ENVIRONMENTAL ASSESSMENT FORM (EAF)

&

DRAFT ENVIRONMENTAL IMPACT STATEMENT

for the

Proposed PS 70

45 Waverly Place/357 Targee Street
Staten Island, New York

March 30, 2018

Lead Agency:
New York City School Construction Authority
30-30 Thomson Avenue
Long Island City, NY 11101

Prepared by:
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New York City School Construction Authority
30-30 Thomson Avenue
Long Island City, NY 11101

Telephone: (718) 472-8204

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Proposed PS 70, Staten Island		
Project Location (describe, and attach a general location map): 45 Waverly Place/357 Targee Street, Staten Island, NY 10304 (Richmond County)		
Brief Description of Proposed Action (include purpose or need): On behalf of the New York City Department of Education (DOE), the New York City School Construction Authority (SCA) proposes to create a new, approximately 748-seat primary school (PS) facility, to be known as PS 70, at 45 Waverly Place/357 Targee Street on Staten Island. Construction of the new PS has been proposed to provide additional public school capacity in Community School District (CSD) No. 31. The project site (Block 635, Lot 1) is located within a C8-1 commercial zoning district, in which schools are not permitted as-of-right. The project site, owned by the City of New York, contains approximately 51,552 square feet. A vacant warehouse building (former Peter Wiederer Mirror Factory) is situated on the western portion of the project site; this warehouse has been determined eligible for listing in the National Register of Historic Places by the New York State Office of Parks, Recreation and Historic Preservation. The proposed action would entail the demolition of the existing warehouse and construction of a new PS facility in its place. As contemplated, the proposed new school facility would be a structure of three to four stories, plus a partial cellar, and would contain approximately 96,307 gross square feet. As part of the proposed action, an outdoor play area would be developed on the northeastern portion of the project site. The proposed PS would provide approximately 748 seats for grade levels pre-kindergarten through five. It is expected that the new PS would open in September 2022.		
Name of Applicant/Sponsor: New York City School Construction Authority	Telephone: (718) 472-8000 E-Mail:	
Address: 30-30 Thomson Avenue		
City/PO: Long Island City	State: New York	Zip Code: 11101-3045
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): City of New York c/o New York City Department of Education	Telephone: E-Mail:	
Address: 52 Chambers Street		
City/PO: New York	State: NY	Zip Code: 10007

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Construction costs will be funded by DOE's Five-Year Capital Plan (FY 2015-2019); zoning overrides requested from the Deputy Mayor for Housing and Economic Development	
e. County agencies ☐Yes ☑No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☐Yes ☑No		
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
C8-1 commercial

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? 31

b. What police or other public protection forces serve the project site?
NYPD 120th Police Precinct

c. Which fire protection and emergency medical services serve the project site?
FDNY Engine Company 153; Ladder Company 77; EMS Station - Willowbrook

d. What parks serve the project site?
Bedford Green (located directly across the street from and southwest of the project site); Sobel Court Park (located 0.2 miles to the south); Eibs Pond Park (located 0.6 miles to the southeast); Stapleton Playground (located 0.7 miles to the northeast); and Tappen Park (located 0.9 miles to the northeast).

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? institutional (primary school facility)

b. a. Total acreage of the site of the proposed action? 1.18 acres
b. Total acreage to be physically disturbed? 1.18 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.18 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 2
- Anticipated commencement date of phase 1 (including demolition) Summer month 2018 year
- Anticipated completion date of final phase Summer month 2021 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: 80 height; 160 width; and 217 length

iii. Approximate extent of building space to be heated or cooled: 96,307 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☑ Yes ☐ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

If Yes:

i .What is the purpose of the excavation or dredging? Excavation for grading and building foundations

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): TBD
- Over what duration of time? 6 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

Excavated soil

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☑ No
If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? TBD acres

vi. What is the maximum area to be worked at any one time? TBD acres

vii. What would be the maximum depth of excavation or dredging? TBD feet

viii. Will the excavation require blasting? ☐ Yes ☑ No

ix. Summarize site reclamation goals and plan: _____

TBD

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No
If Yes, describe:

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑ Yes ☐ No
If Yes:

i. Total anticipated water usage/demand per day: 24,602 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No
If Yes:

- Name of district or service area: Community District 1 (Staten Island)
- Does the existing public water supply have capacity to serve the proposal? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No
- Do existing lines serve the project site? ☑ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☑ No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑ No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:
N/A

vi. If water supply will be from wells (public or private), maximum pumping capacity: N/A gallons/minute.

d. Will the proposed action generate liquid wastes? ☑ Yes ☐ No
If Yes:

i. Total anticipated liquid waste generation per day: 8,230 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No
If Yes:

- Name of wastewater treatment plant to be used: Port Richmond Wastewater Treatment Plant (WWTP)
- Name of district: Community District 1 (Staten Island)
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

N/A

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

N/A

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐ Yes ☑ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☐ No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑ Yes ☐ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Delivery vehicles

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

Power generators and other diesel powered construction equipment

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

Heating and hot water systems would use natural gas and the rooftop exhaust units would be greater in height than any building in the immediate area.

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

_____

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No N/A

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7 AM - 5 PM
- Saturday: N/A
- Sunday: N/A
- Holidays: N/A

ii. During Operations:

- Monday - Friday: 8 AM - 3 PM
- Saturday: N/A
- Sunday: N/A
- Holidays: N/A

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

The majority of construction activities would take place Monday through Friday, although certain activities could occur on weekend days. Hours of construction are regulated by the NYC Department of Buildings. Much of the proposed project's construction would occur within the project site.

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n.. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

TBD

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No N/A

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

N/A _____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☑ Commercial ☑ Residential (~~suburban~~) ☐ Rural (non-farm)

☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): light industrial/warehouse; open space

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	1.18	1.18	0
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Stapleton Neighborhood Senior Center - 189 Gordon Street; IS 49 (Bertha A. Dreyfus) - 101 Warren Street; Bumblebees Day Care Center - 443 Targee Street; and Staten Island Mental Health Society Osgood Avenue Head Start Program - 16 Osgood Avenue

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? unknown feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: Urban Land 100 %

d. What is the average depth to the water table on the project site? Average: 8 (bgs) feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100 year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500 year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:
None

n. Does the project site contain a designated significant natural community? ☑ Yes ☐ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation):
Upland/Terrestrial Communities (Serpentine Barrens); this community type is rare and considered significant by the NY Natural Heritage Program.

ii. Source(s) of description or evaluation: New York State Department of Environmental Conservation (see Supplemental Environmental Studies)

iii. Extent of community/habitat:

- Currently: 3.0 acres
- Following completion of project as proposed: 3.0 acres
- Gain or loss (indicate + or -): 0 acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

Vascular Plants (Green Milkweed) - listed as Threatened by New York State

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site?

ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name:

ii. Basis for designation:

iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Peter Wiederer Mirror Factory

iii. Brief description of attributes on which listing is based:

It is an intact and surviving example of a late 19th century industrial building on Staten Island.

