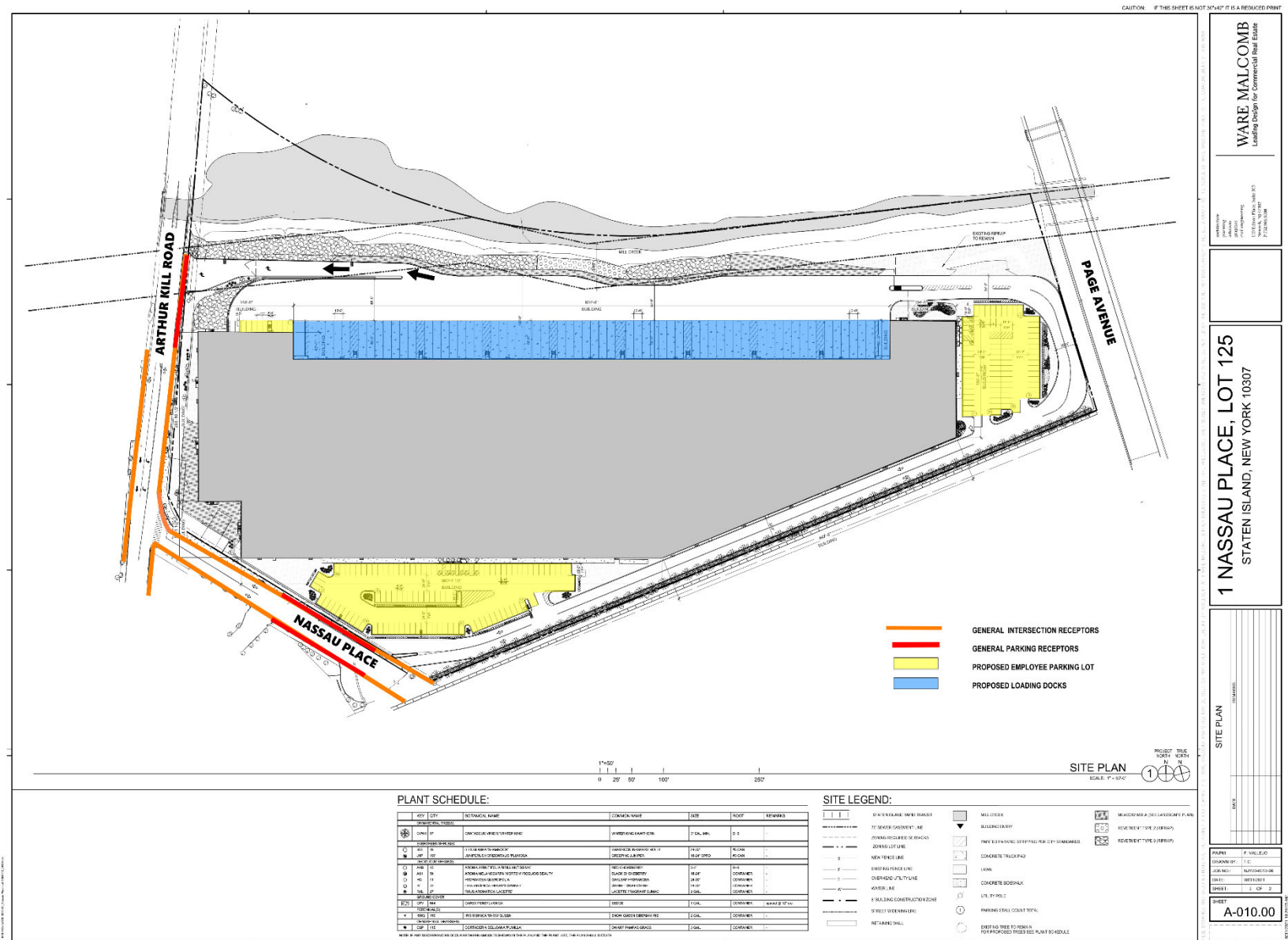
Note: The background concentration of 34 µg/m³ is included into the PM₁₀ concentrations

Impacts from Parking Lot

The proposed warehouse facility would have 31,618 sf of parking on the Development Site's south side, 1,832 sf of parking on the northwest side and 19,215 sf of parking on the east side and a truck loading area on the north side of the building (see **Figure 8-1** for details). The proposed parking facilities would have two egresses on the project site, one at Nassau Place and one at Arthur Kill Road. The Nassau Place entrance would be used as an employee entry and exit and as an entrance for trucks. Arthur Kill Road would be used as an exit by trucks. To be conservative and to account for impact of emissions from all employee cars on the sidewalk receptors at Nassau Place, it was assumed that all employee cars would utilize the parking lot that is located closer to the egress at Nassau Place. The potential impacts of truck emissions in the loading area were assessed on the Arthur Kill Road receptors.

The analysis used the 2021 CEQR parking analysis guidance to estimate CO and PM impacts of idling, starting and running emissions from vehicles in the parking lot or loading area. Vehicular emission rates were calculated using MOVES3 for Richmond County with similar assumptions as the intersection analysis for the year 2024. Following the EPA guidance, emission rates for the parking lot were estimated as an average of all four seasons and not using the highest season as for the intersection analysis. Concentrations were estimated at the near and far sidewalks on Nassau Place and only at the closest sidewalk on Arthur Kill Road. The only sidewalk on Arthur Kill Road is located on the side of the Proposed Development and would be created under With-Action conditions by the project. There is no sidewalk on the west side of Arthur Kill Road at the site driveway analysis location. The Nassau Place emissions on the sidewalks included contributions from the parking lot, from the proposed Nassau Place driveway, and from Nassau Place. The latter contribution was included for the far side receptor following *2021 CEQR Technical Manual* guidance.

Figure 8-1 Air Quality Receptors



The results of the analysis are presented in **Tables 8-6 to Table 8-8** below. The results indicate that pollutant concentrations at both analyzed locations would be below the respective NAAQS and *de minimis* criteria. Therefore, no significant adverse air quality impacts are expected from the proposed parking facilities at either Nassau Place or Arthur Kill Road.

Table 8-6 Highest PM_{2.5} Impact from Parking Facility (µg/m³)

Location	Time period	Impact at near/far sidewalk	CEQR <i>de minimis</i>
Nassau Place	24 Hours	0.27/0.33	7.0
Arthur Kill Road	24 Hours	0.42	7.0

Table 8-7 Highest 8-Hour CO Concentrations from Parking Facility (ppm)

CO Concentration	Nassau Place		Arthur Kill Road
	Near Sidewalk	Far Sidewalk	Near Sidewalk
Impact	0.03	0.02	0.1
Background	1.6	1.6	1.6
Total*	1.6	1.6	1.7
NAAQS	9.0	9.0	9.0
CEQR <i>de minimis</i>	3.7	3.7	3.7

Note: *Total concentration conservatively includes impact from traffic on entrance ramp to the parking and the on-street contribution.

Table 8-8 Highest PM₁₀ Concentration from Parking Facility (µg/m³)

24-Hour PM ₁₀ Concentration	Nassau Place		Arthur Kill Road
	Near Sidewalk	Far Sidewalk	Near Sidewalk
Impact	0.2	0.2	0.9
Background	34	34	34
Total*	34.2	34.2	34.9
NAAQS	150	150	150

Note: Total concentration conservatively includes impact from traffic on entrance ramp to the parking and the on-street contribution.

Stationary Sources

HVAC Analysis

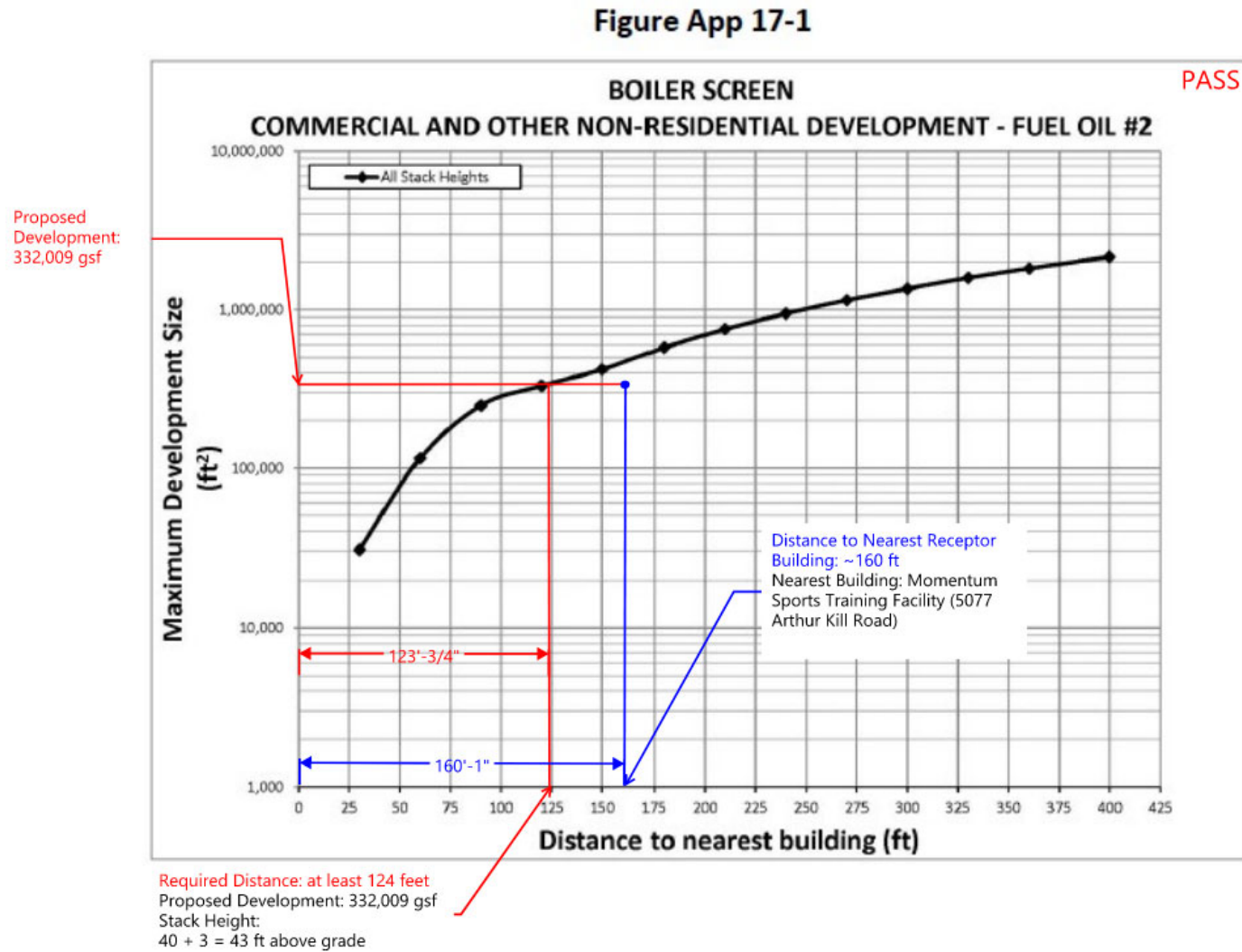
An HVAC screening analysis following the *2021 CEQR Technical Manual* procedures was conducted to assess the effects of the Proposed Development on surrounding buildings. The Proposed Development is projected to be an approximately 332,009 gsf, one-story, approximately 40-foot-tall cube warehouse. Consistent with *2021 CEQR Technical Manual* guidelines, it is assumed that the stack for the warehouse HVAC would rise three feet above the roof for a total height of 43 feet above grade.

A screening analysis performed for the Proposed Development indicated that the closest receptor building is the Momentum Training Sports Facility at 5077 Arthur Kill Road. The existing sports facility is 1 story high, and is of similar height to the proposed building's stack

height of 43 feet. The distance between the southwestern façade of the proposed warehouse and the northeastern façade of the sports facility is approximately 160 feet. Assuming a total development size of 332,009 gsf, the minimum screening distance necessary to avoid potential adverse air quality impacts was determined to be 124 feet assuming fuel oil is used for heating and hot water system. See **Figure 8-2**, which shows the CEQR nomograph screening analysis for the Proposed Development.

The actual source to receptor distance is 160 feet, which greater than the required distance between the proposed building and the receptor building. Thus, no significant air quality impacts are expected from the HVAC systems of the Proposed Development and further analysis is not required.

Figure 8-2



Conclusion

The Proposed warehouse development in Charleston neighborhood in Staten Island will include a 43-foot-tall building, surface parking lots and a loading area. The project-generated vehicular trips would be below CEQR threshold for CO, but the equivalent truck trips would be above the PM_{2.5} threshold at Nassau Place, the local street that provides direct access to the site. A detailed PM_{2.5} and PM₁₀ microscale analysis of the intersection of Nassau Place and Arthur Kill Road demonstrated that there would be no adverse significant air quality impacts from mobile sources.

There would be three parking areas on site associated with the Proposed Development, two employee parking lots and the truck loading and parking area. The analyses of these parking facilities showed that no significant adverse air quality impacts are expected from vehicular emissions at these parking areas.

In addition, CEQR screening HVAC analysis was conservatively conducted to assess potential impacts from the proposed warehouse on the nearby recreational facilities and residential houses. The distance from the HVAC stack was more than the distance required by the screening analysis. As such, no significant adverse impacts from the HVAC emissions are expected.

As a result, no significant adverse air quality impacts are anticipated as a consequence of the Proposed Actions and the resulting development.



9

Noise

The goal of this section is to determine whether the Proposed Development may increase noise exposure at existing sensitive receptors and whether new noise-sensitive receptors would be introduced into an acceptable ambient noise environment.

Introduction

As described in **Part I: Project Description**, the Proposed Actions would facilitate the development of a one-story high cube warehouse (the Proposed Development). The Proposed Development would include Use Group 16 warehouse and distribution center spaces. The *2021 City Environmental Quality Review (CEQR) Technical Manual* states that a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would introduce noise-sensitive uses in an area with high ambient noise levels. The Proposed Development does not have noise-sensitive uses and the Proposed Actions would not introduce new noise-sensitive receptors. Therefore, an assessment of whether new receptors would be introduced into an acceptable ambient noise environment is not warranted and it will not be necessary to assess the need for specific window/wall sound attenuation measures. The Proposed Development would introduce new mobile sources which have the potential to increase noise levels at existing nearby noise-sensitive receptors.

Therefore, the purpose of the noise assessment under *CEQR* is to determine if:

- › The Proposed Development would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the Development Site, including commercial and residential spaces.

Per the *2021 CEQR Technical Manual*, a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would introduce new noise-sensitive uses in an area with high ambient noise levels. Mobile sources include vehicular traffic; stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

Noise assessment includes the following:

- › Background on metrics used to describe noise;
- › The methodology and criteria used to assess potential impacts;
- › An assessment of the potential for the Proposed Development to significantly affect existing receptors due to the introduction of new mobile or stationary sources; and
- › Results from ambient sound level monitoring.

Noise Background

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. How people perceive sound depends on several measurable physical characteristics. These factors include:

- › **Level:** Sound level is based on the amplitude of sound pressure fluctuations and is often equated to perceived loudness.
- › **Frequency:** Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Pure tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds. Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:
 - A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
 - A 10-dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.

Audible sound is comprised of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels. **Table 9-1** presents a list of common outdoor and indoor sound levels.

Table 9-1 Common Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure μPa	Sound Level dBA	Indoor Sound Levels
	6,324,555	-	110
Jet Over-Flight at 300 m		-	105
	2,000,000	-	100
Gas Lawn Mower at 1 m		-	95
	632,456	-	90
Diesel Truck at 15 m		-	85
Noisy Urban Area—Daytime	200,000	-	80
		-	75
Gas Lawn Mower at 30 m	63,246	-	70
Suburban Commercial Area		-	65
	20,000	-	60
Quiet Urban Area—Daytime		-	55
	6,325	-	50
Quiet Urban Area—Nighttime		-	45
	2,000	-	40
Quiet Suburb—Nighttime		-	35
	632	-	30
Quiet Rural Area—Nighttime		-	25
Rustling Leaves	200	-	20
		-	15
	63	-	10
		-	5
Reference Pressure Level	20	-	0

μPa MicroPascals describe pressure. The pressure level is what sound level monitors measure.

dBA A-weighted decibels describe pressure logarithmically with respect to 20 μPa (the reference pressure level).

Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980.

Because sound levels change over time, a variety of sound level metrics can be used to describe environmental noise. The following is a list of sound level descriptors that are used in the noise analysis:

- › L_{10} is the sound level which is exceeded for 10 percent of the time during a given time period. Therefore, it represents the higher end of the range of sound levels. The unit is commonly used in the *2021 CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed project.
- › L_{eq} is the energy-average A-weighted sound level. The L_{eq} is a single value that is equivalent in sound energy to the fluctuating levels over a period of time. Therefore, the L_{eq} considers how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and

relates well to human annoyance. In accordance with the *2021 CEQR Technical Manual*, the L_{eq} sound level is used to assess the potential for significant increases in noise due to a proposed project at existing receptors in the Study Area and to assess noise exposure for new receptors.

Assessment Methodology

This noise analysis considers two receptor types when evaluating noise for the Proposed Development: existing and new receptor(s). The Development Site does not have noise-sensitive uses and the Proposed Actions would not introduce new noise-sensitive receptors.

The analysis also considers “existing receptors” which are the current noise-sensitive uses, including the surrounding residences, schools, and places of worship. The following describes the results of the noise assessment for these two types of receptors.

Noise Assessment for Existing Receptors

Noise impact at existing nearby sensitive receptors is assessed according to the relative increase between No-Action and With-Action sound levels. Noise impact is assessed according to the increase in the L_{eq} sound level in accordance with the *2021 CEQR Technical Manual*. If mobile or stationary sources associated with the Proposed Development would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq} , the Proposed Development would cause a significant adverse impact prior to mitigation. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Mobile Sources

As described in **Section 6, Transportation**, a detailed traffic analysis has been conducted at 5 intersections to evaluate Existing, No-Action, and With-Action traffic volumes near the Development Site including the following:

- › Arthur Kill Road and Richmond Valley Road
- › Richmond Valley Road and Page Avenue
- › Arthur Kill Road and Nassau Place
- › Arthur Kill Road and North Bridge Street
- › Arthur Kill Road and South Bridge Street

The traffic analysis evaluated vehicle classification counts as part of the turning movement counts. The increase in noise at existing receptors has been determined based on proportional modeling of noise passenger-car equivalents (PCEs) for the No-Action and With-Action conditions.

If a proposed project would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double due to the Proposed Development, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *2021 CEQR Technical Manual*

describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- › Each automobile or light truck: 1 noise PCE
- › Each medium truck: 13 noise PCEs
- › Each bus: 18 noise PCEs
- › Each heavy truck: 47 noise PCEs
- › Future With-Action noise increases are calculated using the following equation:

$$\text{With Action } L_{eq} \text{ Increase} = 10 * \log \left(\frac{\text{With Action PCE}}{\text{No Action PCE}} \right)$$

Table 9-2 presents the Existing, No-Action, and With-Action PCE values at study area intersections and the sound increment between conditions. This table shows that traffic noise would increase by up to 0.8 dBA in the No-Action condition compared to the Existing condition. The highest increase in noise would be at the Arthur Kill Road and North Bridge Road intersection. Traffic noise would increase up to 0.4 dBA at all intersections in the With-Action condition compared to the No-Action condition. The total increase in noise in the With-Action condition compared to the Existing condition would be less than 1 dBA at all intersections with a maximum increase of up to 0.9 dBA at Arthur Kill Road and North Bridge Road.

The Proposed Actions would not result in a doubling of PCEs compared to the No-Action condition, and noise levels would increase by less than 3 dB at all intersections. Therefore, there would be no significant adverse vehicular noise impact due to the Proposed Actions.

Table 9-2 Passenger Car Equivalents Analysis

Intersection	Period	Existing PCEs	No-Action PCEs	No-Action minus Existing Sound Level ¹ (dBA)	With-Action PCEs	With-Action minus No-Action Sound Increment ² (dBA)	With-Action minus Existing Sound Increment ³ (dBA)
Arthur Kill Road and Nassau Place	Morning	2,770	2,999	0.3	3,174	0.2	0.6
	Afternoon	2,954	3,133	0.3	3,366	0.3	0.6
	Evening	2,771	2,963	0.3	3,116	0.2	0.5
Arthur Kill Road and Richmond Valley Road	Morning	3,469	3,879	0.5	4,210	0.4	0.8
	Afternoon	3,493	3,921	0.5	4,300	0.4	0.9
	Evening	3,303	3,675	0.5	3,939	0.3	0.8
Richmond Valley Road and Page Avenue	Morning	3,471	3,810	0.4	3,929	0.1	0.5
	Afternoon	2,960	3,275	0.4	3,437	0.2	0.6
	Evening	2,834	3,162	0.5	3,242	0.1	0.6
Arthur Kill Road and North Bridge Street	Morning	5,825	6,919	0.7	7,062	0.1	0.8
	Afternoon	4,983	6,001	0.8	6,182	0.1	0.9
	Evening	5,072	5,986	0.7	6,092	0.1	0.8
Arthur Kill Road and South Bridge Street	Morning	6,444	7,380	0.6	7,592	0.1	0.7
	Afternoon	5,586	6,424	0.6	6,628	0.1	0.7
	Evening	5,444	6,153	0.5	6,337	0.1	0.7

¹ Sound increment represents No-Action sound levels minus Existing sound levels.