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Sarah L. Butler, AICP Date March 30, 2018

Signature Sarah L. Butler Title Associate, STV Incorporated

PRINT FORM

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☑	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		□	□

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	□	□
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	□	□
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	□	□
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	□	□
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	□	□
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	□	□
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	□	□
h. Other impacts: _____ _____		□	□

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	□	□
b. The proposed action may result in development within a 100 year floodplain.	E2j	□	□
c. The proposed action may result in development within a 500 year floodplain.	E2k	□	□
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	□	□
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	□	□
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	□	□

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D,2,h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	□	□
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	□	□
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	□	□
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	□	□
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	□	□
j. Other impacts: _____ _____		□	□

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☐ NO ☑ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☐	☑
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☑	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☑	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☑
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☑	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☑	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Agency Use Only [IfApplicable]

Project :

Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the New York City School Construction Authority as lead agency that:

☐ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

☑ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Proposed PS 70, Staten Island

Name of Lead Agency: New York City School Construction Authority

Name of Responsible Officer in Lead Agency: Kelly Murphy, AICP

Title of Responsible Officer: Director, Real Estate Services

Signature of Responsible Officer in Lead Agency: Kelly Murphy Date: 3/30/2018

Signature of Preparer (if different from Responsible Officer) Sarah L. Butler Date: 3/30/2018

For Further Information:

Contact Person: Kelly Murphy, AICP

Address: 30-30 Thomson Avenue, Long Island City, New York 11101-3045

Telephone Number: (718) 472-8000

E-mail:

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

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DRAFT
ENVIRONMENTAL IMPACT STATEMENT

for the

Proposed PS 70

45 Waverly Place/357 Targee Street
Staten Island, New York

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Proposed PS 70
45 Waverly Place/357 Targee Street
Staten Island, New York

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Executive Summary

Introduction

On behalf of the New York City Department of Education (DOE), the New York City School Construction Authority (SCA) proposes to create a new, approximately 748-seat primary school (PS) facility, currently known as PS 70, at 45 Waverly Place/357 Targee Street on Staten Island. The proposed new school would serve students in grade levels pre-kindergarten through five within Community School District (CSD) No. 31.

The project site (Block 635, Lot 1) is owned by the City of New York and contains approximately 1.18 acres (51,552 square feet). The project site is an entire block bounded by Osgood Avenue to the north, Waverly Place to the south, Wiederer Place to the east, and Targee Street to the west. The project site is located within a C8-1 commercial zoning district, in which schools are not permitted as-of-right; however, the area surrounding the project site is located within a R3A residential zoning district where schools are permitted as-of-right.

A vacant, approximately 19,400 sf, three-story warehouse building (the former Peter Wiederer Mirror factory) is situated on the western portion of the project site, and is surrounded by an asphalt and gravel parking lot. This existing warehouse building, which was constructed in 1886, has been determined eligible for inclusion in the State and National Registers of Historic Places by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP).

The proposed action would entail the demolition of the existing warehouse on the project site, and the construction of a new public school facility in its place. As contemplated, the proposed new school facility would be a structure of three to four stories, plus a partial cellar, and would contain approximately 96,307 gross square feet (gsf). The proposed school would be built on both the southern and western portions of the project site with frontage on both Waverly Place and Targee Street. The school's main entrance would be located on Waverly Place. An approximately 18,321 square foot (sf) main play yard and an approximately 2,730 sf early childhood play yard would be provided on the remaining (northeastern) portion of the project site, adjacent to both Osgood Avenue and Wiederer Place. The proposed play yard space would also serve as an area for the congregation of children and parents during school arrival and dismissal times.

The design program for the proposed school facility includes classrooms for grade levels pre-kindergarten through five, special education classrooms, lobby area, kitchen, cafeteria, exercise room, administrative office suite, staff lunch room, gymatorium (gymnasium/auditorium), multi-purpose room, physical therapy room, speech therapy room, medical suite, library, art

room, reading resource room, staff workroom, science resource room, music room, office space, and storage.

Funding for design and construction of the proposed school facility would be provided by DOE's Proposed Five-Year Capital Plan for Fiscal years 2015-2019. It is expected that the new PS would open in September 2022.

The new public school facility would serve primary school students and special education students within CSD No. 31. It is estimated that approximately 75 teachers and staff would be employed at the new school facility. Construction of the new approximately 748-seat PS 70 has been proposed to provide additional public school capacity in CSD No. 31 in order to address existing overcrowding and forecast changes in student enrollments, and also to support DOE's policies regarding class-size reduction, transition from the use of transportable classroom units (TCUs), and the expansion of pre-kindergarten classroom capacity in the City.

This report examines the environmental effects expected to result from the construction and operations of the new PS 70. The following summarizes the expected impacts and their significance.

Probable Impacts of the Proposed Project

A. Land Use, Zoning and Public Policy

LAND USE

The proposed project would entail the demolition of the vacant three-story warehouse building on the project site. After the site is cleared for construction, the proposed school building, which would be a structure of three to four stories, plus a partial cellar, would be built on both the southern and western portions of the project site. The new school would contain approximately 96,307 gsf, with its main entrance on Waverly Place. The project would also develop an approximately 18,321 sf main play yard and an approximately 2,730 sf early childhood play yard on the northeastern portion of the project site, adjacent to both Osgood Avenue and Wiederer Place. The new school facility would provide space for approximately 748 primary school students.

The proposed school would be consistent with surrounding uses in the study area, which are comprised of a mix of residential, institutional, open space, light industrial/warehouse, commercial, mixed uses, and vacant lots. The proposed project would replace a vacant warehouse building with a compatible community facility use. It would be a different building form and active, rather than vacant, but the new school would be compatible with surrounding land uses. No significant adverse impacts to land use would result from the proposed PS 70.

ZONING AND PUBLIC POLICY

The project site is located within a C8-1 district, in which schools are not permitted as-of-right; however, the area surrounding the project site is located within a R3A residential zoning district where schools are permitted as-of-right. The proposed project would not conform to the use

regulations of the site's C8-1 zoning designation. Therefore, it is expected that the SCA would request zoning overrides from the Deputy Mayor for Housing and Economic Development to allow the proposed use (community facility) and for non-compliance with the FAR, maximum heights and required setbacks, and off-street parking spaces. As the zoning overrides would pertain only to the proposed project, no significant adverse impacts to zoning and public policy would occur.

B. Socioeconomic Conditions

The proposed school would replace an existing, vacant warehouse building in a commercial district. The proposed project would introduce approximately 748 primary school students and a total of approximately 75 teachers, administrators, and support staff to the project site. The proposed PS would not result in the displacement of any residents or businesses, as the existing building is currently unoccupied. Additional jobs for teachers and support staff would be created as a result of the new school.

Although the proposed project would result in new construction, the construction activities would be generally contained within the site. In addition, the construction of the new school building would be a localized activity of limited duration, without the potential to affect a larger area or the conditions of any specific industry. Significant adverse impacts to socioeconomic conditions from the proposed project would not result.

C. Community Facilities and Services

The proposed action would create a new public school facility on a site currently developed with a vacant warehouse building. The proposed PS would serve approximately 748 students in grades pre-kindergarten through five within CSD No. 31. The proposed project would not introduce new residents to the area, therefore creating little new demand for community facilities and services.

Further, the proposed new school facility would provide an additional community resource for area residents and expand the public school capacity in CSD No. 31; however, the new PS would not change the service area of this school district. No significant adverse impacts to community facilities and services would occur as a result of the proposed project.

D. Open Space

The construction of a new school facility on the project site would not have any direct or indirect impacts on open space. The need for physical education at the school would be met within the project site itself with the provision of a gymatorium and exercise room within the proposed school building and two outdoor play yards on the northeastern portion of the project site, including an approximately 18,321 sf main play yard and an approximately 2,730 sf early childhood play yard. Therefore, the open space needs of the students and staff associated with the proposed PS 70 would be met on site, and the new school facility would not result in any significant adverse impacts to open space resources.

E. Shadows

The proposed project would result in a new school building of three to four stories, which would be over 50 feet in height. Therefore, a screening for shadow impacts has been performed. With an estimated height of approximately 80 feet, the proposed school building's maximum shadow would extend approximately 344 feet.

Following both Tier 1 and Tier 2 screenings for shadows, performed in the manner prescribed by the *CEQR Technical Manual*, it has been determined that the only potentially sunlight-sensitive resource within 344 feet of the proposed school building is Bedford Green, which is located directly southwest of the project site.

Given that the proposed school building would be located on both the southern and western portions of the project site, the longest shadow cast by early morning sun would extend across the middle and southern portions of Bedford Green.