² Sound increment represents With-Action sound levels minus No-Action sound levels.

³ Sound increment represents With-Action sound levels minus Existing sound levels.

Source: VHB, 2021.

Stationary Sources

The Proposed Development is not anticipated to include any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. The design and specifications for the mechanical equipment, such as heating, ventilation, and air conditioning, are not known at this time. As the project design advances, mechanical equipment would be selected that incorporates sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code. This would ensure that mechanical equipment does not result in any significant increases in noise levels by itself or cumulatively with other project noise sources.

Noise Assessment for New Receptors

The 2021 CEQR Technical Manual states that a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with

high ambient noise levels. The Development Site does not have noise-sensitive uses and the Proposed Actions would not introduce new noise-sensitive receptors. Therefore, an assessment of whether new receptors would be introduced into an acceptable ambient noise environment is not warranted and it will not be necessary to assess the need for specific window/wall sound attenuation measures.

Existing Sound Levels

Noise monitoring was conducted at three sites on Thursday, November 19, 2020, in accordance with the *2021 CEQR Technical Manual*, as shown in **Figure 9-1**. Noise monitors were placed with a minimum of four feet between the microphone and nearby reflecting surfaces. With roadway activity dominating the overall noise environment, 1-hour noise measurements were conducted at two sites and 20-minute noise measurements were conducted at one site, all during morning peak periods (7:30 – 9 AM), midday periods (12 – 1:30 PM) and evening peak periods (4 – 5:30 PM). Measurements were conducted using a Type I sound level meter at ground level.

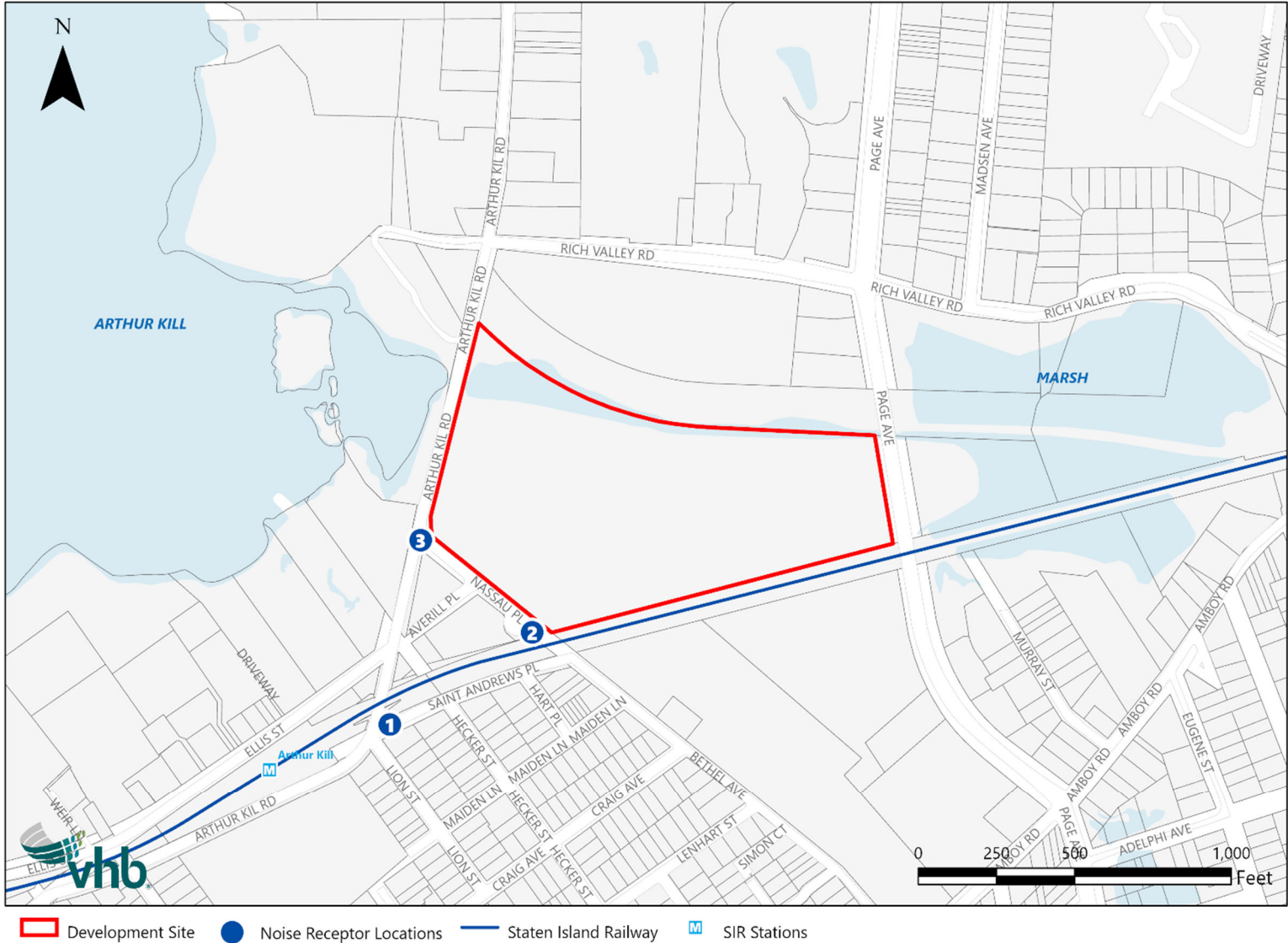
Table 9-3 summarizes the measurement results. The measured L_{eq} levels ranged from 61.2 dBA to 74.3 dBA and the L_{10} levels ranged from 61.6 dBA to 76.8 dBA.

Table 9-3 Ambient Sound Level Measurements

Site	Monitoring Location	Period	Duration	L_{eq}	L_{min}	L_{max}	L_1	L_{10}	L_{50}	L_{90}
1	Arthur Kill Rd and St. Andrews Rd	Morning	60 Min	72.9	58.4	88.9	82.9	75.9	72.2	65.0
		Midday	60 Min	74.3	58.9	95.3	84.1	76.8	69.5	63.1
		Evening	60 Min	67.5	50.5	83.6	75.6	70.3	65.6	60.2
2	One Nassau Place	Morning	60 Min	61.2	47.3	85.2	74.3	61.6	53.5	50.7
		Midday	60 Min	70.1	49.4	91.6	80.5	70.2	68.1	51.8
		Evening	60 Min	62.3	47.6	87.3	75.3	61.9	53.3	49.7
3	Arthur Kill Rd and Nassau Place	Morning	20 Min	72.6	53.2	85.1	80.4	76.1	70.5	60.6
		Midday	20 Min	69.3	50.5	83.6	77.6	73.3	66.0	58.8
		Evening	20 Min	71.2	55.3	86.0	79.1	74.9	70.1	64.5

Source: Measurements conducted by VHB on November 19, 2021.

Figure 9-1 Noise Monitoring Locations



Conclusion

A noise assessment was conducted to determine whether the Proposed Development would significantly increase sound levels from mobile and/or stationary sources at existing noise receptors adjacent to the Development Site.

As the Proposed Development does not exceed the detailed transportation analysis thresholds, it would not result in a doubling of noise passenger car equivalents (PCEs), which would be necessary to cause a 3-dBA increase in noise levels. Therefore, the Proposed Development would not result in a significant adverse vehicular noise impact, and the existing noise measurements results are representative of the With-Action vehicular noise conditions.

The Proposed Development is not anticipated to include any substantial stationary source noise generators. The design and specifications for the building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

Appendix A:

Waterfront Revitalization Program

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM

Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the [New York City Waterfront Revitalization Program](#) (WRP) which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: EW Direct 1 Nassau, LLC

Name of Applicant Representative: David Velez, AICP

Address: One Penn Plaza Suite 715 New York, NY 10119-0800

Telephone: (646) 722-9247

Email: dvelez@vhb.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The Applicant is seeking several zoning authorizations to facilitate the development of a one-story 332,009 gross square-foot (gsf) (331,309 zoning square-foot (zsf) (including an enclosed stair shaft of approximately 242 gsf on the roof per New York City Building code requirements) high cube warehouse (Use Group 16 warehouse and distribution center). The warehouse would include 60 loading docks and 175 employee parking spaces at grade. A total of 52,665 sf is allocated for parking spaces; 31,618 sf on the Development Site's south side, 1,832 sf on the northwest side and 19,215 sf on the east side. The proposed new building would be one-story and 43-feet tall. The warehouse is being designed to accommodate up to three tenants, with units having areas of 110,730 gsf, 128,550 gsf, and 92,420 gsf, respectively.

2. Purpose of activity

The Proposed Actions are requested in order to permit the construction of a new high cube warehouse that requires more parking and loading than is permitted in the Special District on an as-of-right basis. The Proposed Development would activate a site that is currently underutilized with a use that is compatible with the applicable environmental restrictions.

C. PROJECT LOCATION

Borough: Staten Island Tax Block/Lot(s): Block 7971, Lot 125

Street Address: 1 Nassau Place

Name of water body (if located on the waterfront): Mill Creek

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission

☒ Yes ☐ No

- | | | |
|---|---|--|
| ☐ City Map Amendment | ☐ Zoning Certification | ☐ Concession |
| ☐ Zoning Map Amendment | ☒ Zoning Authorizations | ☐ UDAAP |
| ☐ Zoning Text Amendment | ☐ Acquisition – Real Property | ☐ Revocable Consent |
| ☐ Site Selection – Public Facility | ☐ Disposition – Real Property | ☐ Franchise |
| ☐ Housing Plan & Project | ☐ Other, explain: _____ | |
| ☐ Special Permit | | |
- (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Board of Standards and Appeals

☐ Yes ☒ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
- (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- | | |
|--|---|
| ☐ Legislation | ☐ Funding for Construction, specify: _____ |
| ☐ Rulemaking | ☐ Policy or Plan, specify: _____ |
| ☐ Construction of Public Facilities | ☐ Funding of Program, specify: _____ |
| ☐ 384 (b) (4) Approval | ☐ Permits, specify: _____ |
| ☐ Other, explain: _____ | |

State Actions/Approvals/Funding

- ☒ State permit or license, specify Agency: NYSDEC Permit type and number: Article 25 permit; MS4, SPDES
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☒ Other, explain: NYSDEC approval to modify BCP-required SMP

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a [Joint Application for Permits?](#)

☒ Yes

☐ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☐ Yes ☒ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☐ Yes ☒ No
3. Is the project located on publicly owned land or receiving public assistance? ☐ Yes ☒ No
4. Is the project located within a FEMA 1% annual chance floodplain? (6.2) ☒ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? (6.2) ☒ Yes ☐ No
6. Is the project located adjacent to or within a special area designation? See [Maps – Part III](#) of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).
 - ☐ Significant Maritime and Industrial Area (SMIA) (2.1)
 - ☐ Special Natural Waterfront Area (SNWA) (4.1)
 - ☐ Priority Maritime Activity Zone (PMAZ) (3.5)
 - ☐ Recognized Ecological Complex (REC) (4.4)
 - ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (2.2, 4.2)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder or Not Applicable (N/A). For more information about consistency review process and determination, see **Part I** of the [NYC Waterfront Revitalization Program](#). When assessing each policy, review the full policy language, including all sub-policies, contained within **Part II** of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).

For those policies checked Promote or Hinder, provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.

		Promote	Hinder	N/A
I	Support and facilitate commercial and residential redevelopment in areas well-suited to such development.	☐	☐	☒
I.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☐	☐	☒
I.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☒
I.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☐	☐	☒
I.4	In areas adjacent to SMIA's, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☒
I.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☐	☐	☒

		Promote	Hinder	N/A
2	Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.	☒	☐	☐
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☐	☐	☒
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☒
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☒
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☒
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☒	☐	☐
3	Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.	☐	☐	☒
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☒
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☒
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☒
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☒
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☒
4	Protect and restore the quality and function of ecological systems within the New York City coastal area.	☒	☐	☐
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☒
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☒
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☒
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☒
4.5	Protect and restore tidal and freshwater wetlands.	☒	☐	☐
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☒
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☒
4.8	Maintain and protect living aquatic resources.	☒	☐	☐

		Promote	Hinder	N/A
5	Protect and improve water quality in the New York City coastal area.	☒	☐	☐
5.1	Manage direct or indirect discharges to waterbodies.	☒	☐	☐
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☒	☐	☐
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☒
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☒	☐	☐
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☒	☐	☐
6	Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.	☒	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☒	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in <i>New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms</i>) into the planning and design of projects in the city's Coastal Zone.	☒	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☒
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☒
7	Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.	☒	☐	☐
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☒	☐	☐
7.2	Prevent and remediate discharge of petroleum products.	☐	☐	☒
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☒
8	Provide public access to, from, and along New York City's coastal waters.	☐	☐	☒
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☐	☐	☒
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☐	☐	☒
8.3	Provide visual access to the waterfront where physically practical.	☐	☐	☒
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☐	☐	☒

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☒
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☒
9	Protect scenic resources that contribute to the visual quality of the New York City coastal area.	☐	☐	☒
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☐	☐	☒
9.2	Protect and enhance scenic values associated with natural resources.	☐	☐	☒
10	Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.	☐	☐	☒
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☐	☐	☒
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☒

G. CERTIFICATION

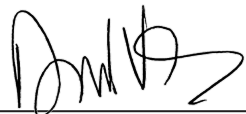
The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: David Velez, AICP

Address: One Penn Plaza, Suite 715 New York, NY 10119-0800

Telephone: (646) 722-9247 Email: dvelez@vhb.com

Applicant/Agent's Signature: 

Date: 8/30/22

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the [NYS Department of State Office of Planning and Development](#) and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning

Waterfront and Open Space Division

120 Broadway, 31st Floor

New York, New York 10271

212-720-3696

wrp@planning.nyc.gov

www.nyc.gov/wrp

New York State Department of State

Office of Planning and Development

Suite 1010

One Commerce Place, 99 Washington Avenue

Albany, New York 12231-0001

518-474-6000

www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☐ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

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WRP Consistency Assessment

The New York City (NYC) Waterfront Revitalization Program (WRP) establishes the City's policies and objectives for maximizing benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The Project Area is located within the City's Coastal Zone (0) and the Proposed Actions are consequently subject to the policies of the WRP.

The WRP Consistency Assessment Form (CAF) is used to identify the relevant WRP policies; the CAF is included in this appendix. For all relevant policies, a written assessment to determine consistency with the applicable WRP policy is provided.

As described in **Part I: Project Description**, the Proposed Development includes a one-story 332,009 gsf (including an enclosed stair shaft of approximately 242 gsf on the roof per NYC Building code requirements) high cube warehouse (UG 16 warehouse distribution center) with 60 loading docks and 175 employee parking spaces at grade. A total of 52,665 sf is allocated for parking spaces, with 31,618 sf on the south side of the Development Site, 1,832 sf on the northwest side, and 19,215 sf on the east side. The proposed warehouse is being designed to accommodate up to three tenants, with a 110,730-gsf space, 128,550-gsf space, and 92,420-gsf space. The proposed building would be one-story and 43-feet tall. Two curb cuts would be located on Nassau Place and the fourth, an exit only driveway, would be located on Arthur Kill Road. Loading docks would be located on the north side of the warehouse facing Mill Creek.

The Development Site, while subject to waterfront regulations, is exempt from visual corridors and waterfront public access area requirements for zoning lots in manufacturing districts per Section 62-81 (Certifications by the Chairperson of the City Planning Commission) of the zoning resolution as the Proposed Development contains predominantly Use Group 16 uses.

The Applicant is requesting several actions to facilitate the Proposed Development:

- › Zoning Authorization pursuant to Section 107-64 (Removal of Trees) to waive Section 107-32 (Tree Regulations);
- › Zoning Authorization pursuant to Section 107-65 (Modifications of Existing Topography) to waive Section 107-312 (Areas not within Designated Open Space);
- › Zoning Authorization pursuant to Section 107-68 (Modification of a Group Parking Facility and Access Regulations) to waive Section 107-472 (Maximum Size of a Group Parking Facility).

Additionally, the project requires the following approvals from New York State Department of Environmental Conservation (NYSDEC): Article 25 Tidal Wetlands Permit and Report and State Pollutant Discharge Elimination System (SPDES). Other approvals include a New York City Department of Environmental Protection (NYCDEP) Municipal Separate Storm Sewer System (MS4) construction permit. The NYSDEC Site Management Plan, Excavation Workplan, and Remedial Action Workplan are all previously approved documents. Upon

completion of the CEQR review, these documents would be updated for the approved Proposed Development if required by NYSDEC.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

Policy 2.5: Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.

See response to WRP Policy 6.2.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

Policy 4.5: Protect and restore tidal and freshwater wetlands.

There are no freshwater wetlands on the Development Site. Tidal Wetlands occur along Mill Creek in the western portion of the site as shown in **Drawing WN101, Tidal Wetlands and Adjacent Area Plan** (see **Appendix C**). The Proposed Development does not include filling, draining, the construction of structures or other direct impacts to the tidal wetlands. There would be development activities within approximately 3.9 acres (169,290 sf) of NYSDEC jurisdictional Tidal Wetlands and Adjacent Area (TWAA), but no activities are anticipated within the tidal wetlands component of the TWAA. The 3.9-acre calculation does not include the 1,130-sf associated with the three rip-rap swales or 1,390 sf associated with the existing vegetative stabilization area that would be replanted. Project activities within the TWAA include: three stormwater outfalls; asphalt/concrete pavement above the impervious site cap; a small portion of the warehouse building (approximately 310 sf); and riprap revetment. However, it should be noted that the project would not increase impervious coverage within the TWAA because the entire area of the TWAA in which project activities would occur is already capped with impervious materials.

Potential impacts to the tidal wetlands would be avoided by incorporating design elements into the Proposed Development such as retaining walls and a fairly steep riprap revetment in the vicinity of the tidal wetland as shown in **Drawing B-101, Proposed Shoreline Plan** (see **Appendix C**). The majority of the slopes on the side of the creek that occurs within the Development Site, would have riprap revetment with no plantings. The revetments consist of earthen embankments with erosion protection. The erosion protection generally consists of riprap armoring over bedding stone in the lower portion of the slopes and turf reinforcement mats in the upper portion of the slopes. The revetment is designed to protect the upland areas from erosion, which is a preventative measure to protect the wetlands and Mill Creek. These upland areas are within the Limit of Moderate Wave Action (LiMWA). Without the revetment, waves could erode the uplands over time and the migrating soil could adversely impact the wetlands and Mill Creek. Retaining walls are proposed, to reduce the overall disturbance area to keep disturbance out of the wetlands. In response to DEP comments, portions of the bank slopes would be planted with a mix which includes native

species, such as common milkweed (*Asclepias syrica*), butterfly weed (*Asclepias tuberosa*), grass-leaved goldenrod (*Euthamia graminifolia*), common rush (*Juncus effuses*), switchgrass (*Panicum virgatum*), little bluestem (*Schzyachyrium scoparium*), early goldenrod (*Solidago juncea*), sand dropseed (*Sporobolus cryptandrus*), smooth blue aster (*Symphyotrichum leave*) and other similar species. No other plantings are proposed along the creek slopes including the north side of the creek as shown in **Drawing LP101, Landscape Plan** (see **Appendix C**). The planting zone mentioned would aid in compensating for any lost physical condition of the former marsh.

As such, the Proposed Development would be consistent with this policy.

Policy 4.8: Maintain and protect living aquatic resources.

As described above, the Proposed Development involves development activities within approximately 3.9 acres (169,290 sf) of NYSDEC jurisdictional TWAA. This calculation does not include the 1,130-sf associated with the three rip-rap swales, or 1,390 sf associated with the existing vegetative stabilization area that will be replanted. Project activities within the TWAA include: three stormwater outfalls; asphalt/concrete pavement; a small portion of the warehouse building; and riprap revetment. The project would not increase impervious coverage within the TWAA.

Potential impacts to the tidal wetlands would be avoided by incorporating design elements into the Proposed Development such as retaining walls and a fairly steep riprap revetment in the vicinity of the tidal wetland. The majority of the slopes on the side of the creek that occurs within the Development Site, would have riprap revetment with no plantings. The revetments consist of earthen embankments with erosion protection. The erosion protection generally consists of riprap armoring over bedding stone in the lower portion of the slopes and turf reinforcement mats in the upper portion of the slopes. The revetment is designed to protect the upland areas from erosion, which is a preventative measure to protect the wetlands and Mill Creek.

Furthermore, vegetative enhancements are proposed which would aid in protecting living aquatic resources, (plants, fish, insects, etc.) on and offsite. There are some portions of the bank slopes that would be planted with a mix of native species including common milkweed (*Asclepias syrica*), butterfly weed (*Asclepias tuberosa*), grass-leaved goldenrod (*Euthamia graminifolia*), common rush (*Juncus effuses*), switchgrass (*Panicum virgatum*), little bluestem (*Schzyachyrium scoparium*), early goldenrod (*Solidago juncea*), sand dropseed (*Sporobolus cryptandrus*), smooth blue aster (*Symphyotrichum leave*) and other similar species. No other plantings are proposed along the creek slopes including the north side of the creek. The planting zone mentioned would aid in compensating for any lost physical condition of the former marsh.

As such, the Proposed Development would be consistent with this policy.

Policy 5: Protect and improve water quality in the New York City coastal area.

Policy 5.1: Manage direct or indirect discharges to waterbodies.

A small portion of the Development Site would discharge stormwater to the NYC sewer system in Nassau Place. The remainder of the Development Site would drain via conventional catch basins and piping to three existing swales, which discharge to Mill Creek. Prior to discharge, the water will be treated for water quality by a manufactured treatment unit in accordance with the NYS Stormwater Management Design Manual and associated NYSDEC State Pollutant Discharge Elimination System (SPDES) permit which will be administered by NYC Department of Environmental Protection (DEP) as the MS4. As such, the Proposed Development would be consistent with this policy.

Policy 5.2: Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

As described above, except for a small amount of stormwater which would drain into the NYC sewer system, all onsite stormwater would be managed and collected in the sites stormwater conveyance system and discharged via three outfalls to Mill Creek as shown in **Drawing CG201, Land Use Drainage Plan** (see **Appendix C**). Proposed stormwater runoff would be managed by an extensive subsurface conveyance system that includes five (5) Aqua-Swirl water quality treatment units. One Aquaswirl unit is proposed at each discharge point for the site. These discharge points consist of two proposed connections to the NYCDEP storm sewer and three discharge points at the existing rip-rap outfalls along Mill Creek. These units have been approved for use in New York and would treat the runoff from the internal road network, automobile parking lots, loading bays and roof drainage from the proposed warehouse. The total site area to be treated will be approximately 14.3 acres. There would be no nonpoint sources of pollution. As such, the Proposed Development would be consistent with this policy.

Policy 5.4: Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.

There would be no impact to groundwater associated with the Proposed Development. The Development Site, in its entirety, is covered by an engineered, impervious cap as required under the NYSDEC-run Site Management Plan (SMP) as shown in **Drawing WN103, Tidal Wetlands and Adjacent Area Coverage–Proposed Conditions** (see **Appendix C**).

Therefore, contaminants cannot infiltrate and reach groundwater. The Proposed Development would have no direct impacts to Mill Creek. Stormwater runoff would drain to the Creek, however it will be pre-treated prior to discharging and as such, it is not anticipated the water quality in the Creek will be adversely affected as a result of the Proposed Development. The source of water for the tidal wetlands onsite is the ebb and flow of the tide in Mill Creek. The Proposed Development will have no effect on tidal flows or fluctuations and would not impact the wetlands water source. As such, the Proposed Development would be consistent with this policy.

Policy 5.5: Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.

Grey infrastructure for the Proposed Development includes the stormwater conveyance system, including water quality treatment, which drains runoff to Mill Creek. Proposed stormwater runoff would be managed by an extensive subsurface conveyance system that includes five (5) Aqua-Swirl water quality treatment units. One Aquaswirl unit is proposed at each discharge point for the site. These discharge points consist of two proposed connections to the NYCDEP storm sewer and three discharge points at the existing rip-rap outfalls along Mill Creek. These units have been approved for use in New York and would treat the runoff from the internal road network, automobile parking lots, loading bays and roof drainage from the proposed warehouse. The total site area to be treated would be approximately 14.3 acres. The rip-rap revetment proposed along the western portion of the Development Site, parallel to Mill Creek, would stabilize the shoreline, prevent erosion, and silt and sediment migration into Mill Creek. There would be minimal impacts to water sources in the vicinity of the Development Site. As such, the Proposed Development is consistent with this policy.

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future condition created by climate change.

Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

See response to WRP Policy 6.2.

Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms) into the planning and design of projects in the city's Coastal Zone.

Guidance provided by DCP includes a detailed methodology to determine the consistency of a project with Policy 6.2. This guidance identifies three basic steps to determine the consistency of a project with this policy: (1) identify vulnerabilities and consequences; (2) identify adaptive strategies; and (3) assess policy consistency.

1. Identify vulnerabilities and consequences

1(a). Complete the Flood Elevation Worksheet to identify current and future flood elevations in relation to the elevations of the site and project features.

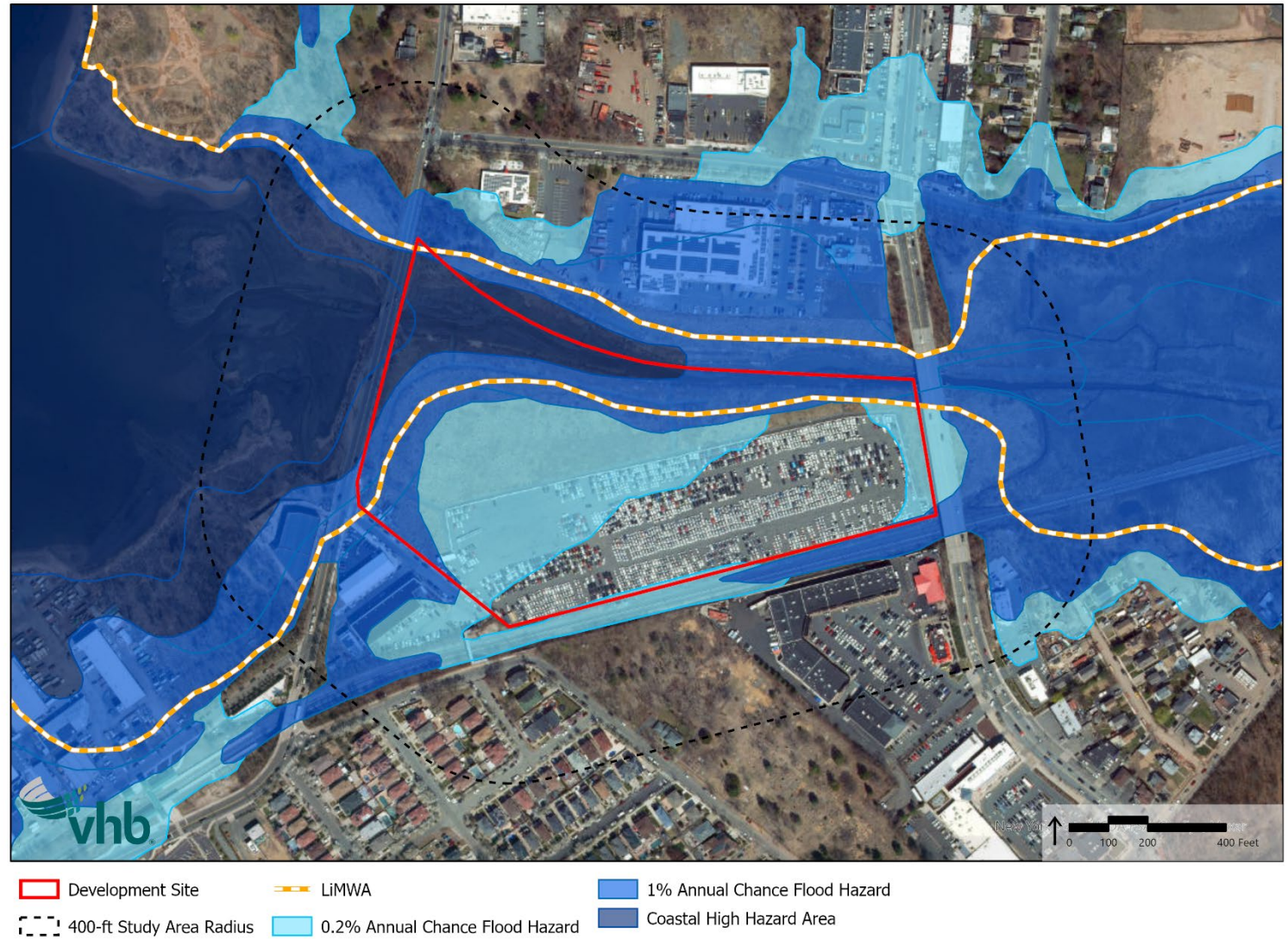
See attached Flood Evaluation Worksheet below.

1(b). Identify any project feature that may be located below the elevation of the 1-Percent Floodplain over the lifespan of the project under any sea level rise scenario.

For this assessment, building features are defined in one of four categories:

- › (1) vulnerable: project features that have the potential to incur significant damage if flooded;
- › (2) critical: project features that if damaged would have severe impacts on the project and its ability to function as designed;
- › (3) potentially hazardous: project features that if damaged or made unsecure by flooding could potentially adversely affect the health and safety of the public and the environment; and
- › (4) other: project features that are entirely open and unenclosed spaces, except the open storage of potentially hazardous materials, which may be damaged by flooding, but are

Figure A-1 Flood and Coastal Zone Map



not likely to present significant consequences and are more easily repaired.

The Flood Elevation Worksheet was prepared for the Proposed Development and is provided as an attachment to this Appendix. This tool identifies current and future flood elevations in relation to the elevations of the site and project features, presents a range of future flood elevations in relation to the elevations of the site and project features, and presents a range of future flood elevations as affected by sea level rise, from high (90th percentile) to low (10th percentile), where the “high estimate” represents a high-end projected increase in flood elevation.

The outer edges of the Development Site are located within the National Flood Insurance Program’s (NFIP) 100-year floodplain, as mapped in the Preliminary Flood Insurance Rate Map (PFIRM) for Richmond County, NY dated September 5, 2007 (Map Number 3604970313F). The height of the 100-year floodplain is 15 feet NAVD88. The Limit of Moderate Wave Action (LiMWA) borders the northern end of the Development Site along the Mill Creek but is not a threat to the existing or proposed warehouse on-site (see **Figure A-1**).

Based on sea level rise (SLR) estimates from the NYC Panel of Climate Change’s 2015 report, Building the Knowledge Base for Climate Resiliency, predicted flood elevations for various SLR scenarios were determined, as depicted in **Table A-1**. All SLR calculations are provided in the flood elevation worksheets attached.

Table A-1 100-Year Floodplain Elevations with Sea Level Rise

Decade	Low Estimate – 10th percentile (ft)	Mid-Range – 25th to 75th percentile (ft)		High Estimate – 90th percentile (ft)
2020	15.00	15.00	15.00	15.00
2050	15.17	15.33	15.50	15.83
2080	15.67	15.92	16.33	17.50
2100	16.08	16.50	17.42	19.83

The Proposed Development on the Development Site would be able to withstand sea level rise, coastal flooding, and storm surge. It would be designed to the standards of Appendix G of the NYC Building Code, specifically G304.1.1(1) and G304.1.2(1). The lowest floor elevation of the Proposed Development, which consists of the finished floor of the 331,767 gsf warehouse, would be constructed at an elevation of 18.5 feet, which is 3.5 feet higher than the 100-year flood height. There are some exterior grades around the building that are as low as 14 feet which would include the lowest grade of the loading docks, located outside of the warehouse at the perimeter of the Proposed Development. Doors from the building would be set at 18.5 feet and stairs would be provided from the elevation of the warehouse floor to the grade of the loading docks to make up the grade change. Portions of the warehouse below 18.5 feet would be comprised of concrete slabs that contain a waterproof adhesive bond to allow for floodproofing.

Overall, the elevation of 18.5 feet would elevate the building to avoid projected flood hazards until the 2050s, except for the 2080s and 2100s mid- to -high-end estimates. The Development Site would be subject to the 100-year flood and the high projections for sea level rise in 2080. However, this would occur beyond the lifespan of the building or after 2072.

As such, the Proposed Development would be consistent with this policy.

1(c). Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water over the lifespan of the project under any sea level rise scenario.

The high-cube warehouse of the Proposed Development will not be located below the elevation of Mean Higher High Water over the lifespan of the project under any sea level rise scenario. As such, the Proposed Development is consistent with this policy.

1(d). Describe how any additional coastal hazards are likely to affect the project, both currently and in the future, such as waves, high winds, or debris.

Since portions of the Development Site are located within Flood Zone AE, it would continue to be at risk for inundation from 1 percent annual chance flood events. Wave action hazards (i.e., Flood Zone VE) have not been designated for the Development Site, but the northwestern portion of the Development Site is designated as Coastal A Zone and the Development Site is subject to the Limit of Moderate Wave Action (LiMWA), which runs along the northern portion. The LiMWA identifies areas that will be affected by waves with a 1.5-foot wave height or greater within the Coastal A zone. Therefore, it is possible that the loading docks and drive-in doors could experience damage from wave action during a 1 percent annual chance flood event over the project lifespan.

2. Identify adaptive strategies

2(a). For any features identified in Step 1(b), identify adaptive strategies.

Most of the Proposed Development's features would be elevated above the 100-year flood height, which include the warehouse and a majority of the loading docks and drive-in doors. The Proposed Development would be designed to the standards of Appendix G of the NYC Building Code, specifically G304.1.1(1) and G304.1.2(1). The lowest floor elevation of the Proposed Development, which consists of the finished floor of the warehouse, would be constructed at an elevation of 18.5 feet, which is 3.5 feet higher than the 100-year flood height. There are some exterior grades around the building that are as low as 14 feet which would include the floor of the loading docks, located outside of the warehouse at the perimeter of the Proposed Development. Doors from the building would be set at 18.5 feet and stairs would be provided from the elevation of the warehouse floor to the grade of the loading docks to make up the grade change. Portions of the warehouse below 18.5 feet would be comprised of concrete slabs that contain a waterproof adhesive bond to allow for floodproofing.

As described above, the majority of the slopes on the side of the creek that occurs within Development Site would include rip rap revetment with no plantings. There are some portions of the bank slopes that would be planted with either a mix of naturalized lawn or meadow seedings. The planting zone would aid in compensating for any lost physical condition of the former marsh to help maximize its values by reintroducing indigenous native flora to emulate natural conditions. These measures would also improve the Development Site's overall resiliency to flood events, as it would mitigate flood levels by providing a permeable surface to absorb floodwaters.

The Proposed Development is anticipated to have a lifespan of about 50 years (around 2072), when adaptive reuse in the form of major rehabilitation or reconstruction is anticipated to be required. If retrofits of vulnerable elements of the building are required prior to the 2070's, there are some adaptive strategies that can be undertaken. For example,

as shown in the Flood Evaluation Worksheet, in a 100-year flood occurring with the sea level rise that is projected for the 2050's (an additional 0.17-0.83 feet) the water level would rise 15.83 feet NAVD 88. In this scenario, the loading docks and drive-in doors would be about 1.83 feet underwater. This means that in the future, there could be potential damage to paving materials and plantings or potentially increased flood insurance costs. Measures to adapt and protect the site would rely on the implementation of best practices and technology available at that time. These may include but not be limited to structural changes, such as dry flood-proofing, considering the implementation of a passive barrier strategy to protect vulnerable features. Operational changes may include moving vulnerable uses to a higher elevation.

The Climate Resiliency Guidelines developed by the Mayor's Office of Climate Resiliency recommend designing adaptive strategies for a proposed project with features below the projected elevation of the "middle range estimate" MHHW (50th percentile) scenario and sea level rise combined, over a project's anticipated useful life. The MHHW compounded by the effects of sea level rise in the 50th percentile scenario of the Development Site is projected to be 5.32 feet NAVD88 by year 2080. All elements of the project would be elevated above this level as described above.

2(b). Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.

As described above, a portion of the Development Site is subject to the LiMWA, which means that part of the loading docks and drive-in doors could experience damage from wave action during a 1 percent annual chance flood event over the project lifespan. This impact would be mitigated by incorporating design elements into the Proposed Development such as retaining walls and a fairly steep rip-rap revetment in the vicinity of the tidal wetland. The majority of the slopes on the side of the creek that occurs within the Development Site, would have rip-rap revetment with no plantings. The revetments consist of earthen embankments with erosion protection. The erosion protection generally consists of rip-rap armoring over bedding stone in the lower portion of the slopes and turf reinforcement mats in the upper portion of the slopes. The revetment is designed to protect the upland areas from erosion, which is a preventative measure to protect the wetlands and Mill Creek. These upland areas are within the LiMWA. Without the revetment, waves could erode the uplands over time and the migrating soil could adversely impact the wetlands and Mill Creek. Retaining walls are proposed, to reduce the overall disturbance area to keep disturbance out of the wetlands. These measures would also improve the Development Site's overall resiliency to flood events and limit waves on the Development Site boundaries.

2(c). Describe how the project would affect the flood protection of adjacent sites, if relevant. How would the project lead to increased flooding on adjacent sites? How would the project protect upland sites from coastal hazards? Does the project complement or conflict with planned, adjacent flood protection projects?

Because the floodplain within NYC is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, the proposed modifications would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the study area. During and following construction, activities within the Development Site would be completed in accordance with applicable stormwater regulations. Therefore, the construction and operation of the Development Site would not exacerbate future projected flooding conditions on adjacent sites.

3. Assess policy consistency

Based on this information, the Proposed Development would promote Policy 6.2. As described above, the vicinity of the TWAA would have a steep rip-rap revetment with earthen embankments with erosion protection, which would allow the Development Site to withstand flood events and mitigate wave action. Vulnerable project features would be above the projected elevation of the future high estimate of MHHW or 1 percent chance annual flood and sea level rise would be made resilient through the implementation of site-specific adaptive strategies such as those described above.

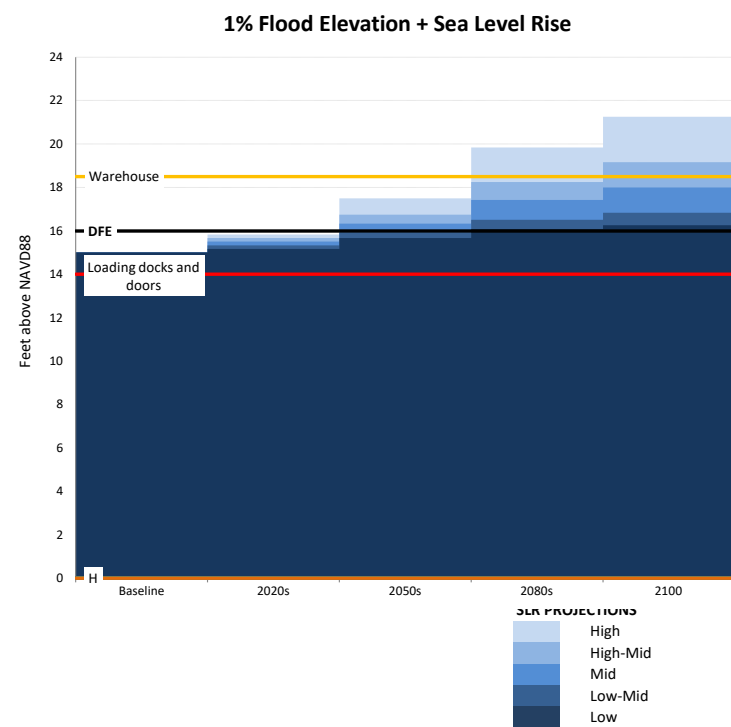
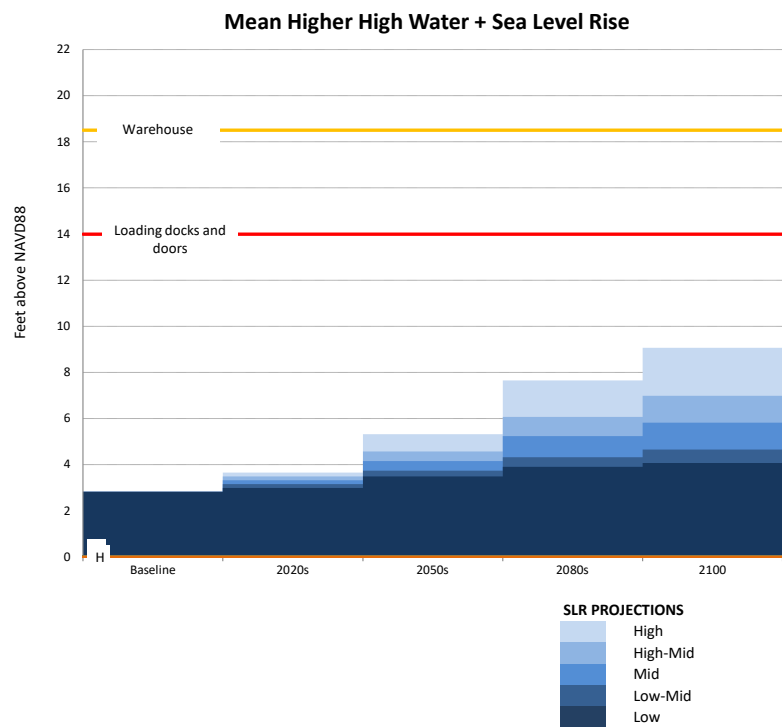
Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.

Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.

Although the cap would be disturbed during the construction of the new building, all construction activities will be completed in accordance with the existing SMP and Excavation Work Plan (EWP) as discussed in **Section 5, Hazardous Materials**. While the SMP does not require additional remediation, it does place use restrictions on the Development Site. It also requires periodic inspection and reporting of the integrity of the composite cover system and requires notification to NYSDEC for any change in use or disturbance of the composite cover system. SMP restrictions and requirements will remain in place indefinitely. Specifically, the SMP was developed to manage remaining contamination at the Development Site by addressing the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are part of the final remedy for the Development Site. The remedy consisted primarily of dredging metals impacted sediments and on-site placement of the dredged materials; restoration of Mill Creek (which bisects OU-1) and associated wetlands with a soil capping system; installation of a soil cap with a Geosynthetic Clay Liner (Soil-GCL Cap) in upland areas; and the construction of an asphalt cap primarily in the location of the former buildings. The composite cover system, which includes the cap associated with the wetland restoration, the soil-GCL cap and the asphalt cap, constitute the ECs that were part of the NYSDEC approved final remedy. In addition to these ECs that are in place to address the remaining contamination at the site, ICs including a deed restriction prohibiting residential use were also required by the Declaration of Covenants and Restrictions as part of the Voluntary Cleanup Program (which the Development Site entered into in 1998 and 2002) process for the Development Site.