A detailed analysis has been performed to assess the incremental shadow that would be attributable to the proposed school building, specifically, which would be built upon demolition of the existing structure on site. Further, the detailed analysis allows for a clearer understanding of seasons and time of day that shadowing would be present on this resource. The June and August shadows would, in their maximum extent, reach the middle and southern portions of Bedford Green where there is grass and mature trees. This shadow would be an incremental shadow that is attributable to the proposed school building, and that would not be present in the future without the project. The maximum shadow would occur at 5:57 AM on June 21st and 6:27 AM on August 6th. These early morning shadows, however, would not be expected to result in substantially decreased sunlight on this portion of Bedford Green, particularly as ample direct sunlight would be available for most of the day throughout the entire year to support the growth of grass and trees, as well as to support the public use and enjoyment of this passive recreation space.

Therefore, while incremental shadow attributable to the proposed school building would reach a nearby park, the shadow would not result in significant adverse impacts.

F. Historic and Cultural Resources

ARCHAEOLOGICAL RESOURCES

A Preliminary Assessment/Disturbance Record study was completed for the proposed project site to address the archaeological sensitivity of the project site. It was determined that no further research and study of archaeological resources is warranted, based on a low sensitivity for both precontact and historical period archaeological resources, coupled with significant disturbance to the original ground surface on the project site. Construction of the proposed new school facility on the project site would not result in significant adverse impacts to archaeological resources.

HISTORICAL RESOURCES

The existing warehouse building on the project was constructed in 1886 and has been determined eligible for inclusion in the State and National Registers of Historic Places by the New York State

Office of Parks, Recreation and Historic Preservation (OPRHP). The former Peter Wiederer Mirror Factory is an intact and surviving example of a late nineteenth century industrial building on Staten Island. It is noted as important in the areas of manufacturing/technology as well as social/ethnic history for its association with German immigrant families and workers. The structure, comprised of three connected masonry buildings, is severely deteriorated due to age, long term lack of maintenance, water infiltration, and fire damage.

The proposed project would require that the existing on-site warehouse building be demolished to accommodate the DOE's Program of Requirements (POR) for a new, modern primary school. As such, under Section 14.09 of the State Historic Preservation Act of 1980 (SHPA), this is likely to result in an adverse effect to the historic resource, and may constitute a significant adverse impact to historic resources. As required under Section 14.09, consultation with OPRHP was undertaken by the SCA as part of the proposed development of a new public school facility on the project site. OPRHP commented in its letter of January 2, 2018, that based on their review of the SCA's Structural Condition Assessment Report (July 28, 2017), which outlined the conditions of the warehouse building on the project site, they concurred with the SCA's determination that there are no prudent and feasible alternatives to demolition of the historic building (OPRHP Project Review Number 16PR08451). As described in the Structural Condition Assessment Report, the age of the building, long term lack of maintenance, water intrusion, and fire damage have diminished the original building's stability and structural capacity. Therefore, for safety reasons, the existing warehouse building cannot be used as an educational facility, nor can it be incorporated into an educational facility. Upon OPRHP's recommendation, the SCA has developed and signed a Letter of Resolution (LOR) which outlines the agreement between the SCA and OPRHP and identifies proper mitigation measures to be incorporated into the work. Mitigation measures include documentation, salvage of certain building components and continued consultation with OPRHP as the new building is designed. In the LOR between the SCA and OPRHP, it is stated that the proposed project may proceed subject to the following stipulations:

(1) Consultation with OPRHP on the design of the new school;

(2) Historic Documentation: The building located at 357 Targee Street, Staten Island (Richmond County), NY shall be photographically documented including the following views:

- All elevations;
- Overall and select detail views providing an accurate visual representation of the property and its significant features;
- OPRHP shall be provided with one copy of the documentation that shall be for archival storage in the New York State Archives. A second copy of the documentation shall also be provided to Historic Richmond Town (Staten Island Historic Society) or the local history division of the Staten Island Public Library. The documentation shall be provided to OPRHP in photocopy and digital formats for retention in the OPRHP files. The documentation shall be submitted to OPRHP prior to any demolition activities by the SCA;

(3) The SCA's design will incorporate certain preserved elements from the existing building in order to preserve some of its history. Approximately thirty square feet of

interior tin ceiling and twenty (20) structural decorative metal stars have been identified for incorporation into the design of the new school facility; and that the SCA will consult with OPRHP on the incorporation of these elements into the new school design.

G. Urban Design and Visual Resources

The proposed development of the project site as a new school, in accordance with the design currently considered and the stipulations outlined in the Letter of Resolution (LOR) between the SCA and OPRHP, would improve the urban design of the study area and visual quality of the surrounding streetscapes. Therefore, the proposed PS 70 would have a positive effect with regard to the proposed design for the project site; no significant adverse impact to urban design and visual quality would result with the proposed project.

H. Natural Resources

There are no known natural resources (e.g., terrestrial ecological features, wetlands, water bodies, streams, or special flood hazard area) on or adjacent to the project site, and none would be affected by the proposed project. The site is part of a well-developed urban context. Furthermore, the proposed project would not have any impact on endangered or threatened wildlife species, since none are known to inhabit or visit the site.

A letter, dated November 4, 2016, was received from the New York State Department of Environmental Conservation (NYSDEC), Division of Fish, Wildlife & Marine Resources, stating that threatened vascular plants (Green Milkweed) and a significant natural community (Upland/Terrestrial Communities - Serpentine Barrens) from the New York Natural Heritage Program database have been documented within approximately 0.5 miles of the project site. The letter further states that given the nature of the proposed work and of the land use between the project site and the locations of the rare plants and significant natural community, they do not have any concerns regarding potential impacts from the project on the rare plants or significant natural community. No significant adverse impacts to natural resources would result.

I. Hazardous Materials

A Phase I Environmental Site Assessment (ESA) and a Phase II Environmental Site Investigation (ESI) were completed for the proposed project site between April 2015 and August 2016. The Phase I ESA and Phase II ESI were completed to evaluate the environmental conditions of the site.

The Phase I ESA, prepared in April 2015, identified the following on-site recognized environmental conditions (RECs) associated with the site: the potential presence of fill material from demolition of structures; evidence of soil borings advanced on the site by others; the historic use of the site for manufacturing including silvering and varnishing, as a foundry, and as a laundry; the historic use of coal and oil for heating system fuels; and the potential presence of an on-site underground storage tank (UST). Identified off-site RECs with the potential to impact the site included: the historic use of nearby properties as a hat factory, for manufacturing, for woodworking, for automobile repair, for television repair, as a paint store and as a laundry; and, an adjacent upgradient property listed in regulatory agency databases for hazardous waste

generation and historic auto repair. In addition, environmental concerns include potential asbestos-containing materials (ACM), lead-based paint (LBP) and polychlorinated biphenyl (PCB)-containing materials in existing and buried structures, and methane from historic landfilling near the site.

Additionally, a Phase II ESI that was completed in May 2015. The Phase II ESI consisted of a geophysical survey, inspection of interior floor drains, the advancement of soil borings, one temporary well point, and the collection and laboratory analysis of soil, groundwater, and sub-slab vapor and soil vapor samples. The results of the geophysical survey identified anomalies indicative of USTs. Based on review of the sub-slab vapor and soil vapor sampling results, several petroleum-related volatile organic compounds (VOCs) were detected at concentrations exceeding New York State Department of Health (NYSDOH) published background concentrations. Several metals and pesticides were detected in soil at concentrations above New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives (SCOs). Additionally, the VOCs tetrachloroethene (PCE), acetone, and xylenes were detected in the soil sample collected from one floor drain at elevated concentrations, significantly exceeding Unrestricted Use SCOs. VOCs were not detected in the groundwater sample above NYSDEC Class GA Values.

Phase II ESI field activities were performed between April 25 and June 19, 2016 and consisted of geophysical surveys; inspection of two floor drains, truck scale manhole covers, and an underground structure; the advancement of soil borings; installation of temporary soil vapor probes, and temporary groundwater monitoring wells; and the collection and laboratory analysis of a water sample from the underground structure and ambient air, soil vapor, soil, and groundwater samples. The results of the Phase II ESI indicated one VOC, PCE, detected in soil vapor and sub-slab vapor at concentrations exceeding the NYSDOH Air Guideline Value and may be attributed to historic site operations. One VOC (xylene), metals and one pesticide (4,4'-DDT) were detected in soil samples at concentrations above unrestricted use criteria and are attributed to naturally occurring constituents, the characteristics of site soil and/or historic on-site activities/operations. One VOC (chloroform), semivolatile organic compounds, and two metals (in a filtered sample) were detected at concentrations marginally above comparison criteria in groundwater, and may be attributed to historic site operations, historic off-site operations, and/or the characteristics of site soil. The geophysical surveys identified an UST area south of the site building which may contain two USTs, three anomalies in the site building and an underground structure.

For the site to be suitable for construction of a public school, a vapor barrier and sub-slab depressurization system will be incorporated into the foundation design. The USTs and underground structures will be cleaned and removed and confirmatory endpoint samples will be collected. Excavated soil will be characterized to identify material handling, reuse, and/or disposal requirements; and, two feet of environmentally clean fill will be placed over all landscaped areas. Any dewatering necessary during construction activities will be performed in accordance with applicable local, State, and Federal regulations. Suspect asbestos-containing material (ACM), lead-based paint (LBP), and/or polychlorinated biphenyl- (PCB-) containing building materials, including buried structures, affected by site development, will be properly managed. In addition, to minimize any potential for exposure by construction workers and the surrounding public, standard industry practices, including appropriate health and safety

measures, will be utilized. With the implementation of these measures, there would be no significant potential for significant adverse effects related to hazardous materials.

J. Water and Sewer Infrastructure

The project site is located within the Port Richmond Wastewater Treatment Plant (WWTP) drainage area, which serves the northern portion of Staten Island. This WWTP is permitted to treat 60 million gallons per day (mgd). The proposed school would include approximately 748 seats and 75 faculty and staff, and thus, daily water usage would be approximately 7,480 gpd for students and 750 gpd for staff, for a total of 8,230 gpd. The proposed school building would contain approximately 96,307 gsf, and thus, would consume an additional 16,372 gpd for air conditioning, for a total of 24,602 gpd during the cooling season. No significant adverse impacts to water supply would result.

K. Solid Waste and Sanitation Services

The new school facility, with a total of approximately 748 students and 75 faculty and staff, would generate approximately 3,219 pounds of solid waste per week, or 13,796 pounds per month. The New York City Department of Sanitation (DSNY) is responsible for collecting and disposing of solid waste from residences and public facilities, including schools. The typical DSNY collection truck for commercial carters typically carries between twelve and fifteen tons of waste material per truck. Therefore, with 3,219 pounds of solid waste per week, or 13,796 pounds per month, to be generated by occupants of the proposed school facility, there would be no significant adverse impact anticipated with solid waste collection and disposal.

L. Energy

It is expected that the new school building would be substantially more energy efficient than the adjacent buildings in the neighborhood. The proposed project would comply with the New York State Energy Conservation Construction Code. The proposed project would also incorporate energy conservation measures.

The proposed project would be designed following the NYC Green Schools Rating System (guidelines specific to the design, construction and operation of New York City public school buildings) and be in compliance with site-related credits to achieve a LEED-certified or higher rating.

The estimated annual usage of energy for the proposed approximately 96,307 gsf school facility would be approximately 24.1 billion British Thermal Units (BTUs), or 18.1 billion BTUs for the nine-month academic year. It is expected that no significant adverse impacts would occur with the capacity of both Con Edison and National Grid to provide service to the project site and surrounding area.

M. Transportation

With the proposed project, significant adverse traffic impacts would be expected at two signalized intersections. Mitigation measures are recommended to mitigate the significant traffic impacts at the intersections of Vanderbilt Avenue at Osgood Avenue and at Targee Street. These mitigation measures include signal timing adjustments and "daylighting" (i.e., temporary removal of parking adjacent to the curbs).

The east and westbound Waverly Place approaches at Targee Street are expected to deteriorate to Level of Service (LOS) E and F conditions in the AM and PM peak hours. This would not be considered a significant traffic impact as the traffic volumes on east and westbound Waverly Place (minor street approaches) do not exceed the 90 Passenger Car Equivalents (PCEs) threshold during the peak hours. However, given that this unsignalized intersection is projected to operate at a poor level of service and is close to the proposed main entrance of the new school, the SCA will coordinate with the New York City Department of Transportation (NYCDOT) to monitor traffic and safety operations at this intersection to determine if any operational and/or safety improvements are needed.

No pedestrian impacts would be expected. The proposed school is projected to generate approximately 1,240 pedestrian trips during the peak hours. Analysis of the pedestrian elements adjacent to the proposed school site that would process the highest school-generated volumes would continue to operate at an acceptable LOS C condition or better.

No significant transit impacts would be expected. Less than 200 incremental peak hour transit trips would be generated by staff, students, and accompanying adults; therefore, the proposed school is unlikely to create a significant transit impact.

No significant parking impacts would be expected. The proposed school would increase the parking demand by 58 vehicles. The parking analysis indicates that the available capacity of on-street parking within a reasonable walking distance of the proposed school site can accommodate the proposed parking demand, with a remaining surplus of 264 spaces.

N. Air Quality

Based on the air quality screening procedures described in the *CEQR Technical Manual*, the proposed school would not result in a significant number of project-induced traffic, and therefore it would not adversely affect surrounding mobile source air quality conditions. In addition, existing stationary source emissions in the immediate vicinity of the project site would not have a detrimental effect on the health of students or staff at the proposed school nor would the school's operations result in stationary source impacts within the surrounding community.

The proposed school would be considerably smaller in size than 350,000 sf and is subsequently not considered an energy-intense source, per the guidance of the *CEQR Technical Manual*. Therefore, the proposed project would not result in a significant adverse greenhouse gas (GHG) emissions impact.

O. Noise

Mobile Source Noise. The *CEQR Technical Manual* recommends a detailed technical assessment of potential traffic-related noise impacts if a potential action would result in the doubling of existing Passenger Car Equivalent (PCE) values at any intersection during the peak traffic hour. PCEs are used to account for the different types of motor vehicles (i.e., cars, trucks, buses) and their varying levels of sound. Based on the data obtained from the traffic studies associated with this project, existing PCEs would double at Waverly Place for the proposed project; therefore, a detailed noise analysis was required for this location.

The maximum difference in noise levels between the No Build and Build noise levels on Waverly Place was less than the 5 dBA impact threshold. Therefore, according to the *CEQR Technical Manual* impact criteria described above, the proposed project would not result in any significant mobile source noise impacts. As a result, traffic-related noise impacts would not occur.

Playground Noise. As part of the proposed project, an approximately 18,321 sf main play yard and an approximately 2,730 sf early childhood play yard would be provided on the northeastern side of the project site along both Wiederer Place and Osgood Avenue. As a result, potential future school-related noise impacts at these sensitive locations along Wiederer Place and Osgood Avenue were examined.

Based on the overall playground assessment, the increase in the future project noise levels *would not* exceed the 5 dBA SCA impact criteria during the Midday period. As a result, noise impacts related to the proposed main play yard and early childhood play yard affecting any surrounding sensitive noise receptors are not anticipated.