As part of the Proposed Development's construction activities, the site cap will be re-constructed and a revised SMP and EWP will be provided to the NYSDEC upon completion of the work to document the new conditions and the requirements for the monitoring of the new cap. The new cap and monitoring requirements are anticipated to generally conform with the existing plans.

Assess project vulnerability over a range of sea level rise projections.



Appendix B:

LPC Correspondence

ENVIRONMENTAL REVIEW

Project number: LA-CEQR-R (DEPARTMENT OF CITY PLANNING)

Project:

Address: 1 NASSAU PLACE BBL: 5079710125

Date Received: 10/5/2020

☒ **No architectural significance**

☒ **No archaeological significance**

☐ **Designated New York City Landmark or Within Designated Historic District**

☐ **Listed on National Register of Historic Places**

☐ **Appears to be eligible for National Register Listing and/or New York City
Landmark Designation**

☐ **May be archaeologically significant; requesting additional materials**

Gina Santucci

10/8/2020

SIGNATURE

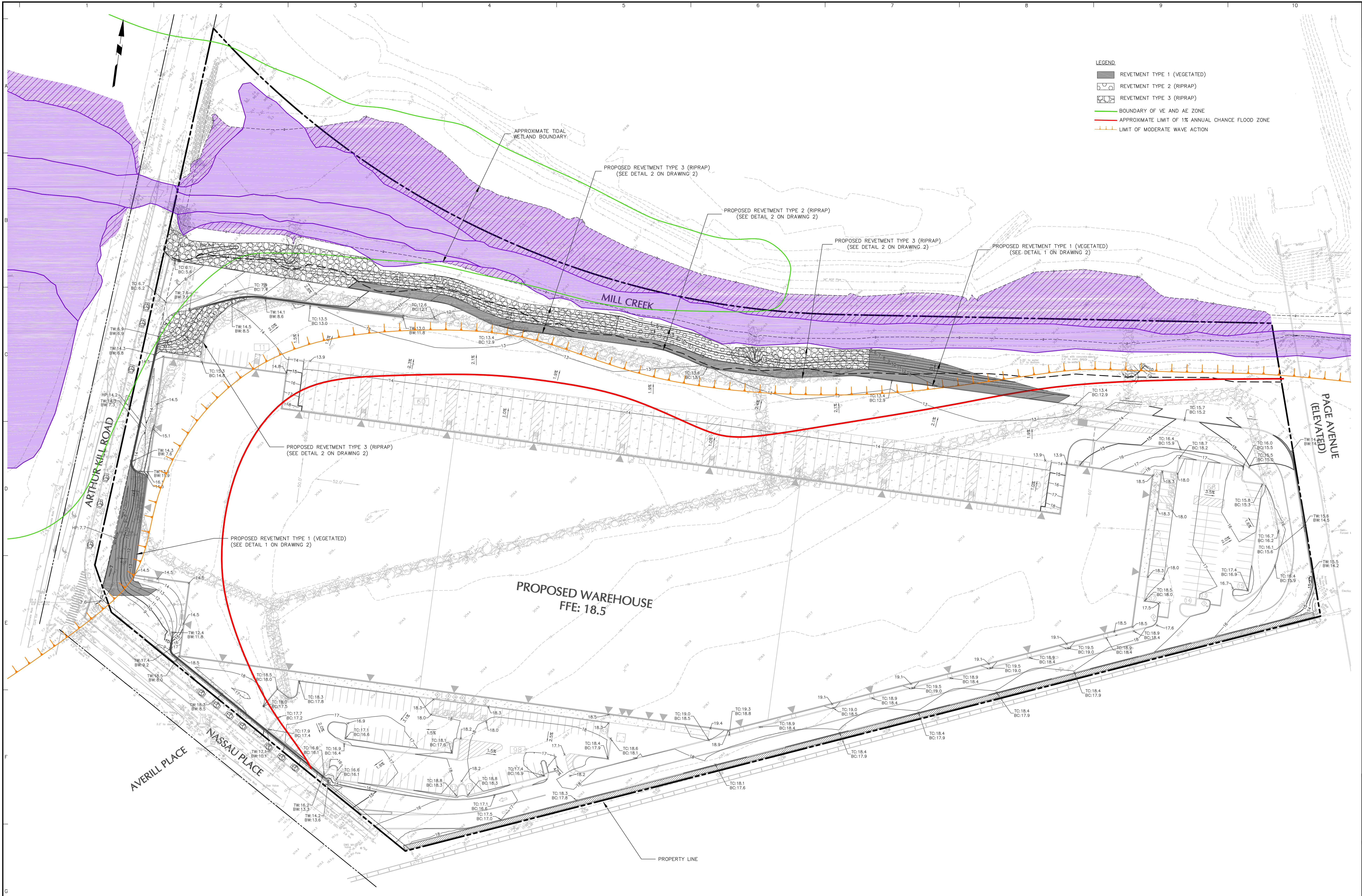
Gina Santucci, Environmental Review Coordinator

DATE

File Name: 35206_FSO_DNP_10082020.docx

Appendix C:

Civil Engineering Drawings



40

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10

25

40

SCALE IN FEET

1" = 40'

Date	Description	No.
Revisions		

LANGAN

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PROPOSED
1 NASSAU PLACE
DEVELOPMENT
BLOCK 7971, LOT No. 125
STATEN ISLAND
RICHMOND COUNTY NEW YORK

Drawing Title

**PROPOSED
SHORELINE PLAN**

Project No.

100860701

Date

07/23/2021

Drawn By

WZ

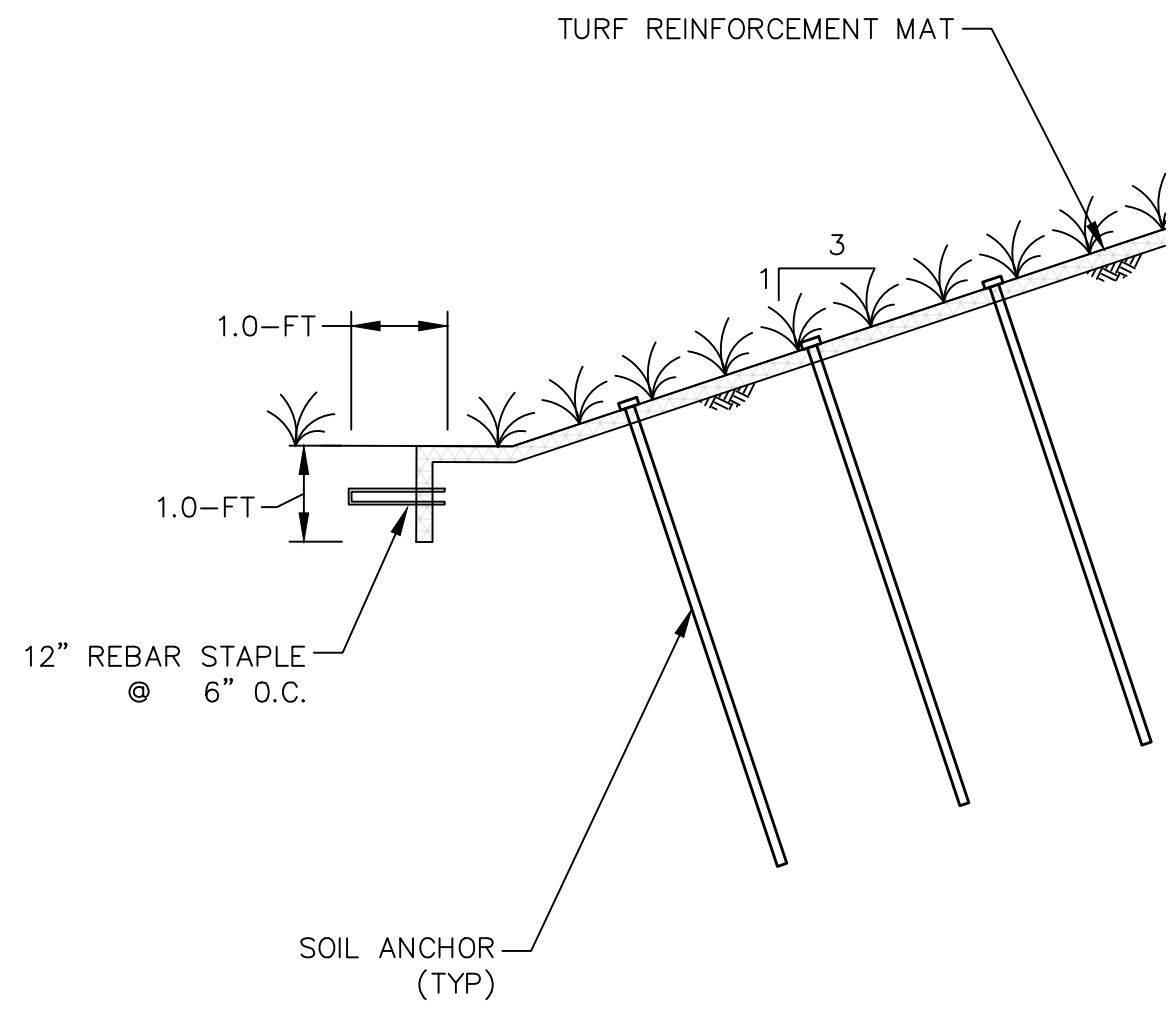
Checked By

KAH

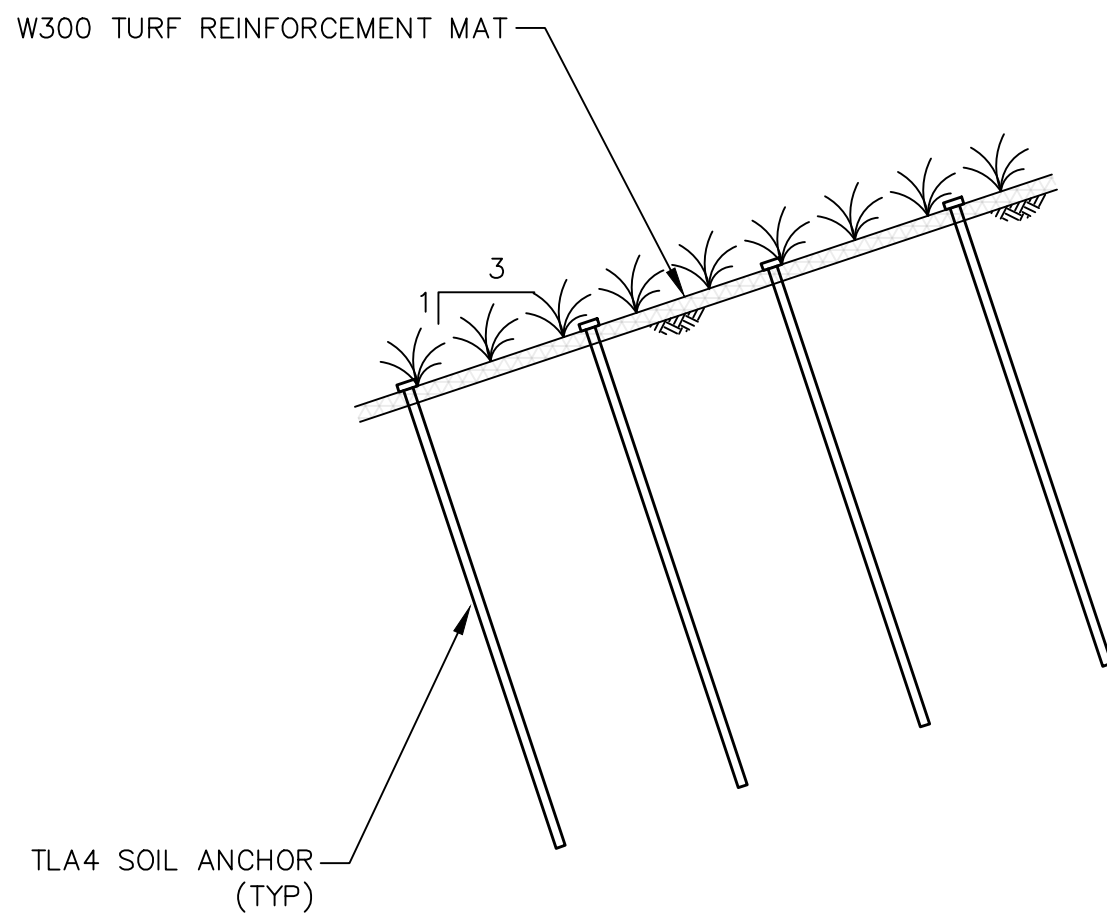
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B-101

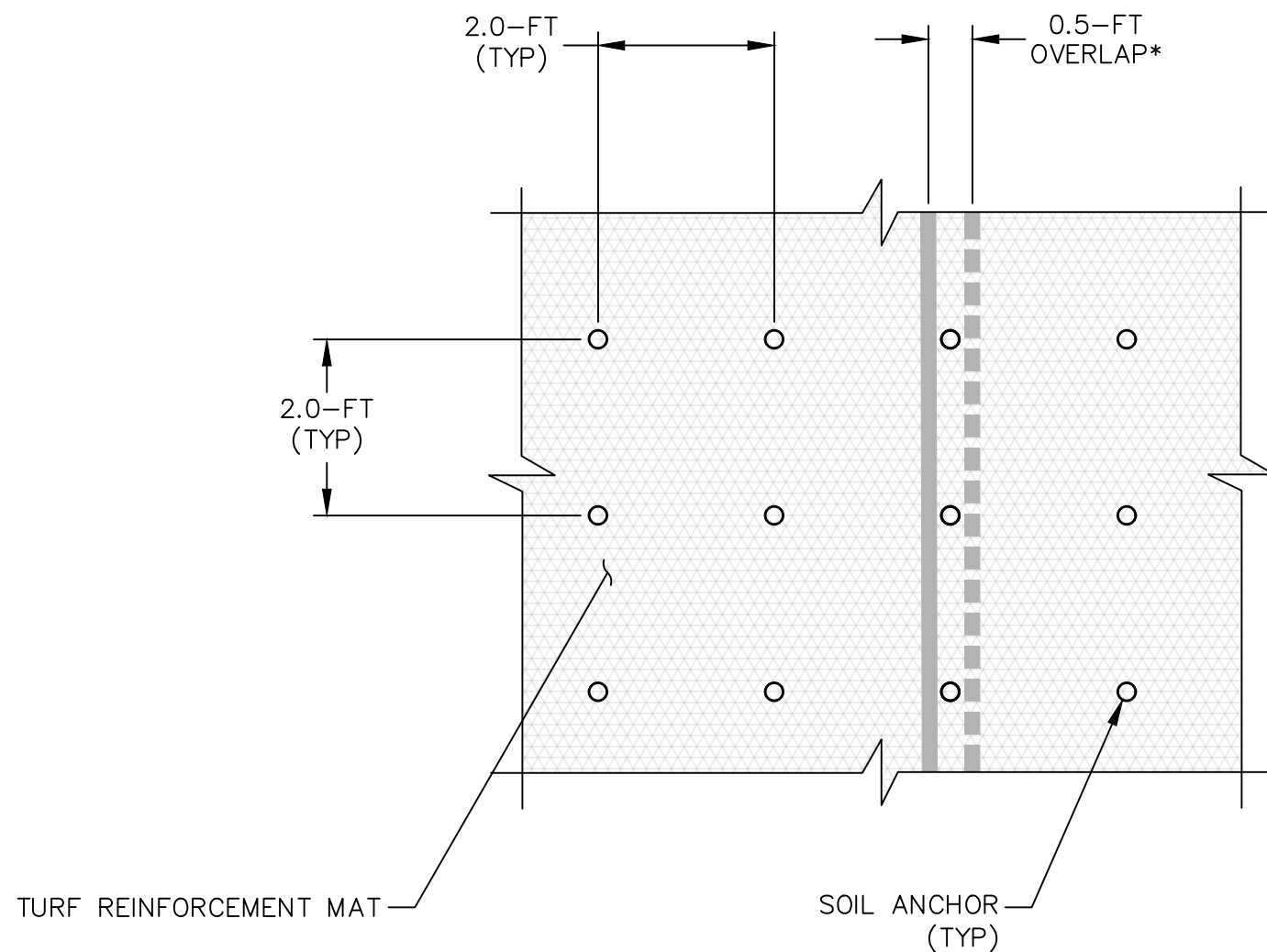
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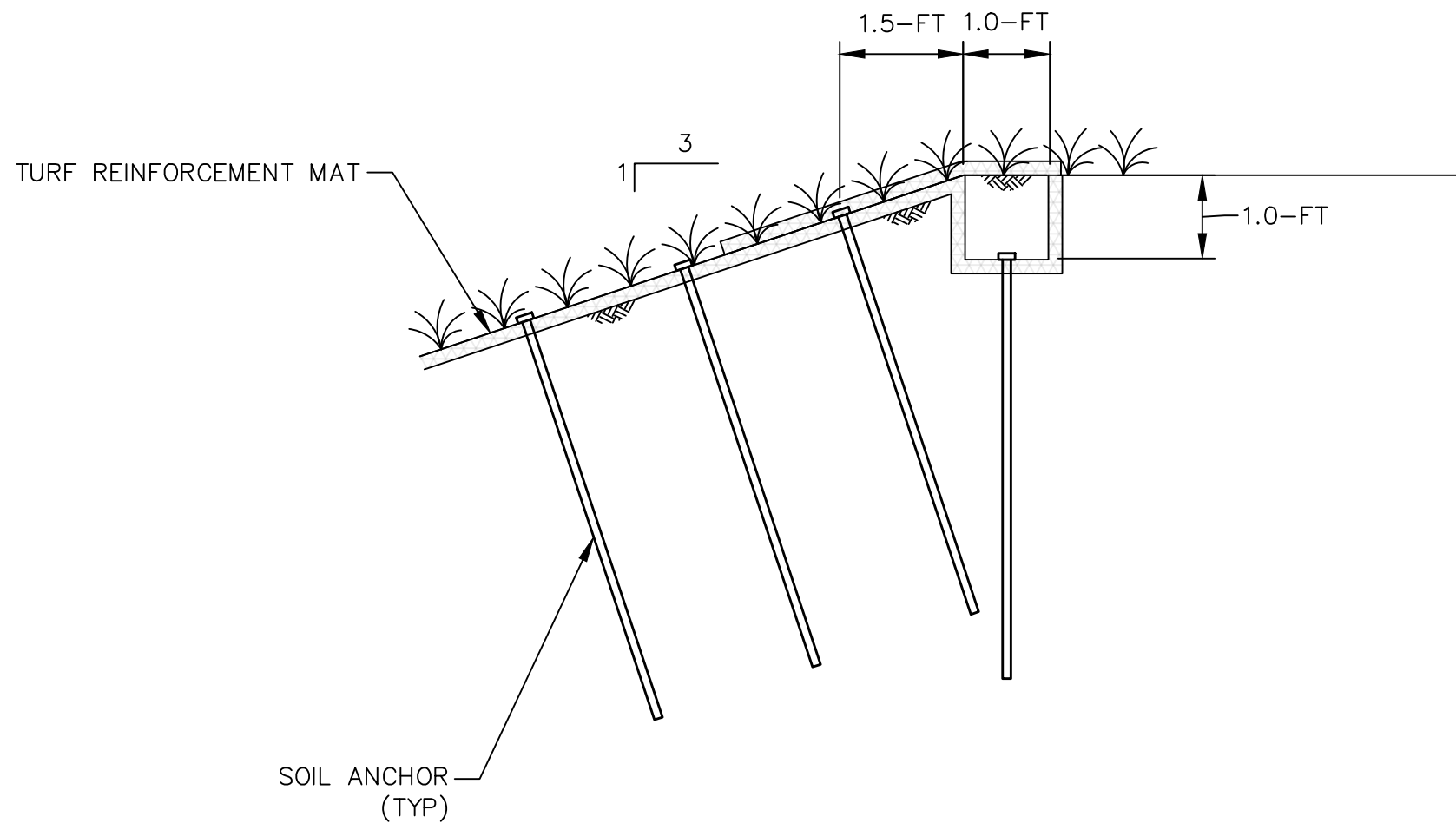
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SCALE: N.T.S.



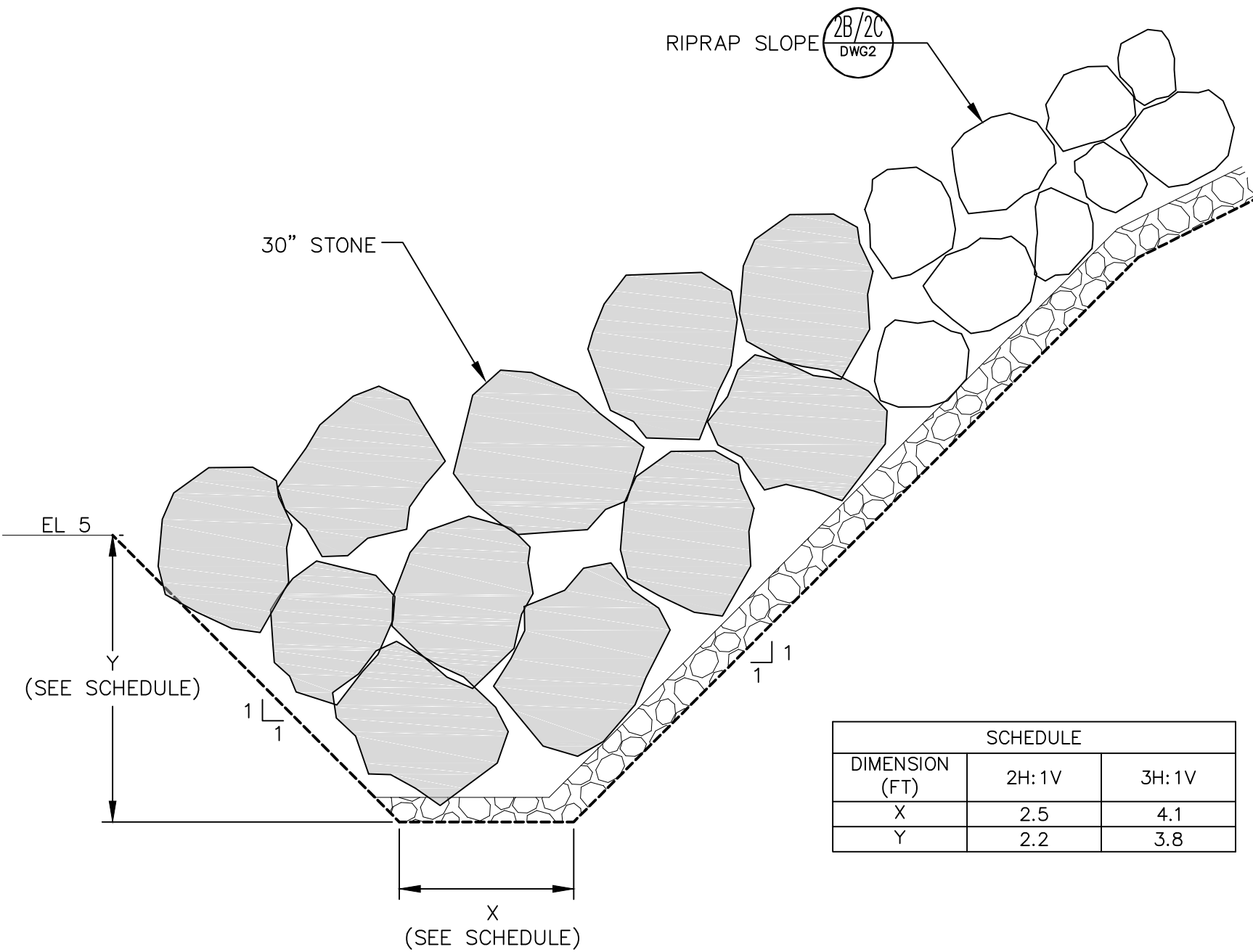
1B TYPICAL DETAIL — REVETMENT TYPE 1 (VEGETATED)
SCALE: N.T.S.



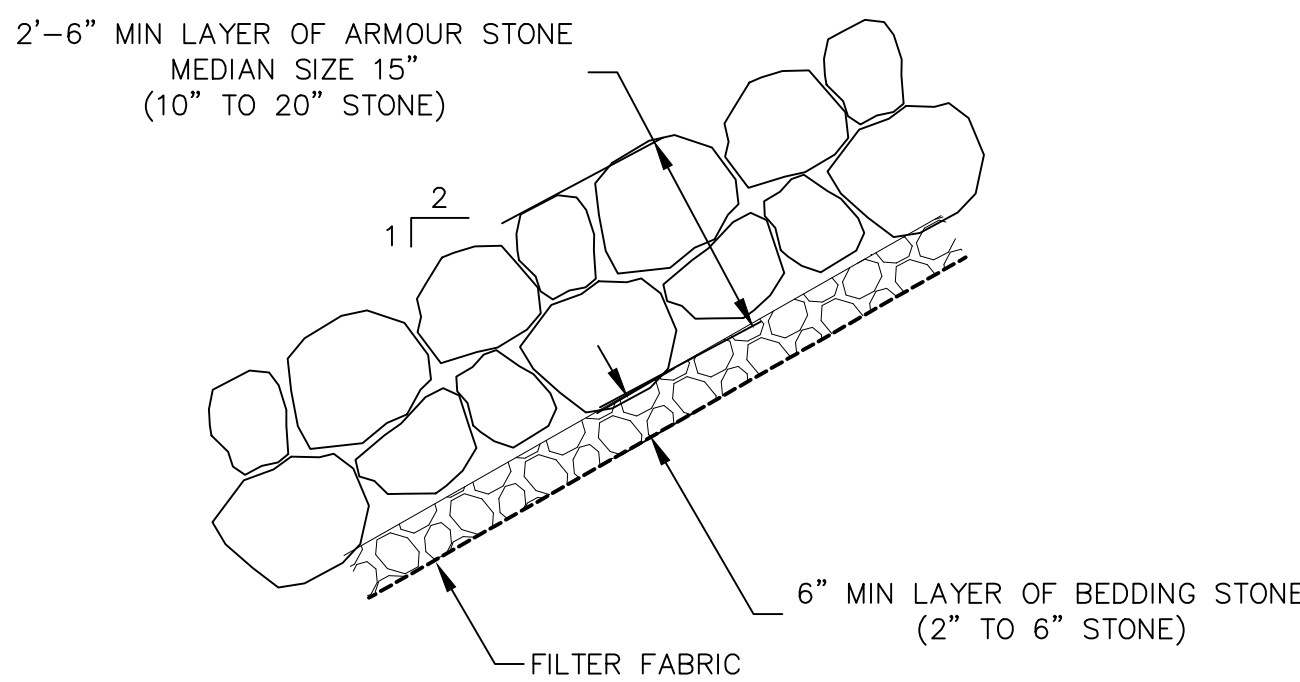
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SCALE: N.T.S.



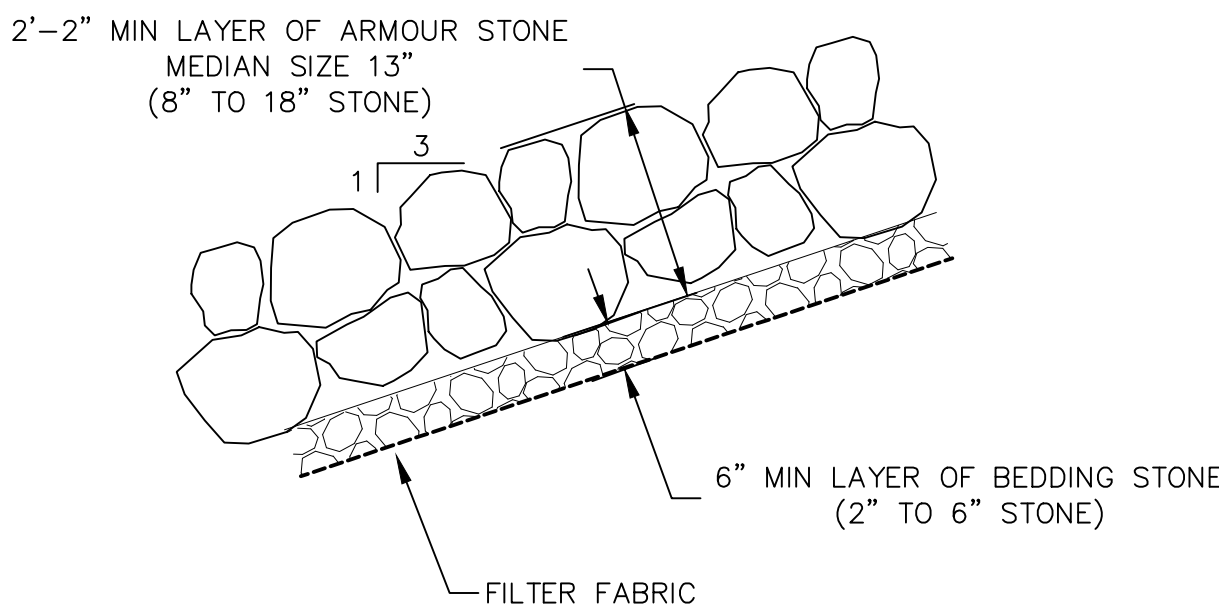
1D TOP DETAIL — REVETMENT TYPE 1 (VEGETATED)
SCALE: N.T.S.



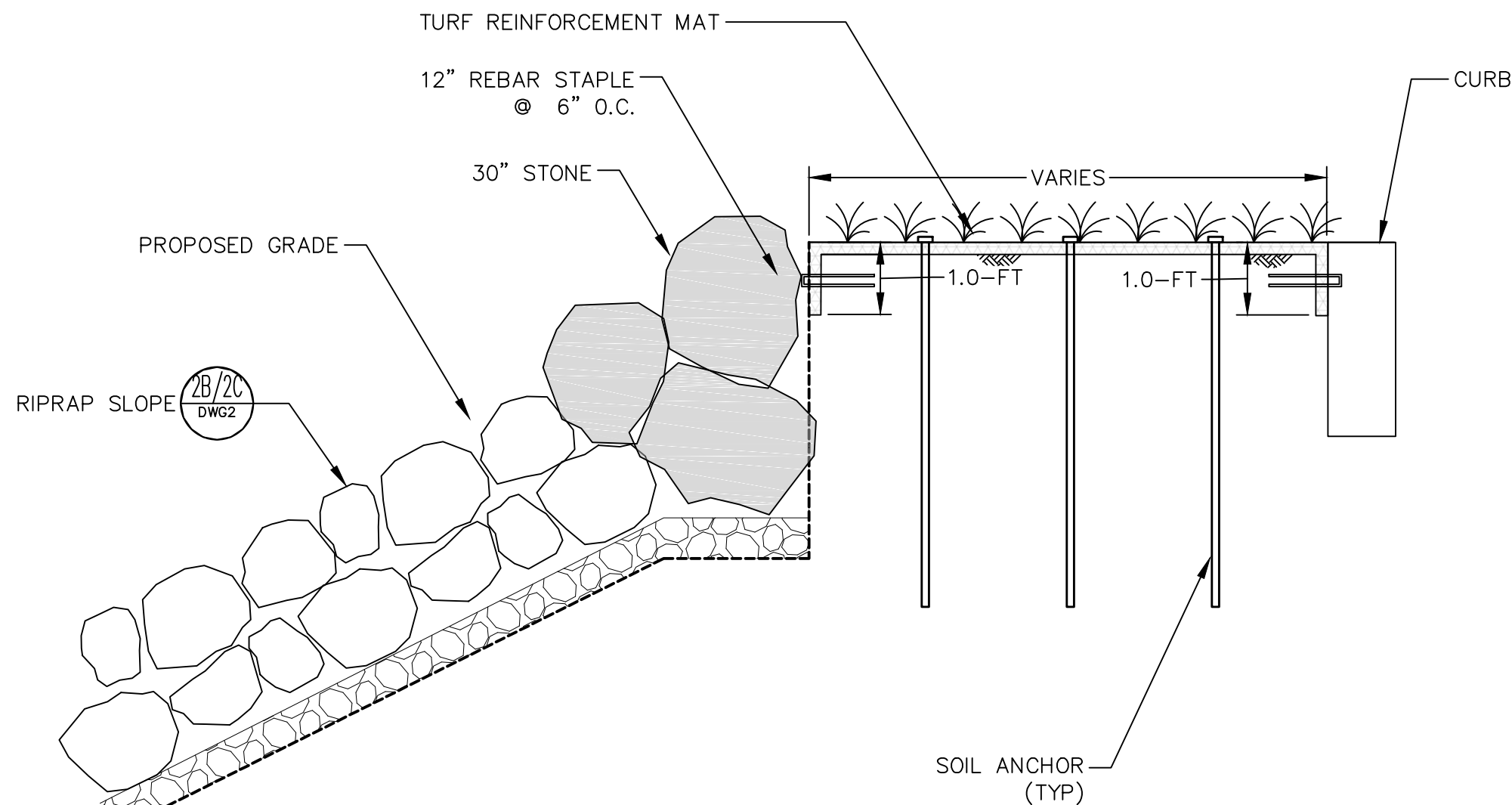
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2B TYPICAL DETAIL — REVETMENT TYPE 2 (RIPRAP)
SCALE: N.T.S.



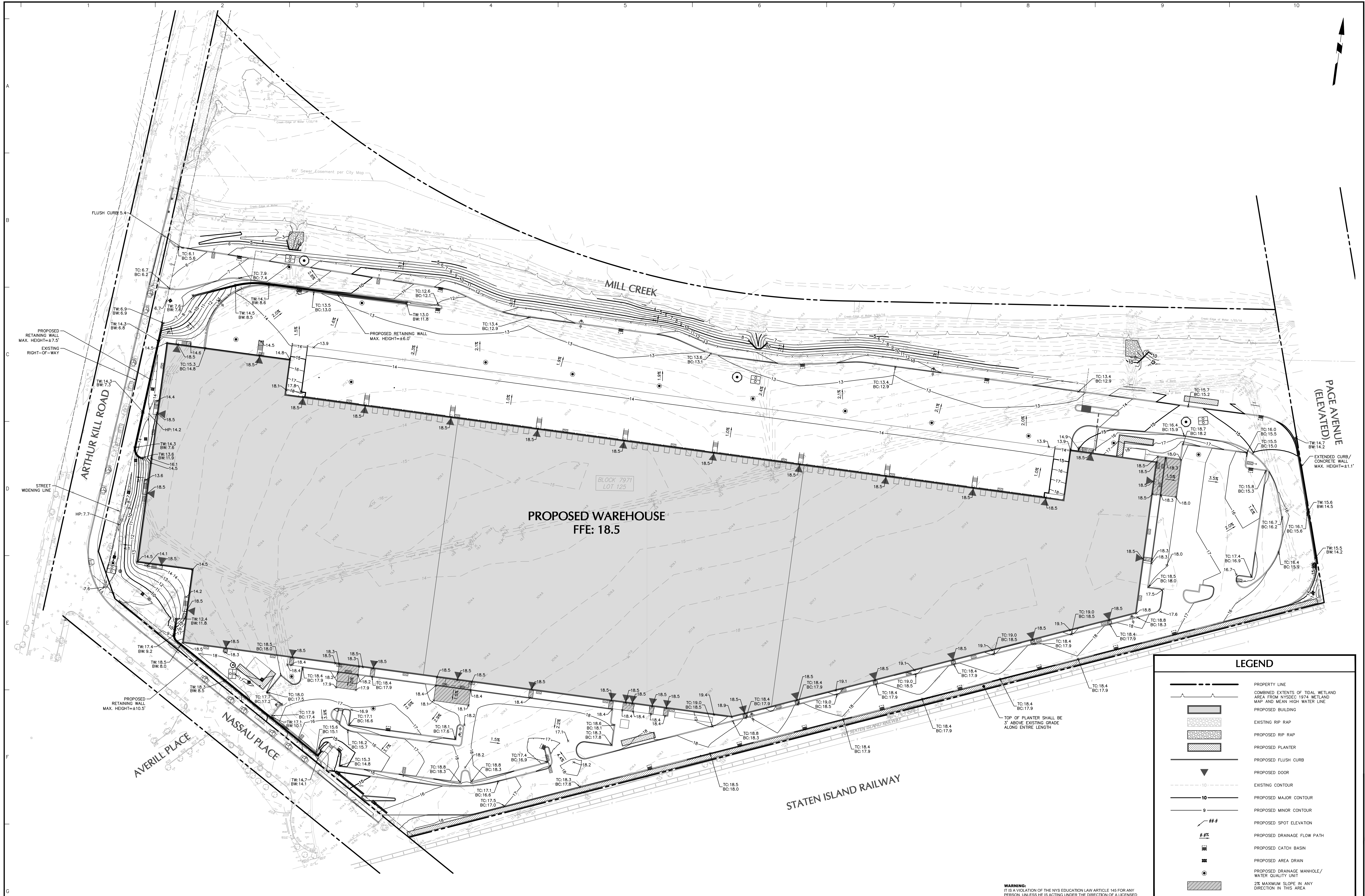
2C TYPICAL DETAIL — REVETMENT TYPE 3 (RIPRAP)
SCALE: N.T.S.



2D TOP DETAIL — REVETMENT TYPE 2/3 (RIPRAP)
SCALE: N.T.S.

Date	Description	No.
Revisions		

Signature	Date	LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C. 300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com	PROPOSED 1 NASSAU PLACE DEVELOPMENT BLOCK 7971, LOT No. 125 STATEN ISLAND RICHMOND COUNTY NEW YORK	Drawing Title DETAIL	Project No. 100860701	B-501
					Date 07/23/2021	
				Drawn By WZ		
				Checked By KAH		



GENERAL NOTES

1. EXISTING BOUNDARY, UTILITY, TOPOGRAPHIC INFORMATION, AND MEAN HIGH WATER INFORMATION SHOWN HEREON WITHIN SITE PROPERTY LINE IS FROM THE PLAN PREPARED BY D.W. HANNIG L.S. P.C., DATED 11/11/2006, LAST UPDATED 02/01/2022 AND SUPPLEMENTED BY ADDITIONAL SURVEY INFORMATION WITHIN THE ROW PROVIDED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. ON 07/16/2021 (FLOOD HAZARD INFORMATION AND EXISTING TREES ARE FROM LANGAN SURVEY SHOWN WITHIN AND BEYOND THE SITE PROPERTY LINE).

2. ELEVATIONS SHOWN ARE BASED UPON NAVD88.

ABBREVIATIONS

TW = TOP OF WALL ELEVATION
BW = BOTTOM OF WALL ELEVATION = FINISHED GRADE AT THE FACE OF THE WALL
TC = TOP OF CURB
BC = BOTTOM OF CURB

SCALE IN FEET
1" = 40'

PROGRESS PRINT		
3/18/2022		
2/3/2022	REVISED FOR NYC DCP COMMENTS	1
Date	Description	No.
Revisions		

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NJ CERTIFICATE OF AUTHORIZATION No. 24GA2799400

Project
PROPOSED 1 NASSAU PLACE DEVELOPMENT
BLOCK 7971, LOT No. 125
STATEN ISLAND
RICHMOND NEW YORK

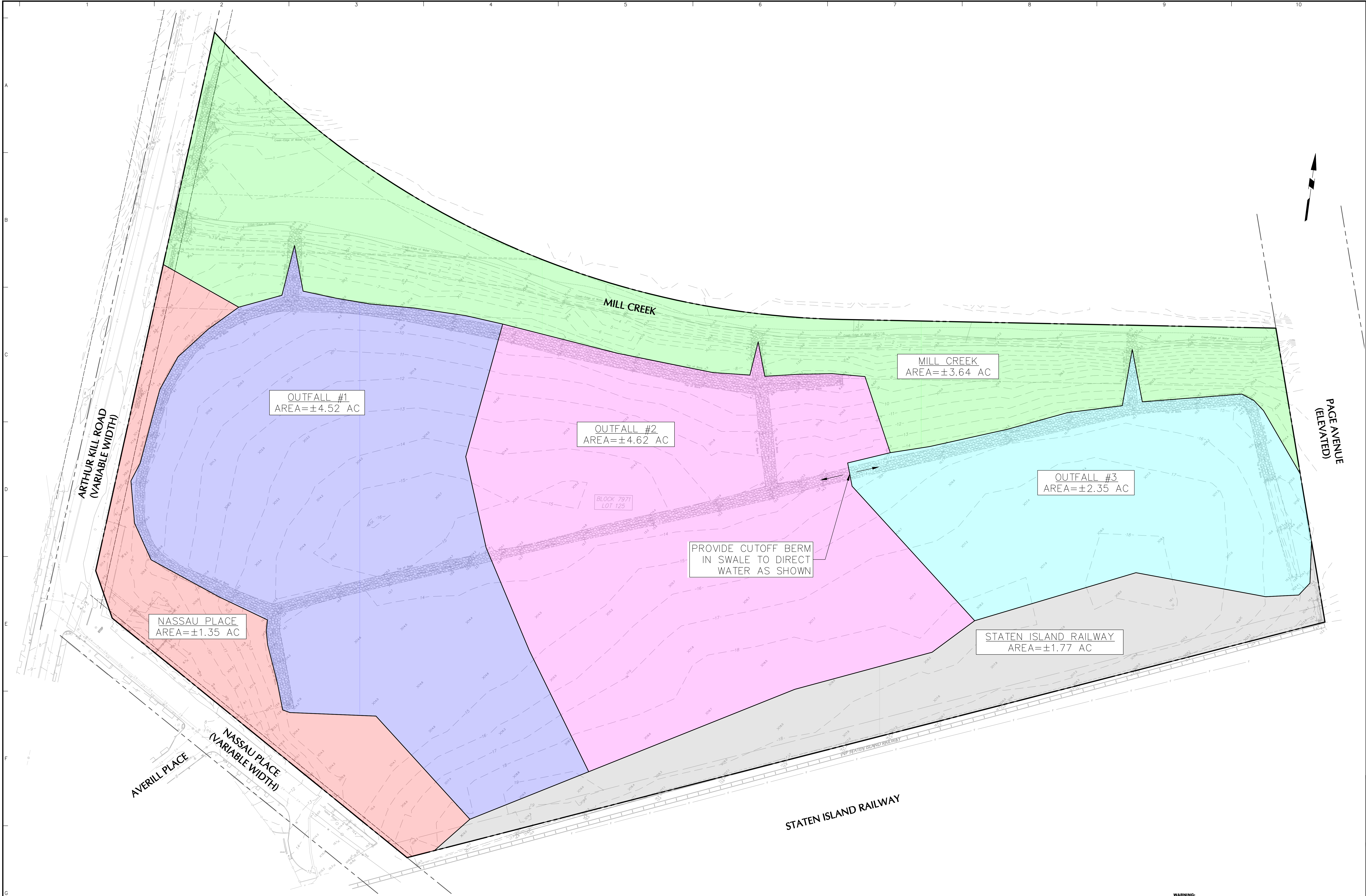
Drawing Title
LAND USE GRADING PLAN

Project No. 100860701	Drawing No. CG101
Date 08/20/2021	
Drawn By DHC	
Checked By BMW	