School Interior Noise Levels. Based on the noise monitoring measurements, the maximum L_{10} noise exposure level in the project area was found to 71.5 dBA along Targee Street. This noise level includes the effect of traffic noise from local streets. Based on the CEQR noise exposure standards, the school's exterior noise exposure would be in the "Marginally Unacceptable" category. To reduce the exterior noise exposure level to the required interior noise level of 45 dBA or below, attenuation measures (e.g., double glazed windows), which are a standard feature of new facilities, would be incorporated into the new school facility's design and construction. Standard double-glazed windows are available which would result in the required attenuation value of 26.5 dBA. The walls and doors of the proposed school building would also have to attain a minimum attenuation value of 26.5 dBA. With these measures, the proposed school building would meet New York City Department of Environmental Protection (NYCDEP) interior noise level requirements, and would not experience any noise exposure impacts.

The proposed school's HVAC equipment, along with any other project-related mechanical devices, would be designed to meet the NYC Noise Code standards.

P. Public Health

No impacts related to air quality, water quality, or noise are anticipated as a result of the proposed project. Hazardous materials are anticipated to be present on site, based on the Phase I ESA and Phase II ESI prepared for the project site. However, with any such existing on-site contamination appropriately addressed through proper handling and disposal, and other measures (including

the incorporation of a vapor barrier and sub-slab depressurization system into the foundation design; the cleaning and removal of USTs and underground structures and the collection of confirmatory endpoint samples; the characterization of excavated soil to identify material handling, reuse, and/or disposal requirements; and, the placement of two feet of environmentally clean fill over all landscaped areas), no public health issues are expected with the proposed project. Therefore, the proposed project would not result in significant adverse impacts to public health.

Q. Neighborhood Character

The construction of the proposed PS 70 would be an appropriate land use, and its design would contribute to the visual quality of the area. Its height and massing would be consistent with other non-residential development in the area, including the light industrial/warehouse uses to the southwest and the existing Staten Island Mental Health Society Osgood Avenue Head Start Program facility to the west.

The proposed school would enliven the streetscape in a manner similar to the Head Start facility, and given its neighborhood-oriented function, the new school would be consistent with the residential context surrounding the project site. As stipulated in the Letter of Resolution (LOR) between the SCA and OPRHP, the SCA will consult with OPRHP on the design of the new school and the incorporation of certain preserved elements from the existing building into the design of the new facility in order to preserve some of the building's history.

Technical analyses have concluded that with the recommended improvement measures in place, the proposed school at this location would not result in significant adverse impacts related to traffic, air quality or noise conditions that would alter the character of the neighborhood.

Furthermore, the proposed new school would introduce new capacity in the school district, thereby representing an improvement to neighborhood character in terms of improved community facilities and services. As such, the proposed PS 70 would be a positive attribute to the educational opportunities in the neighborhood, as well as an improvement to the physical design and character of the project site and surrounding area. Therefore, the proposed PS 70 would have a positive effect on neighborhood character. No significant adverse impact to neighborhood character would result with the proposed project.

R. Construction-Related Impacts

The anticipated construction period for the proposed project is expected to include two phases, with Phase 1 estimated to be a period of approximately 12 months and Phase 2 estimated to be a period of approximately 27 months. Phase 1 is scheduled to begin in summer 2018 and expected to be completed in summer 2019. This phase would include demolition of the existing building, soil removal, and oil tank removal and replacement. Phase 2 of construction would start in the summer of 2019 and continue through the summer of 2021. This phase of construction would include the physical construction of the school (i.e., foundation, superstructure, mechanical installations, and interior finishing work).

Impacts that may result from construction of the proposed project include temporary traffic and parking congestion, increased noise from construction activities, fugitive dust and mobile source emissions, soil erosion and sedimentation, and disturbance of potentially hazardous materials. Construction impacts would be temporary and to the extent practicable would be limited to the proposed school site.

Construction activities may result in temporary disruptions to the surrounding community. Various measures would be implemented in order to minimize the temporary disruptions and to ensure the safety of the community during construction. Therefore, it is expected that no significant adverse impacts would occur with construction of the proposed project.

Mitigation Measures

Historic Resources

The SCA has undertaken consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) regarding the proposed project and will continue, through the design process, to identify ways of mitigating any impact. OPRHP commented in its letter of January 2, 2018, that based on their review of the SCA's Structural Condition Assessment Report (July 28, 2017), which outlined the conditions of the warehouse building on the project site, they concurred with the SCA's determination that there are no prudent and feasible alternatives to demolition of the historic building (OPRHP Project Review Number 16PR08451). Upon OPRHP's recommendation, the SCA has developed and signed a Letter of Resolution (LOR) which outlines the agreement between the SCA and OPRHP and identifies proper mitigation measures to be incorporated into the work (see Appendix B – Agency Correspondence). Mitigation measures include documentation, salvage of certain building components and continued consultation with OPRHP as the new building is designed. In the LOR between the SCA and OPRHP, it is stated that the proposed project may proceed subject to the following stipulations:

(1) Consultation with OPRHP on the design of the new school;

(2) Historic Documentation: The building located at 357 Targee Street, Staten Island (Richmond County), NY shall be photographically documented including the following views:

- All elevations;
- Overall and select detail views providing an accurate visual representation of the property and its significant features;
- OPRHP shall be provided with one copy of the documentation that shall be for archival storage in the New York State Archives. A second copy of the documentation shall also be provided to Historic Richmond Town (Staten Island Historic Society) or the local history division of the Staten Island Public Library. The documentation shall be provided to OPRHP in photocopy and digital formats for retention in the OPRHP files. The documentation shall be submitted to OPRHP prior to any demolition activities by the SCA;

(3) The SCA's design will incorporate certain preserved elements from the existing building in order to preserve some of its history. Approximately thirty square feet of interior tin ceiling and twenty (20) structural decorative metal stars have been identified for incorporation into the design of the new school facility; and that the SCA will consult with OPRHP on the incorporation of these elements into the new school design.

Transportation

With the proposed project, significant adverse traffic impacts would be expected at two intersections.

Mitigation measures are recommended to mitigate the significant traffic impacts at the signalized intersections of Vanderbilt Avenue at Osgood Avenue and at Targee Street. These mitigation measures include signal timing adjustments and "daylighting" (i.e., temporary removal of parking adjacent to the curbs).

Alternatives to the Proposed Project

No Build Alternative

Under the No Build Alternative, the SCA would not construct a new public school facility on the project site to provide additional public school capacity in CSD No. 31. Accordingly, under this alternative, the existing vacant warehouse building and surrounding asphalt and gravel parking lot would remain on the project site.

Unlike the proposed project, the No Build Alternative would not provide additional public school capacity on the project site to accommodate current and future student enrollment in CSD No. 31. Therefore, this alternative would not meet the project's purpose and need.

This alternative would not result in significant adverse impacts related to historic resources, transportation, and noise, which would occur with the proposed project (though impacts related to transportation and noise would be mitigated under the proposed project).

Chapter 1: Project Description

A. Introduction

On behalf of the New York City Department of Education (DOE), the New York City School Construction Authority (SCA) proposes to create a new, approximately 748-seat primary school (PS) facility, currently known as PS 70, at 45 Waverly Place/357 Targee Street on Staten Island. The proposed new school would serve students in grade levels pre-kindergarten through five within Community School District (CSD) No. 31.

Funding for design and construction of the proposed school facility would be provided by DOE's Five-Year Capital Plan for Fiscal Years 2015-2019. It is expected that the new public school facility would open for student occupancy in September 2022.

B. Purpose and Need

The new public school facility would serve primary school students and special education students within CSD No. 31. Construction of the new public school facility has been proposed to provide additional public school capacity in CSD No. 31.