Sheet 2 of 5

LEGEND	
	PROPERTY LINE
	COMBINED EXTENTS OF TIDAL WETLAND AREA FROM NYSDEC 1974 WETLAND MAP AND MEAN HIGH WATER LINE
	PROPOSED BUILDING
	EXISTING RIP RAP
	PROPOSED RIP RAP
	PROPOSED PLANTER
	PROPOSED FLUSH CURB
	PROPOSED DOOR
	EXISTING CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED SPOT ELEVATION
	PROPOSED DRAINAGE FLOW PATH
	PROPOSED CATCH BASIN
	PROPOSED AREA DRAIN
	PROPOSED DRAINAGE MANHOLE/WATER QUALITY UNIT
	2% MAXIMUM SLOPE IN ANY DIRECTION IN THIS AREA

WARNING:
IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



OUTFALL #1
AREA=±4.52 AC

OUTFALL #2
AREA=±4.62 AC

MILL CREEK
AREA=±3.64 AC

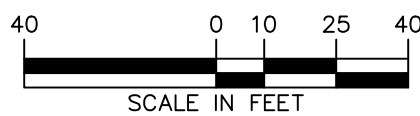
OUTFALL #3
AREA=±2.35 AC

NASSAU PLACE
AREA=±1.35 AC

STATEN ISLAND RAILWAY
AREA=±1.77 AC

PROVIDE CUTOFF BERM
IN SWALE TO DIRECT
WATER AS SHOWN

BLOCK 7971
LOT 125



Date	Description	No.
Revisions		

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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

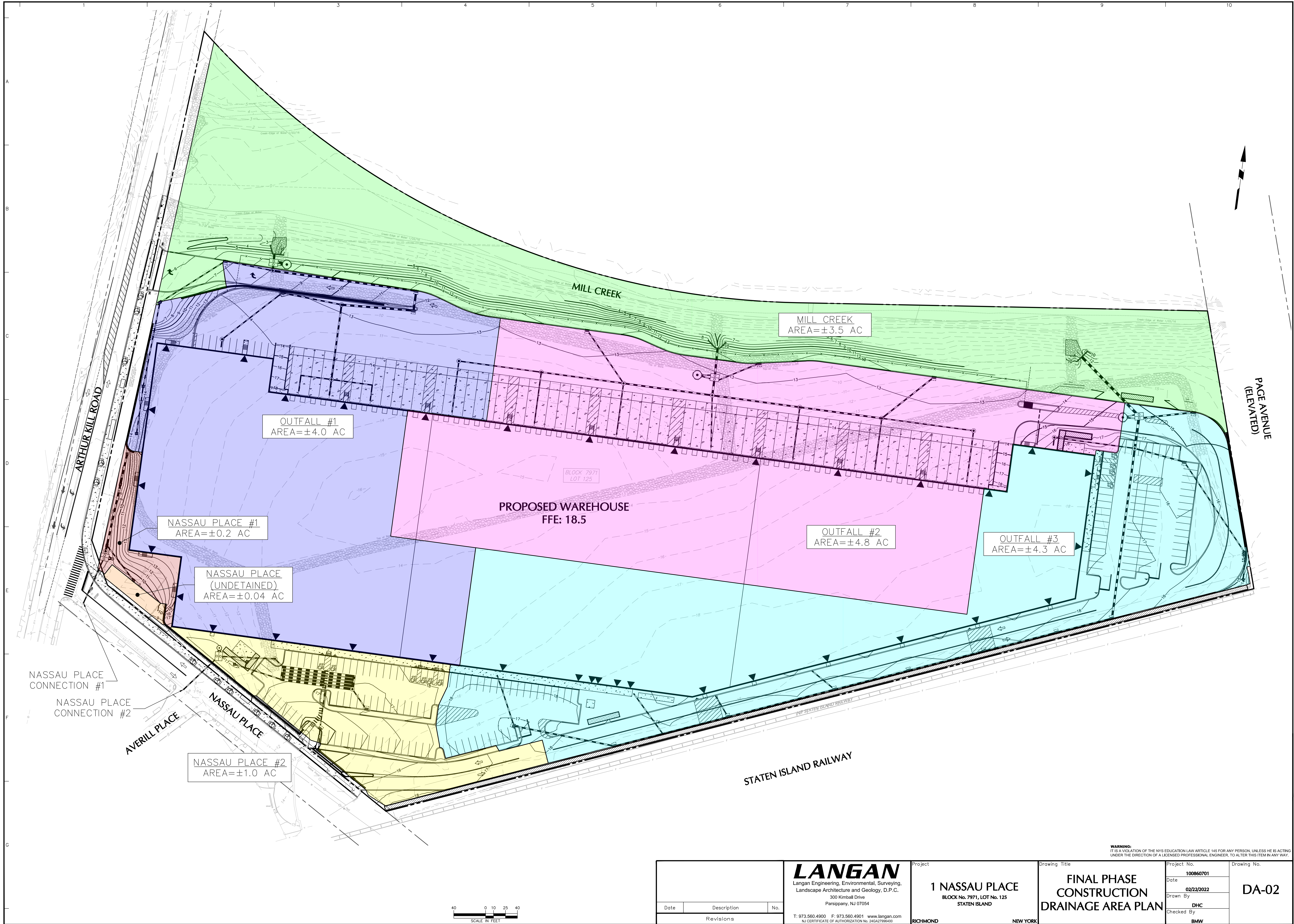
Project	1 NASSAU PLACE BLOCK No. 7971, LOT No. 125 STATEN ISLAND
Project	RICHMOND
Project	NEW YORK

Drawing Title	INITIAL PHASE CONSTRUCTION DRAINAGE AREA PLAN
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Project No.	100860701
Date	02/22/2022
Drawn By	DHC
Checked By	BMW

DA-01

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Date	Description	No.
Revisions		

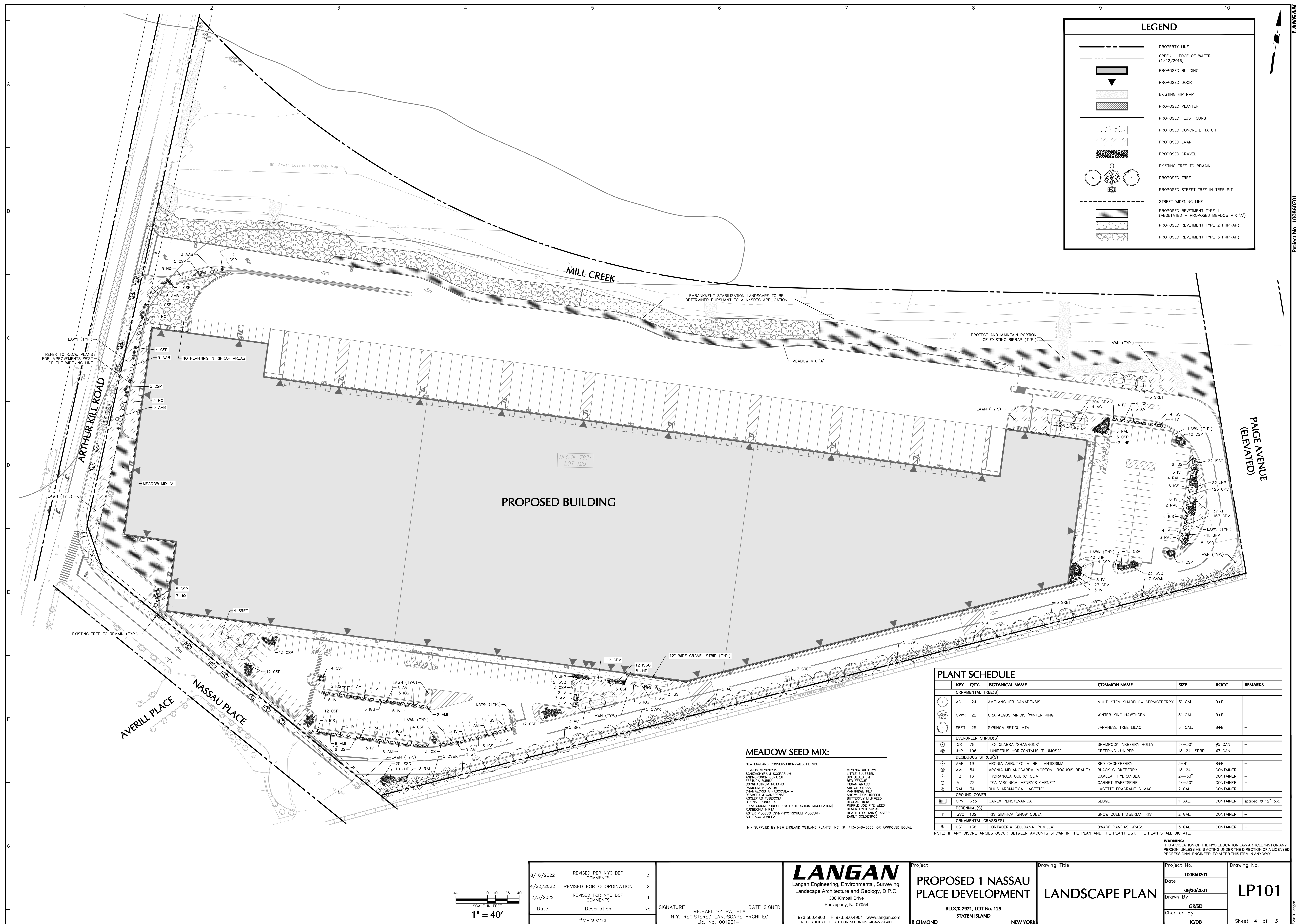
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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
1 NASSAU PLACE
BLOCK No. 7971, LOT No. 125
STATEN ISLAND
RICHMOND NEW YORK

Drawing Title
**FINAL PHASE
CONSTRUCTION
DRAINAGE AREA PLAN**

Project No.
100860701
Date
02/22/2022
Drawn By
DHC
Checked By
BMW

Drawing No.
DA-02

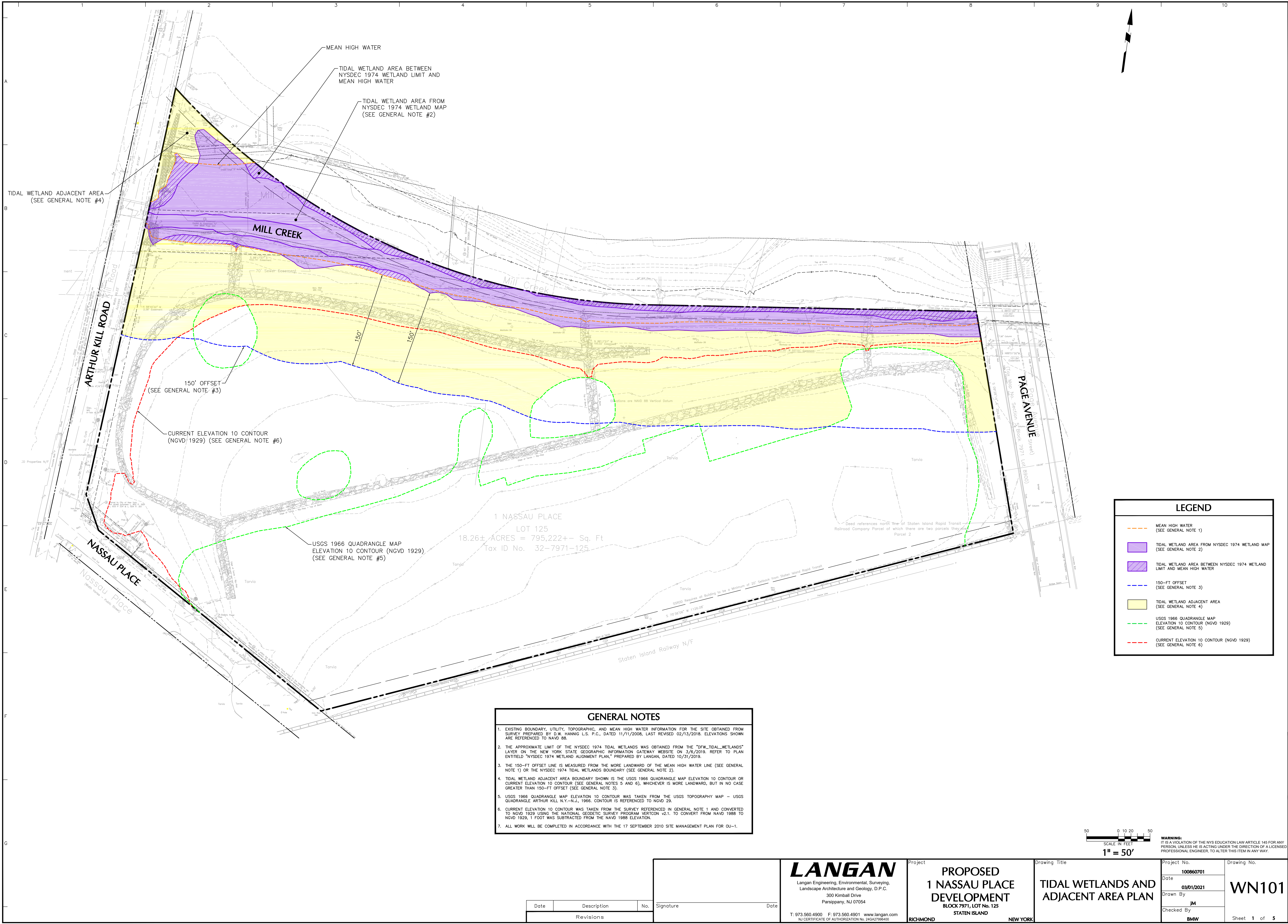


	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
	ORNAMENTAL TREE(S)						
	AC	24	AMELANCHIER CANADENSIS	MULTI STEM SHADLOW SERVICEBERRY	3" CAL.	B+B	—
	CVWK	22	CRATAEGUS VIRIDIS 'WINTER KING'	WINTER KING HAWTHORN	3" CAL.	B+B	—
	SRET	25	SYRINGA RETICULATA	JAPANESE TREE LILAC	3" CAL.	B+B	—
	EVERGREEN SHRUB(S)						
	IGS	78	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERY HOLLY	24-30"	#5 CAN	—
	JHP	196	JUNIPERUS HORIZONTALIS 'PLUMOSA'	CREEPING JUNIPER	18-24" SPRD	#3 CAN	—
	DECIDUOUS SHRUBS						
	AMJ	19	ARONIA ARBUTIFOLIA 'BRILLANTISSIMA'	RED CHOKEBERRY	3-4'	B+B	—
	AMI	54	ARONIA MELANOCARPA 'MORTON' 'IROQUOIS BEAUTY'	BLACK CHOKEBERRY	18-24"	CONTAINER	—
	HQ	16	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	24-30"	CONTAINER	—
	IV	72	ITEA VIRGINICA 'HENRY'S GARNET'	CANAL SWEETSPICE	24-30"	CONTAINER	—
	RAL	34	RHUS AROMATICA 'LACETTE'	LACETTE FRAGRANT SUMAC	2 GAL.	CONTAINER	—
	GROUND COVER						
	CPV	135	CAREX PENSYLVANICA	SEDGE	1 GAL.	CONTAINER	spaced @ 12" o.c.
	PERENNIAL(S)						
	ISSQ	102	IRIS SIBIRICA 'SNOW QUEEN'	SNOW QUEEN SIBERIAN IRIS	2 GAL.	CONTAINER	—
	ORNAMENTAL GRASS(ES)						
	CSP	138	CORTADERIA SELLOANA 'PUMILLA'	DWARF PAMPAS GRASS	3 GAL.	CONTAINER	—

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICATE.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR A PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

<table><tr><td>8/16/2022</td><td>REVISED PER NYC DEP COMMENTS</td><td>3</td></tr><tr><td>4/22/2022</td><td>REVISED FOR COORDINATION</td><td>2</td></tr><tr><td>2/3/2022</td><td>REVISED FOR NYC DCP COMMENTS</td><td>1</td></tr><tr><td>Date</td><td>Description</td><td>No.</td></tr><tr><td colspan="3">Revisions</td></tr></table>			8/16/2022	REVISED PER NYC DEP COMMENTS	3	4/22/2022	REVISED FOR COORDINATION	2	2/3/2022	REVISED FOR NYC DCP COMMENTS	1	Date	Description	No.	Revisions			</
8/16/2022	REVISED PER NYC DEP COMMENTS	3																
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Revisions																		



LEGEND

MEAN HIGH WATER
(SEE GENERAL NOTE 1)

TIDAL WETLAND AREA FROM NYSDEC 1974 WETLAND MAP
(SEE GENERAL NOTE 2)

TIDAL WETLAND AREA BETWEEN NYSDEC 1974 WETLAND
LIMIT AND MEAN HIGH WATER

150'-FT OFFSET
(SEE GENERAL NOTE 3)

TIDAL WETLAND ADJACENT AREA
(SEE GENERAL NOTE 4)

USGS 1966 QUADRANGLE MAP
ELEVATION 10 CONTOUR (NGVD 1929)
(SEE GENERAL NOTE 5)

CURRENT ELEVATION 10 CONTOUR (NGVD 1929)
(SEE GENERAL NOTE 6)

GENERAL NOTES

1. EXISTING BOUNDARY, UTILITY, TOPOGRAPHIC, AND MEAN HIGH WATER INFORMATION FOR THE SITE OBTAINED FROM SURVEY PREPARED BY D.W. HANNIG L.S. P.C., DATED 11/11/2008, LAST REVISED 02/13/2018. ELEVATIONS SHOWN ARE REFERENCED TO NAVD 88.

2. THE APPROXIMATE LIMIT OF THE NYSDEC 1974 TIDAL WETLANDS WAS OBTAINED FROM THE "DFW_TIDAL_WETLANDS" LAYER ON THE NEW YORK STATE GEOGRAPHIC INFORMATION GATEWAY WEBSITE ON 3/6/2019. REFER TO PLAN ENTITLED "NYSDEC 1974 WETLAND ALIGNMENT PLAN" PREPARED BY LANGAN, DATED 10/21/2019.

3. THE 150'-FT OFFSET LINE IS MEASURED FROM THE MORE LANDWARD OF THE MEAN HIGH WATER LINE (SEE GENERAL NOTE 1) OR THE NYSDEC 1974 TIDAL WETLANDS BOUNDARY (SEE GENERAL NOTE 2).

4. TIDAL WETLAND ADJACENT AREA BOUNDARY SHOWN IS THE USGS 1966 QUADRANGLE MAP ELEVATION 10 CONTOUR OR CURRENT ELEVATION 10 CONTOUR (SEE GENERAL NOTES 5 AND 6), WHICHEVER IS MORE LANDWARD, BUT IN NO CASE GREATER THAN 150'-FT OFFSET (SEE GENERAL NOTE 3).

5. USGS 1966 QUADRANGLE MAP ELEVATION 10 CONTOUR WAS TAKEN FROM THE USGS TOPOGRAPHY MAP - USGS QUADRANGLE ARTHUR KILL N.Y.-N.J., 1966. CONTOUR IS REFERENCED TO NGVD 29.

6. CURRENT ELEVATION 10 CONTOUR WAS TAKEN FROM THE SURVEY REFERENCED IN GENERAL NOTE 1 AND CONVERTED TO NGVD 1929 USING THE NATIONAL GEODETIC SURVEY PROGRAM VERTCON v2.1. TO CONVERT FROM NAVD 1988 TO NGVD 1929, 1 FOOT WAS SUBTRACTED FROM THE NAVD 1988 ELEVATION.