According to school capacity and utilization data for the 2016-2017 school year, primary school facilities within CSD No. 31 collectively operated at approximately 110 percent of their target capacity. DOE's Five-Year Capital Plan for Fiscal Years 2015-2019 allocates capital funding for the creation of a total of 1,428 additional seats at the primary school level in CSD No. 31 to address existing overcrowding and forecast changes in student enrollments, and also to support DOE's policies regarding class-size reduction, transition from the use of transportable classroom units (TCUs), and the expansion of pre-kindergarten classroom capacity in the City. CSD No. 31 includes the areas of West Shore, New Dorp, and North Shore.

C. Project Site

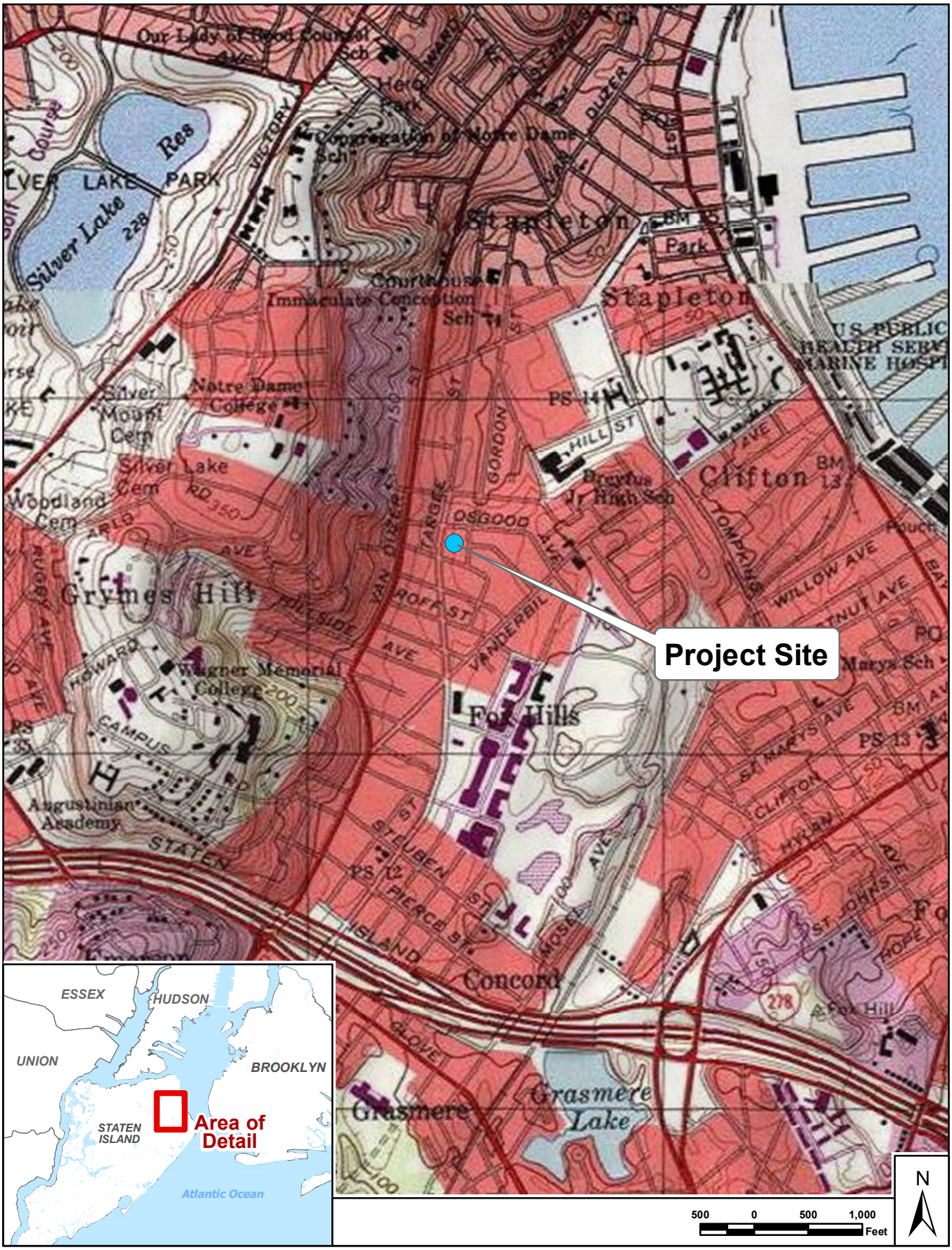
The project site is located in a predominantly low-rise residential neighborhood on Staten Island, within Community District 1 (see Figure 1-1). The project site (Block 635, Lot 1) is an entire block bounded by Osgood Avenue to the north, Waverly Place to the south, Wiederer Place to the east, and Targee Street to the west. The project site is owned by the City of New York and contains approximately 1.18 acres (51,552 square feet). The project site is located within a C8-1 commercial zoning district, in which schools are not permitted as-of-right; however, the area surrounding the project site is located within a R3A residential zoning district where schools are permitted as-of-right.

A vacant, approximately 19,400 sf, three-story warehouse building (the former Peter Wiederer Mirror Factory) is situated on the western portion of the project site, and is surrounded by an asphalt and gravel parking lot enclosed by chain-link fencing. This existing warehouse building, which was constructed in 1886, has been determined eligible for inclusion in the State and National Registers of Historic Places by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP).

D. Proposed Action

The proposed action would entail the demolition of the existing warehouse on the project site, and the construction of a new public school facility in its place. As contemplated, the proposed new school facility would be a structure of three to four stories, plus a partial cellar, and would contain approximately 96,307 gross square feet (gsf). The proposed school would be built on both the southern and western portions of the project site with frontage on both Waverly Place and Targee Street (see Figure 1-2). The school's main entrance would be located on Waverly Place. The new public school facility would provide approximately 748 seats for grade levels pre-kindergarten through five, and would include the following: classrooms for grade levels pre-kindergarten through five, special education classrooms, lobby area, kitchen, cafeteria, exercise room, administrative office suite, staff lunch room, gymatorium (gymnasium/auditorium), multi-purpose room, physical therapy room, speech therapy room, medical suite, library, art room, reading resource room, staff workroom, science resource room, music room, office space, and storage. An approximately 18,321 square foot (sf) main play yard and an approximately 2,730 sf early childhood play yard would be provided on the remaining (northeastern) portion of the project site, adjacent to both Osgood Avenue and Wiederer Place. The proposed play yard space would also serve as an area for the congregation of children and parents during school arrival and dismissal times.

It is estimated that approximately 75 teachers and staff would be employed at the new school facility. The new public school facility would operate during normal school hours, from September to June.