7. ALL WORK WILL BE COMPLETED IN ACCORDANCE WITH THE 17 SEPTEMBER 2010 SITE MANAGEMENT PLAN FOR OU-1.

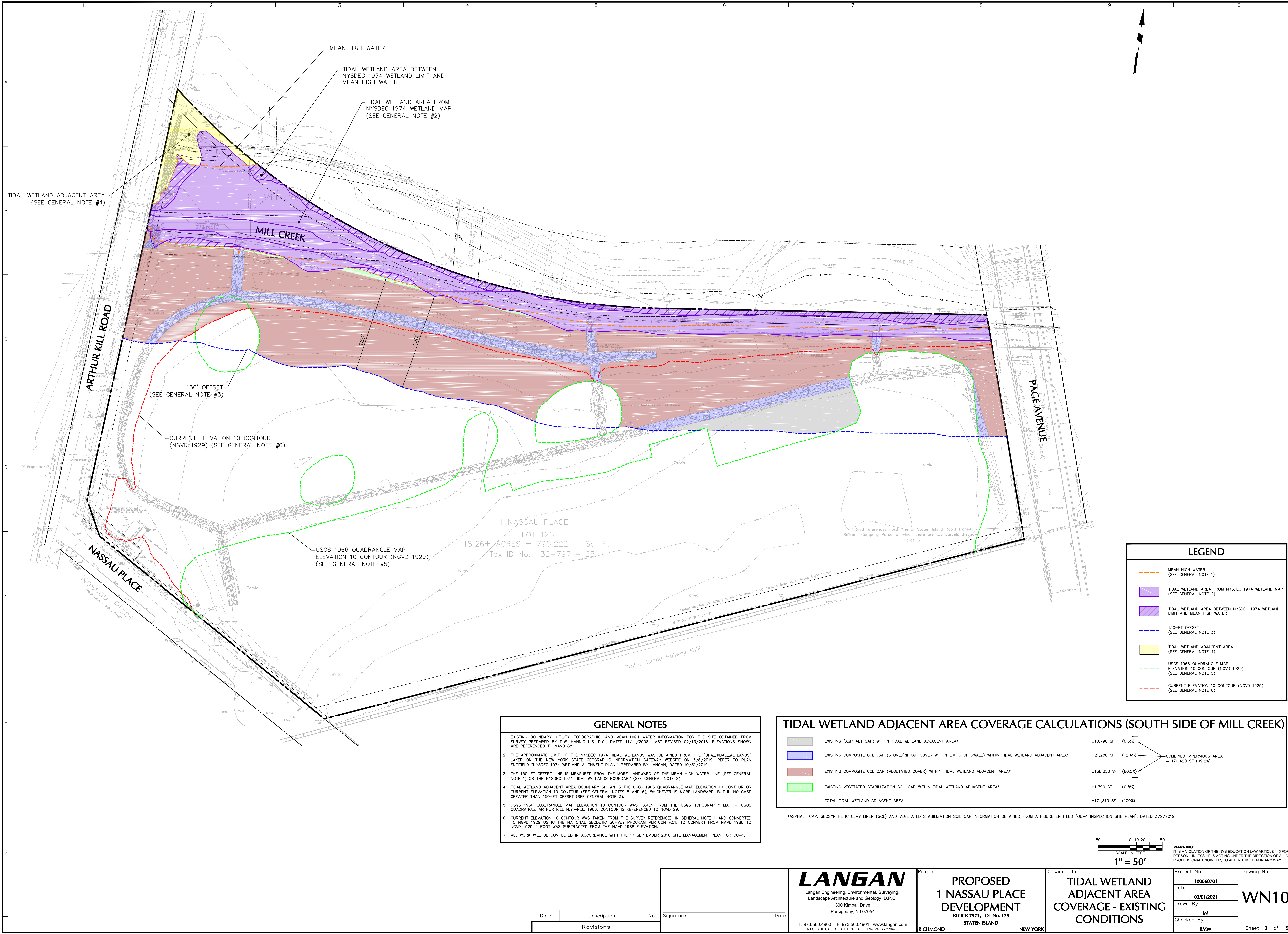
500' 0' 10' 20' 50'

SCALE IN FEET

1" = 50'

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Date Description No. Revisions			Signature Date	LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400	Project PROPOSED 1 NASSAU PLACE DEVELOPMENT BLOCK 7971, LOT No. 125 STATEN ISLAND RICHMOND NEW YORK	Drawing Title TIDAL WETLANDS AND ADJACENT AREA PLAN	Project No. 100860701 Date 03/01/2021 Drawn By JM Checked By BMW Drawing No. WN101 Sheet 1 of 5
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LEGEND

MEAN HIGH WATER
(SEE GENERAL NOTE 1)

TIDAL WETLAND AREA FROM NYSDEC 1974 WETLAND MAP
(SEE GENERAL NOTE 2)

TIDAL WETLAND AREA BETWEEN NYSDEC 1974 WETLAND
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150'-FT OFFSET
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USGS 1966 QUADRANGLE MAP
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7. ALL WORK WILL BE COMPLETED IN ACCORDANCE WITH THE 17 SEPTEMBER 2010 SITE MANAGEMENT PLAN FOR OU-1.

TIDAL WETLAND ADJACENT AREA COVERAGE CALCULATIONS (SOUTH SIDE OF MILL CREEK)

EXISTING (ASPHALT CAP) WITHIN TIDAL WETLAND ADJACENT AREA*

±10,790 SF (6.3%)

EXISTING COMPOSITE GCL CAP (STONE/RIPRAP COVER WITHIN LIMITS OF SWALE) WITHIN TIDAL WETLAND ADJACENT AREA*

±21,280 SF (12.4%)

EXISTING COMPOSITE GCL CAP (VEGETATED COVER) WITHIN TIDAL WETLAND ADJACENT AREA*

±138,350 SF (80.5%)

EXISTING VEGETATED STABILIZATION SOIL CAP WITHIN TIDAL WETLAND ADJACENT AREA*

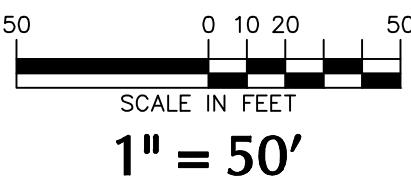
±1,390 SF (0.8%)

TOTAL TIDAL WETLAND ADJACENT AREA

±171,810 SF (100%)

COMBINED IMPERVIOUS AREA
= 170,420 SF (99.2%)

*ASPHALT CAP, GEOSYNTHETIC CLAY LINER (GCL) AND VEGETATED STABILIZATION SOIL CAP INFORMATION OBTAINED FROM A FIGURE ENTITLED "OU-1 INSPECTION SITE PLAN", DATED 3/2/2019.



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Date

Description

No.

Signature

Date

Revisions

LANGAN

Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project

**PROPOSED
1 NASSAU PLACE
DEVELOPMENT**
BLOCK 7971, LOT No. 125
STATEN ISLAND
RICHMOND NEW YORK

Drawing Title

**TIDAL WETLAND
ADJACENT AREA
COVERAGE - EXISTING
CONDITIONS**

Project No.

100860701

Date

03/01/2021

Drawn By

JM

Checked By

BMW

Drawing No.

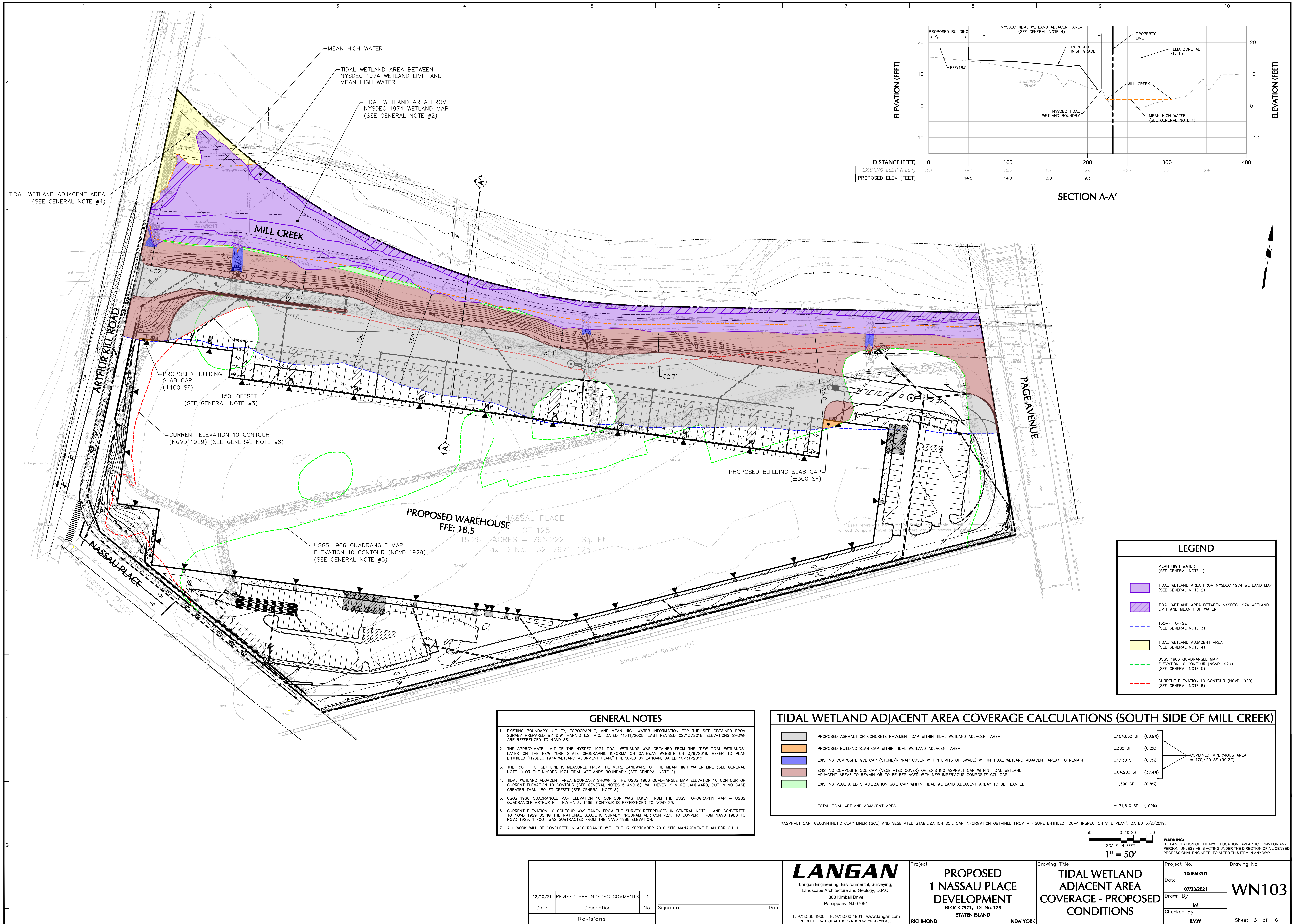
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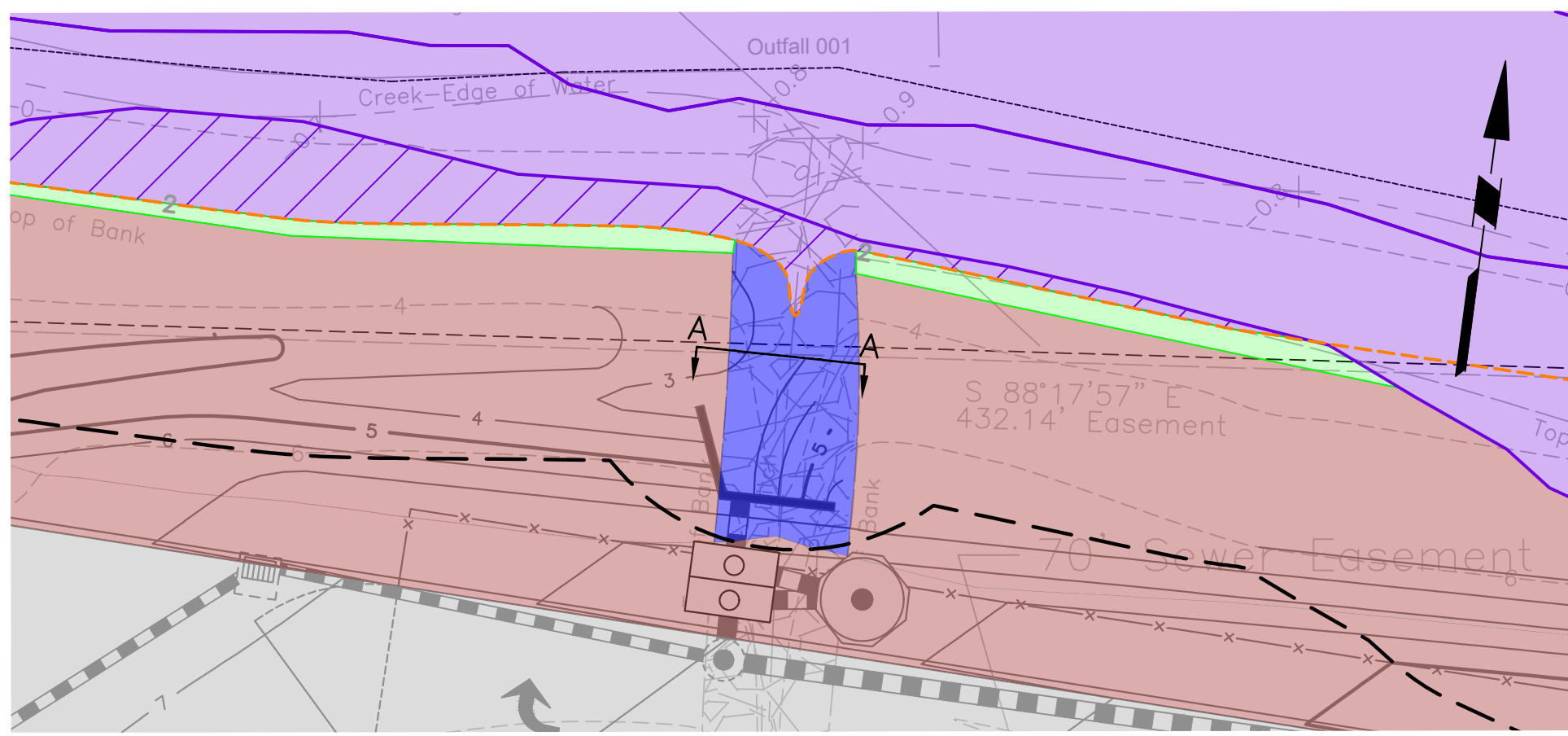
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2 of **5**

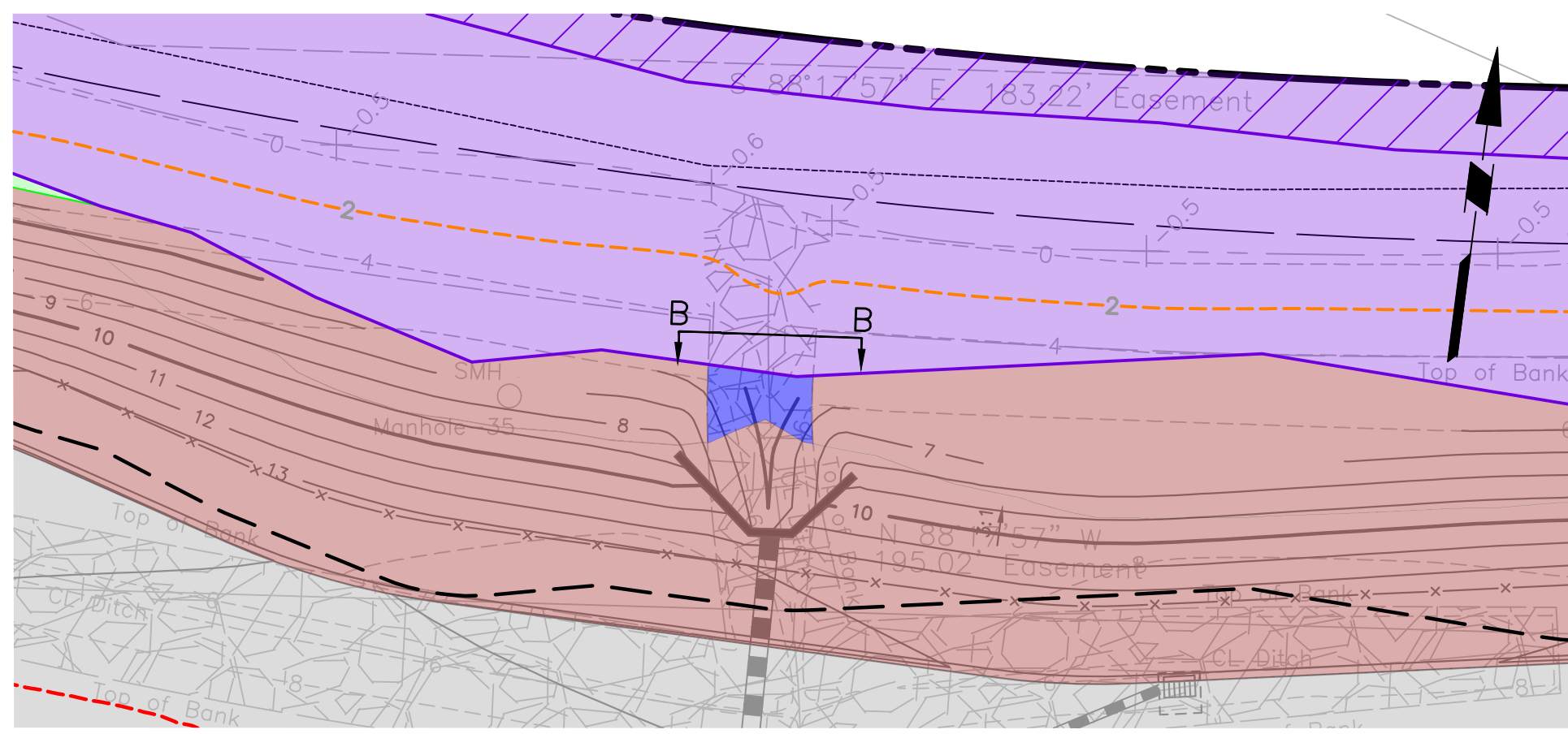
© 2019 Langan

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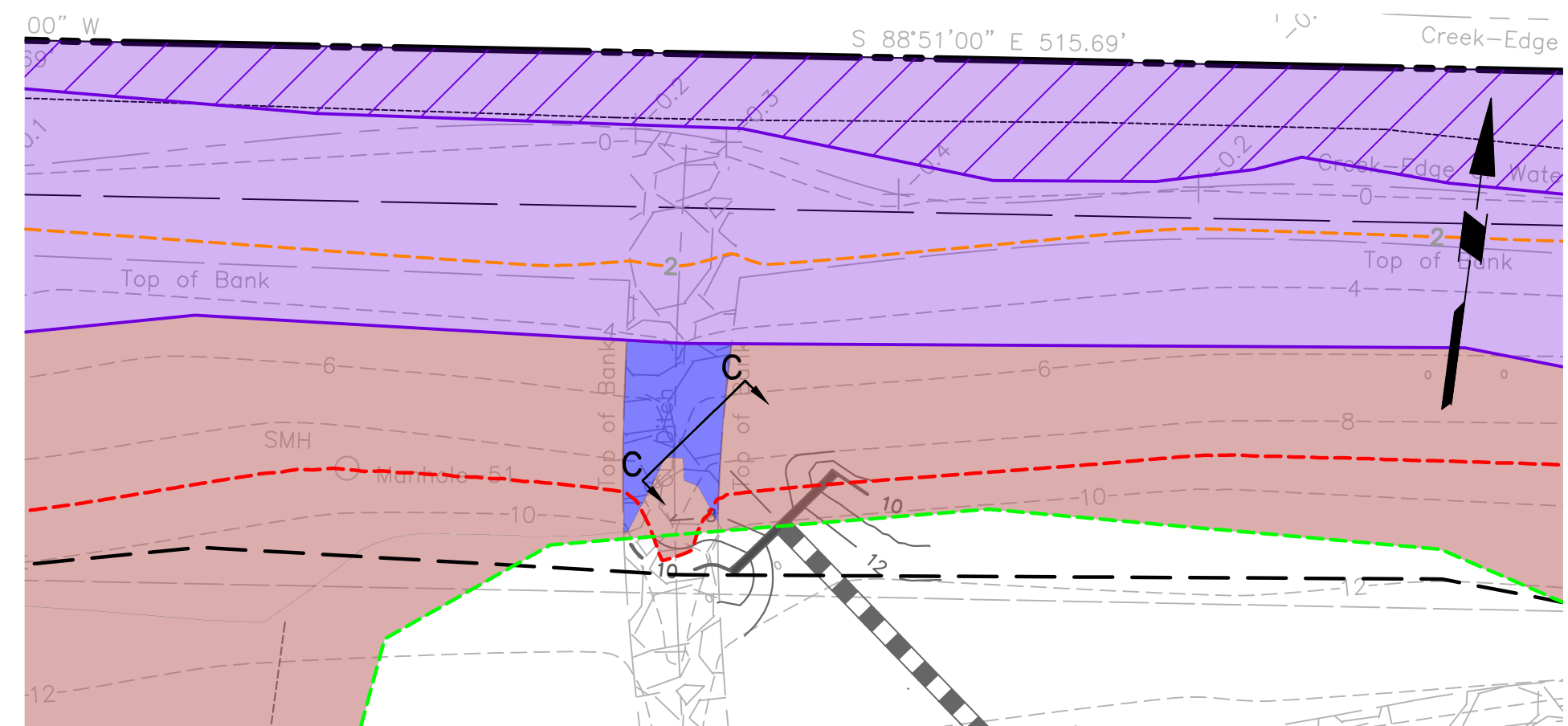




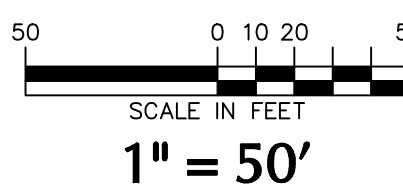
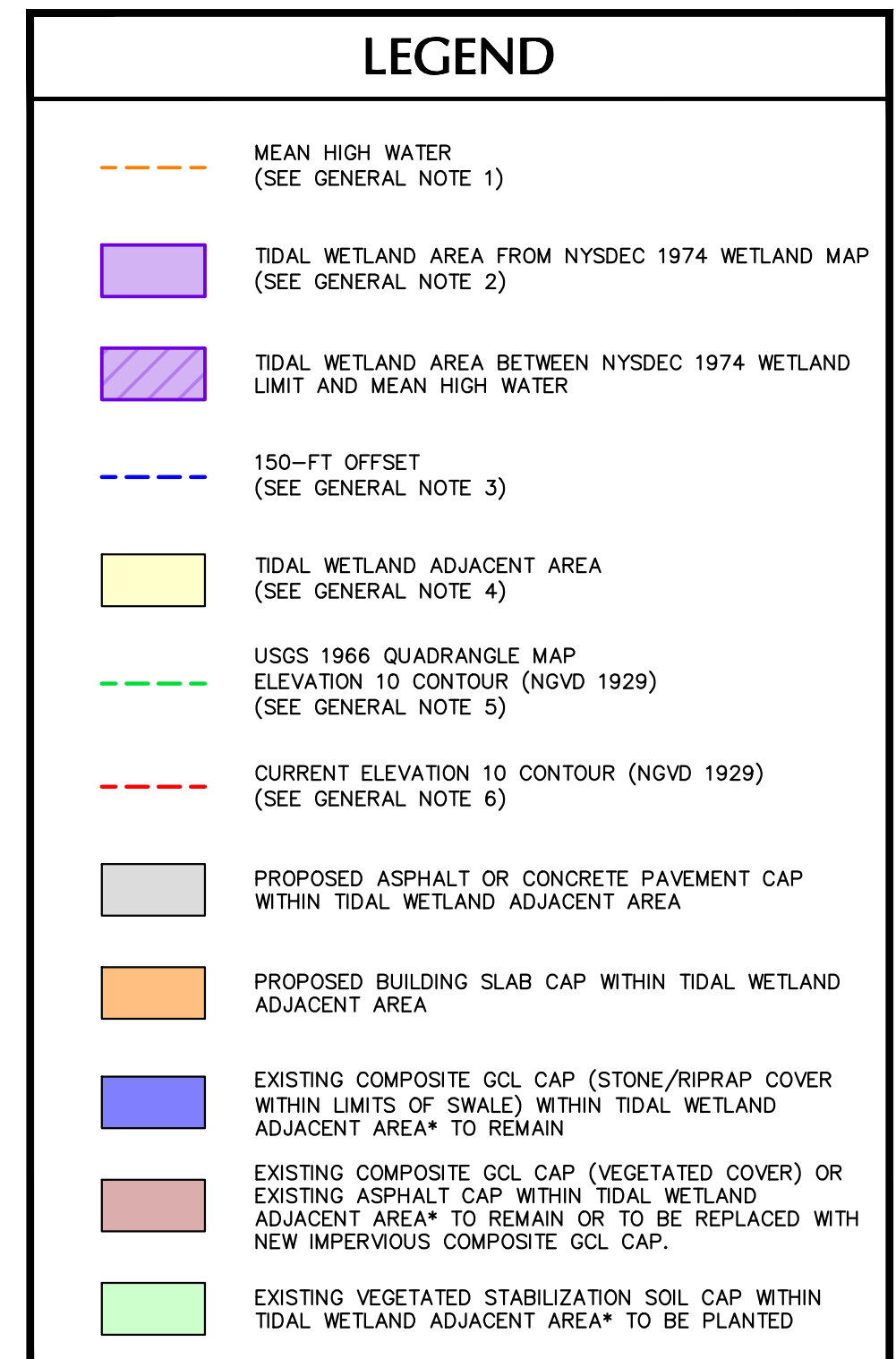
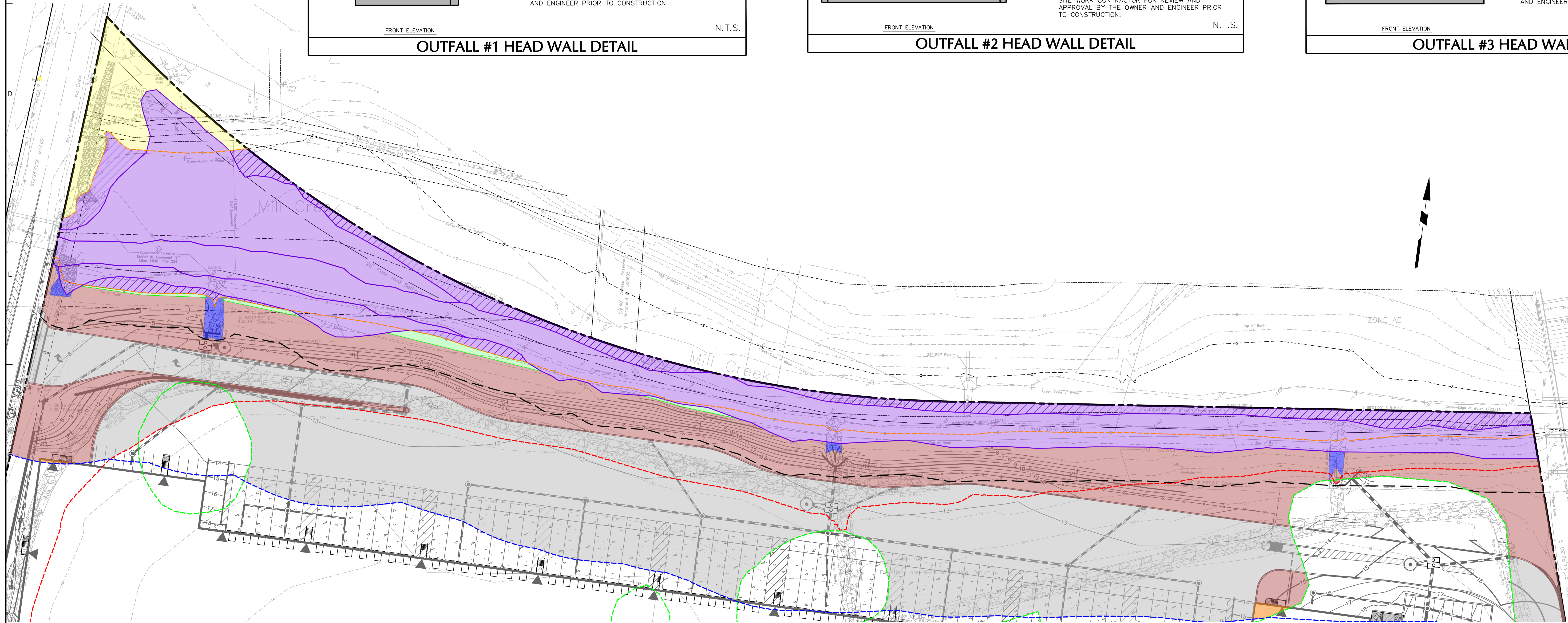
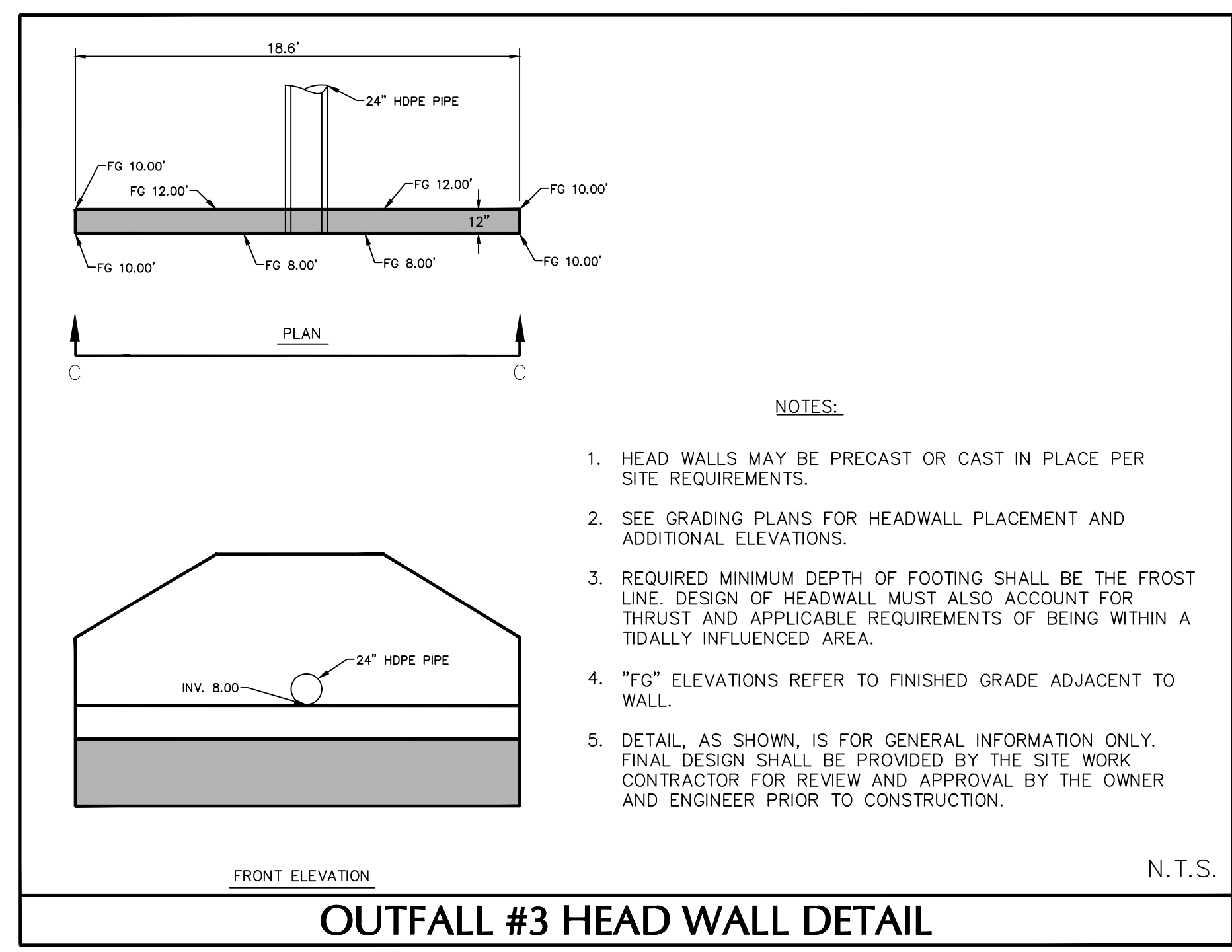
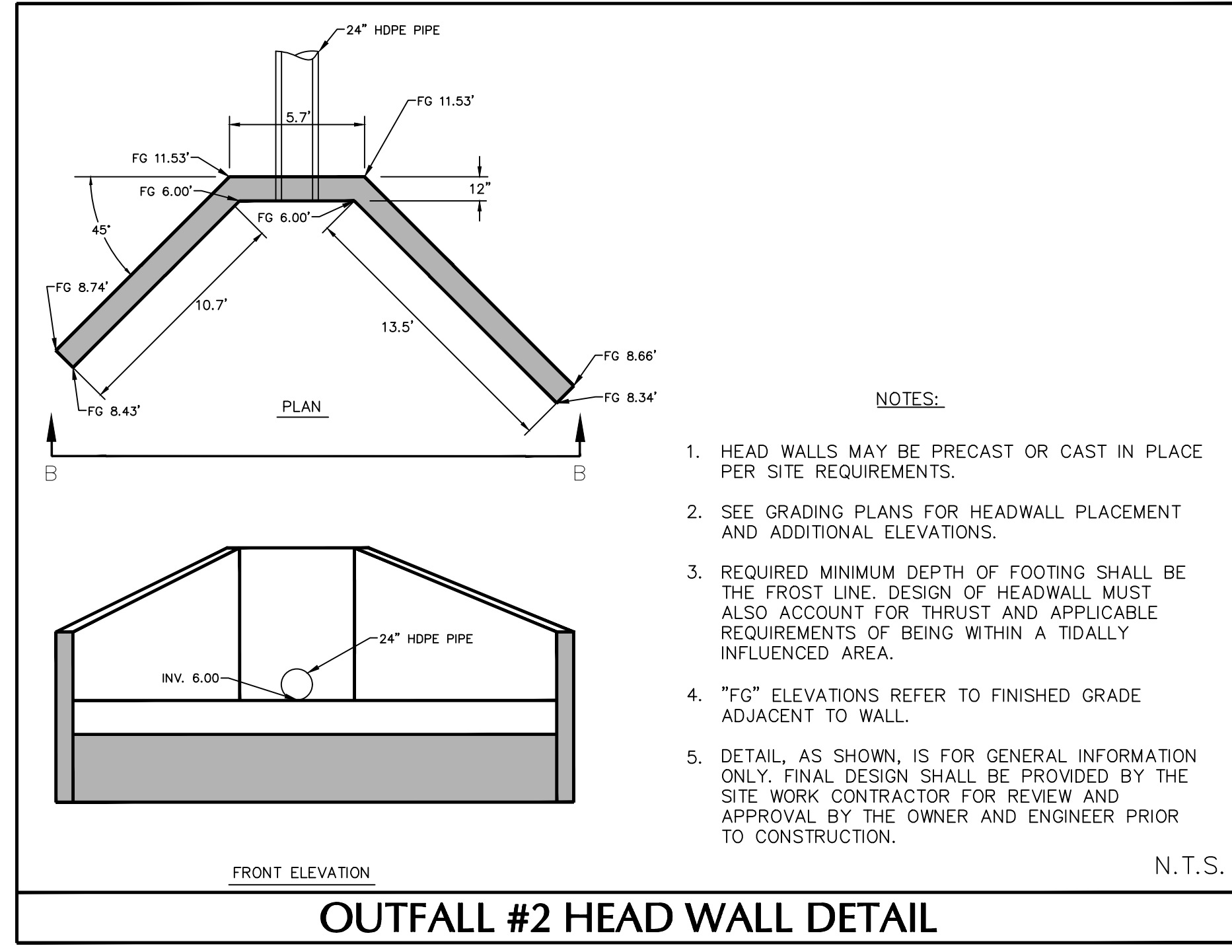
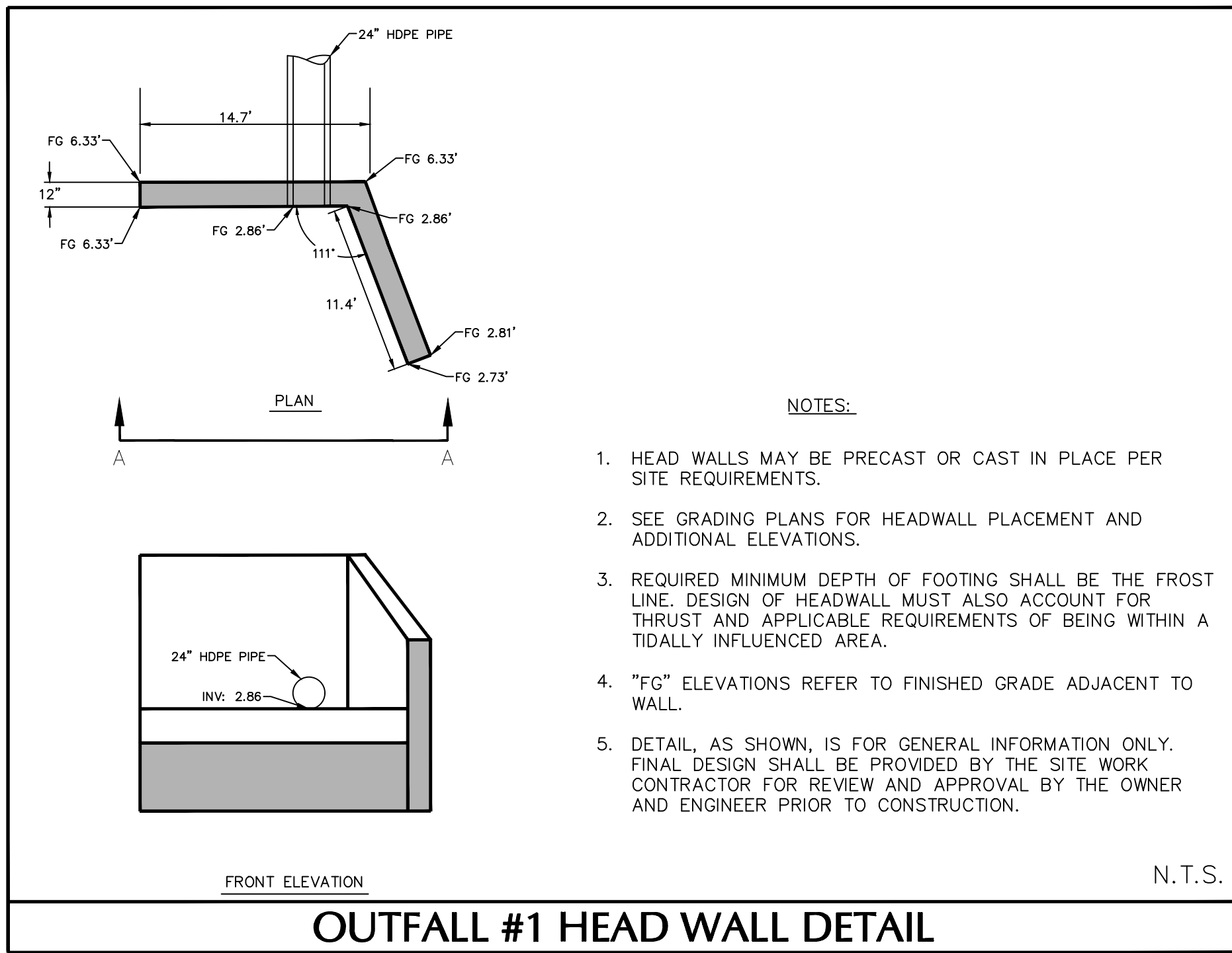
OUTFALL #1 INSET
SCALE: 1" = 20'



OUTFALL #2 INSET
SCALE: 1" = 20'



OUTFALL #3 INSET
SCALE: 1" = 20'



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12/10/21	REVISED PER NYSDEC COMMENTS	1
Date	Description	No.
Revisions		

Signature	Date
-----------	------

LANGAN
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Parsippany, NJ 07054
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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
**PROPOSED
1 NASSAU PLACE
DEVELOPMENT**
BLOCK 7971, LOT No. 125
STATEN ISLAND
RICHMOND NEW YORK

Drawing Title
**STORMWATER OUTFALL
INSETS**

Project No. 100860701	Drawing No. WN104
Date 07/23/2021	
Drawn By JM	
Checked By BMW	
	Sheet 4 of 6

Appendix D:

NYSDEC Letter

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program

625 Broadway, Fifth Floor, Albany, NY 12233-4757

P: (518) 402-8935 | F: (518) 402-8925

www.dec.ny.gov

May 27, 2021

Sarah Parks

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C
300 Kimball Drive, 4th floor
Parsippany, NJ 07054-217

Re: 1 Nassau Place

County: Richmond Town/City: New York City

Dear Sarah Parks:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 2 Office, Division of Environmental Permits, at dep.r2@dec.ny.gov.

Sincerely,



Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program



**The following state-listed animals have been documented
in the vicinity of the project site.**

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed.

For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 2 Office at dep.r2@dec.ny.gov, (718) 482-4997.

The following species has been documented within 1/2 mile of the project site.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	FEDERAL LISTING
Birds			
Peregrine Falcon <i>Breeding</i>	<i>Falco peregrinus</i>	Endangered	1592

The following species has been documented within one mile of the project site.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	FEDERAL LISTING
Birds			
Bald Eagle <i>Breeding</i>	<i>Haliaeetus leucocephalus</i>	Threatened	15980

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.



The following rare plants, rare animals, and significant natural communities have been documented at the project site, or in its vicinity.

We recommend that potential impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQRA. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following plants are listed as Endangered or Threatened by New York State, and/or are rare in New York State, and so are a vulnerable natural resource of conservation concern.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
Vascular Plants			
Swamp Marsh Pennywort	<i>Hydrocotyle ranunculoides</i>	Endangered	Critically Imperiled in NYS
Documented within 1/4 mile southeast of the project site. 2019-06-14: This is a wetland opening between Phragmites where the stream flows across the road to the north.			
			16716
Willow Oak	<i>Quercus phellos</i>	Endangered	Critically Imperiled in NYS
Documented within 1/2 mile east of the project site. 1995-03-22: Floodplain forest and woods along slopes to a creek.			
			10046

The following natural community is considered significant from a statewide perspective by the NY Natural Heritage Program. By meeting specific, documented criteria, the NY Natural Heritage Program considers this community occurrence to have high ecological and conservation value.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
Upland/Terrestrial Communities			
Coastal Oak-Beech Forest			High Quality Occurrence of Uncommon Community Type
Documented within 1/2 mile southeast of the project site. This is a small forest with moderate disturbance and areas of maturing to mature forest. Low percentage of exotic species. In a landscape of predominantly cleared open space, development, and remnant forests and wetlands.			
			7758

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at <http://plants.usda.gov/index.html> (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org. For descriptions of all community types, go to www.dec.ny.gov/animals/97703.html for Ecological Communities of New York State.