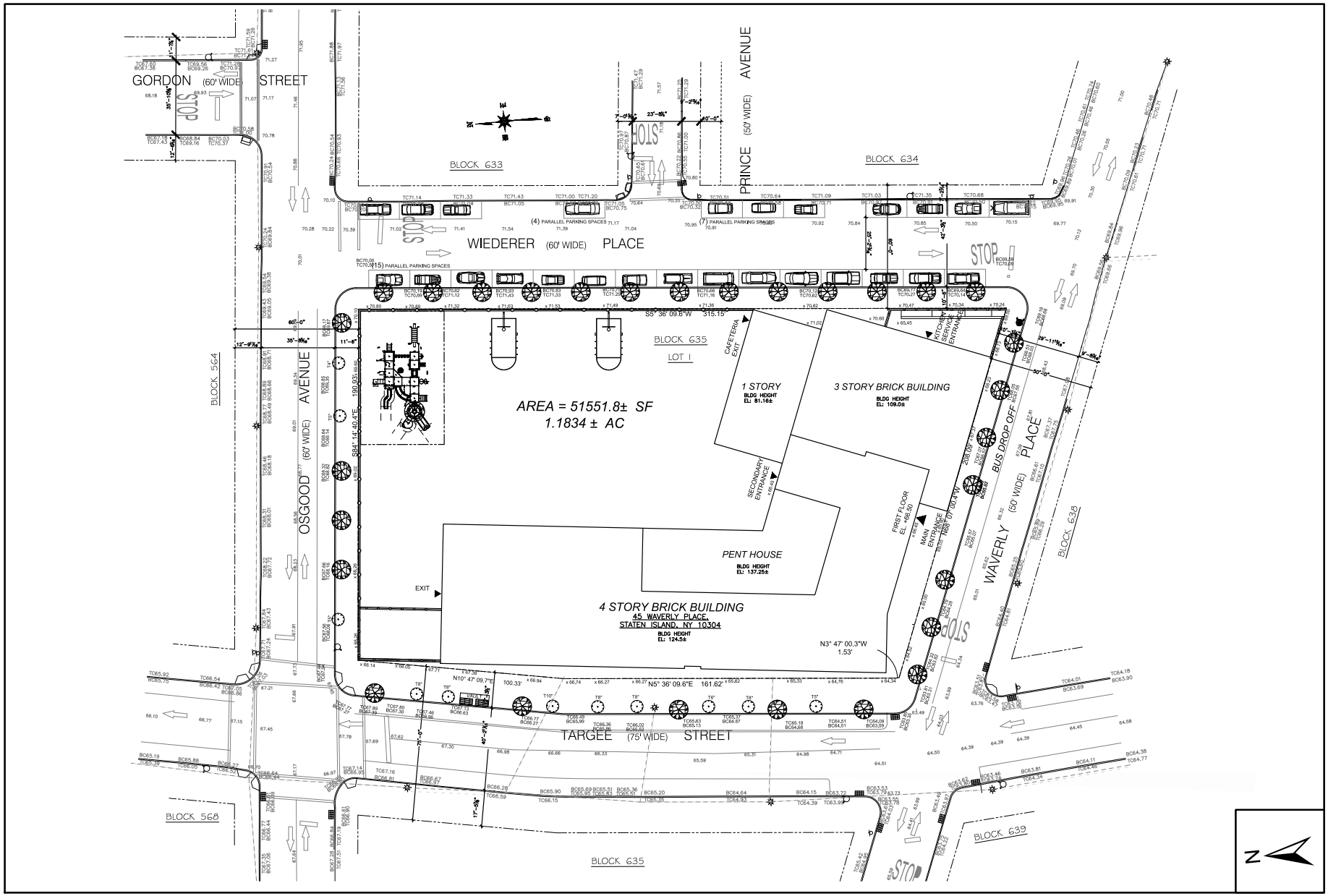


Source: USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data, 2018.

Figure 1-1

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

PROJECT LOCATION



Source: NYCSCA; STV Incorporated, 2018.

Figure 1-2

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

SITE PLAN

Chapter 2: Land Use, Zoning and Public Policy

Land use refers to the activity that is occurring on land and within the structures that occupy it. Types of uses include residential, commercial, industrial, community facilities/institutional, vacant land, and parkland/open space. An analysis of land use patterns characterizes the uses and development trends in the area that may be changed or affected by the proposed action. This analysis is then used to determine whether the proposed project is compatible with, or may alter those conditions. Zoning establishes standards and requirements used to regulate and guide development within New York City. Regulatory controls prescribe permitted uses, building coverage and open space standards, setbacks, structure heights and parking requirements. Public policies are those adopted policies, other than zoning, that can affect or define land use.

A. Existing Conditions

LAND USE

The proposed new public school facility would be constructed on Block 635, Lot 1 on Staten Island. The proposed project site is owned by the City of New York and contains approximately 1.18 acres (51,552 square feet). A vacant three-story warehouse building is situated on the western portion of the project site, and is surrounded by an asphalt and gravel parking lot enclosed by chain-link fencing. The project site, shown on Figure 2-1, is bounded by Osgood Avenue to the north, Waverly Place to the south, Wiederer Place to the east, and Targee Street to the west.

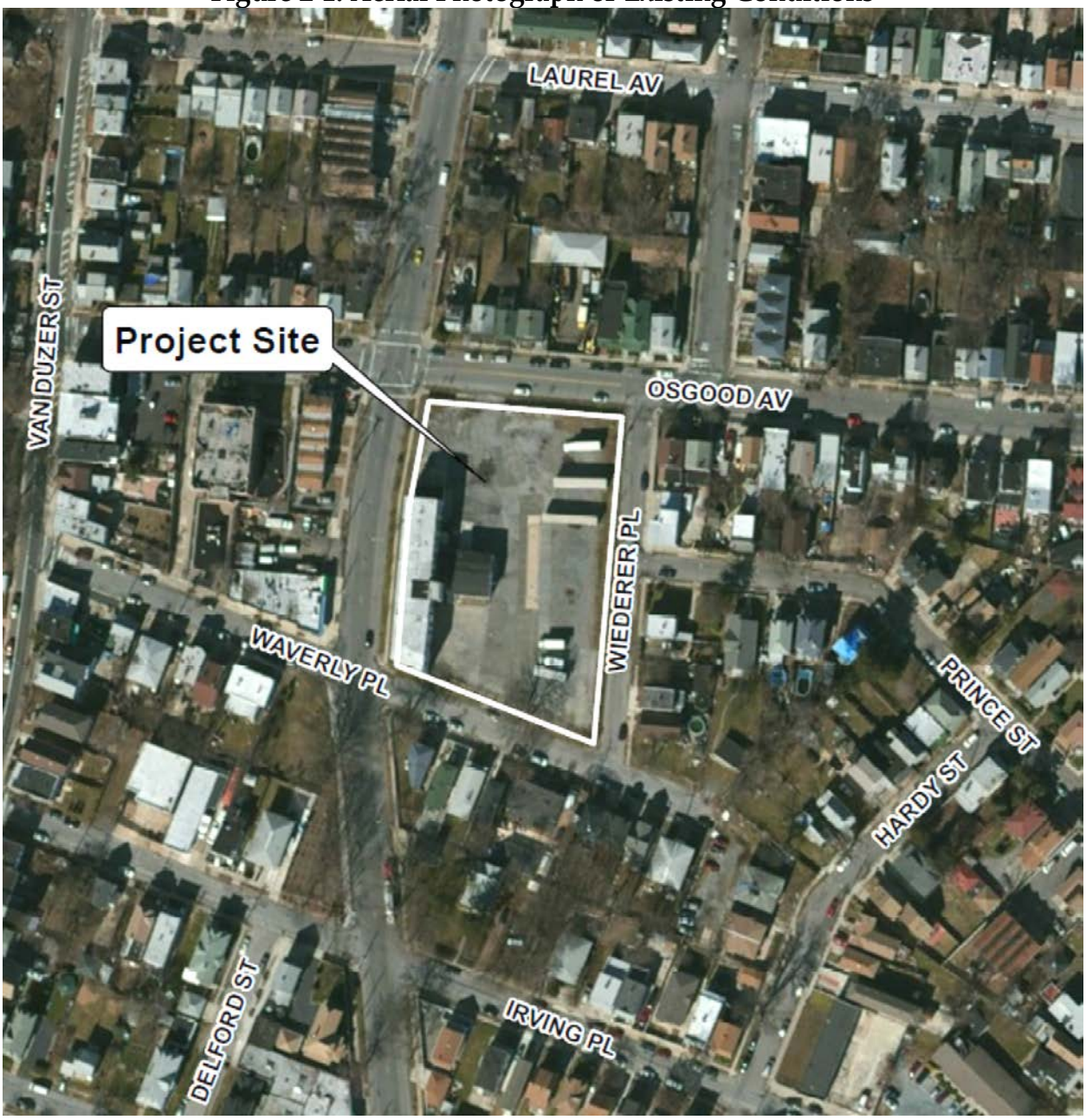
The analysis of land use, zoning, and public policy was conducted within a study area defined in accordance with the *CEQR Technical Manual*. The study area for the proposed project comprises the area within a 400-foot radius surrounding the project site. As illustrated on Figure 2-2, the study area boundary is generally defined by Laurel Avenue to the north, the midblock point south of Irving Place, Hardy Street to the east, and Van Duzer Street to the west.

Within the study area, the land use is predominantly low-rise residential. Other land uses within the study area include institutional, open space, light industrial/warehouse, commercial, mixed uses, and vacant lots.

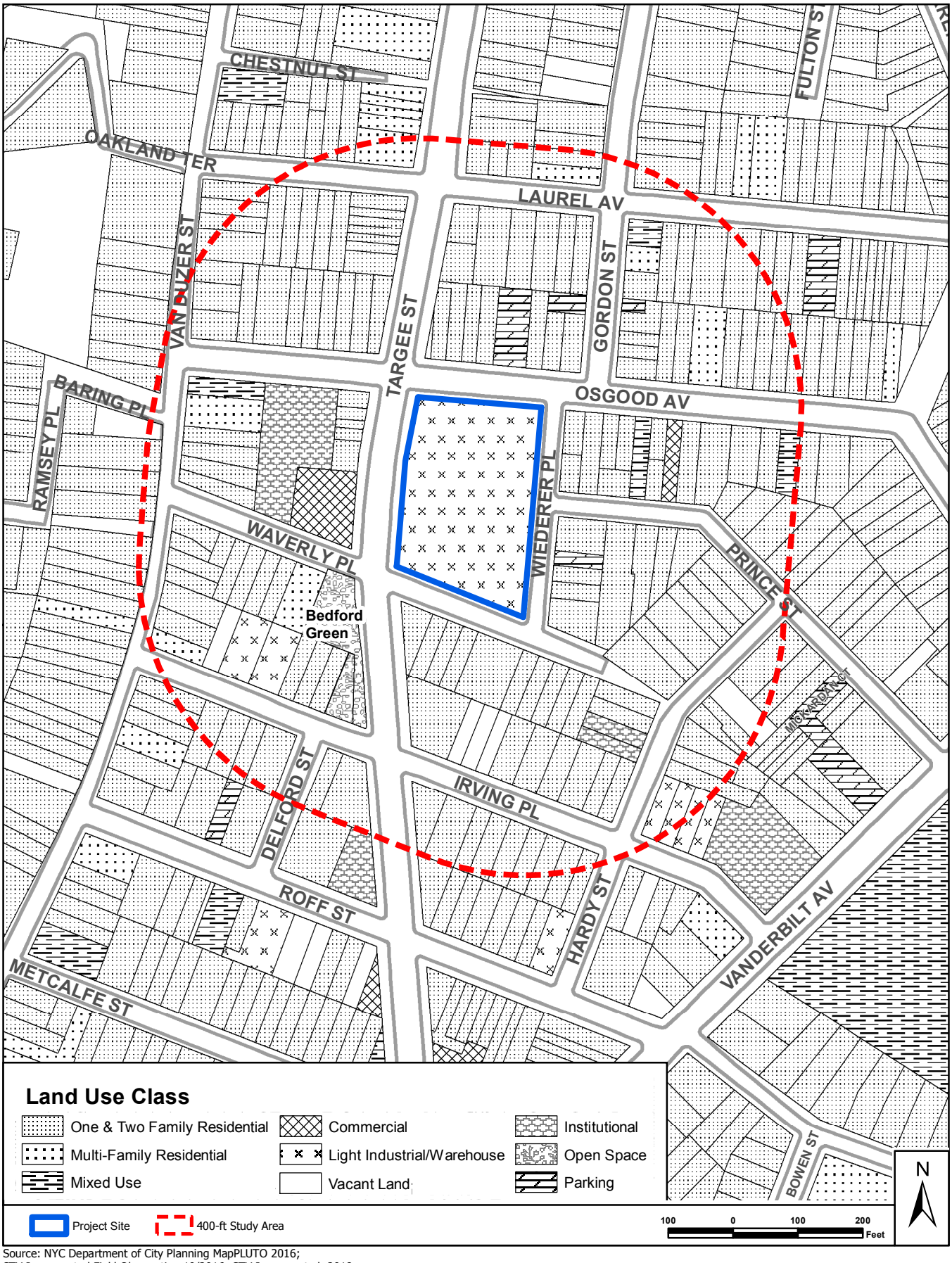
The majority of residential uses within the study area consist of one- and two-family detached buildings ranging from two to three stories in height. There are also several multi-family residential buildings ranging from two to three stories within the northern portion of the study area.

Institutional uses present within the study area include Staten Island Mental Health Society Osgood Avenue Head Start Program (and attached playground areas), located west of the project site on Osgood Avenue, and a mosque (Masjid Rahmatillah), located southeast of the project site on Hardy Street between Irving Place and Prince Street. A church (New Brighton Community Seventh-Day Adventist Church) is located just outside of the study area to the south of the project site at the corner of Roff Street and Targee Street.

Figure 2-1: Aerial Photograph of Existing Conditions



Source: Esri, 2018



Source: NYC Department of City Planning MapPLUTO 2016;
STV Incorporated Field Observation 10/2016; STV Incorporated, 2018.

Figure 2-2

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

LAND USE

Open space uses in the study area include a park (Bedford Green) and a community garden, both located directly southwest of the project site. Bedford Green, located at the southwest corner of Waverly Place and Targee Street, contains grass and mature trees. The community garden, located at the northwest corner of Irving Place and Targee Street (adjacent to and south of Bedford Green), is enclosed by chain-link fencing and contains individual garden plots for fruits and vegetables maintained by neighborhood volunteers.

Light industrial/warehouse uses in the study area consist of Unisys Electrical Inc. and a vacant two-story building (advertised as available warehouse/office space) located southwest of the project site on the north side of Irving Place. Other light industrial/warehouse uses in the study area include another vacant two-story light industrial/warehouse building located southeast of the project site at the boundary of the study area.

Commercial uses, including a delicatessen/grocery and a restaurant, are found across the street from and directly west of the project site at the northwest corner of Waverly Place and Targee Street. Another commercial use in the study area includes a delicatessen located east of the project site on the south side of Osgood Avenue.

Mixed-use buildings (ground floor commercial and upper floor residential) are found within the study area and include a pub/restaurant east of the project site on the south side of Osgood Avenue and a deli/grocery store located north of the project site at the southeast corner of Laurel Avenue and Gordon Street. Other mixed use buildings include the Mountain of Fire and Miracles Ministries located west of the project site at the southeast corner of Van Duzer Street and Osgood Avenue and a daycare facility (Mia Rose Daycare) located east of the project site at the boundary of the study area.

Several vacant lots are present within the study area, including those located along Irving Place, south of the project site.

ZONING AND PUBLIC POLICY

The New York City Council adopted the *Staten Island Borough President Rezoning/N.E. North Shore* on December 3, 2003, which provided the zoning districts and regulations that currently govern the project site and the study area. Under the rezoning, a 186 block area was rezoned from R5, R4, R3-2, and R3-1 to R3A and R3X in the northeast north shore of Staten Island. The zoning map changes recognized the established character of this part of the northeast north shore communities which are characterized by detached homes. The R3A and R3X zoning districts sought to promote development patterns that would reinforce the low density character of the area by allowing the construction of only one- and two-family detached homes.

As shown on Figure 2-3, the proposed project site is located within a C8-1 commercial zoning district. C8 districts bridge commercial and manufacturing uses, and provide for automotive and other heavy commercial services that often require large amounts of land. C8 districts are mapped mainly along major traffic arteries where concentrations of automotive uses have developed. Residential uses and Use Group 3 community facilities, such as schools, are not permitted as-of-right in C8 districts.

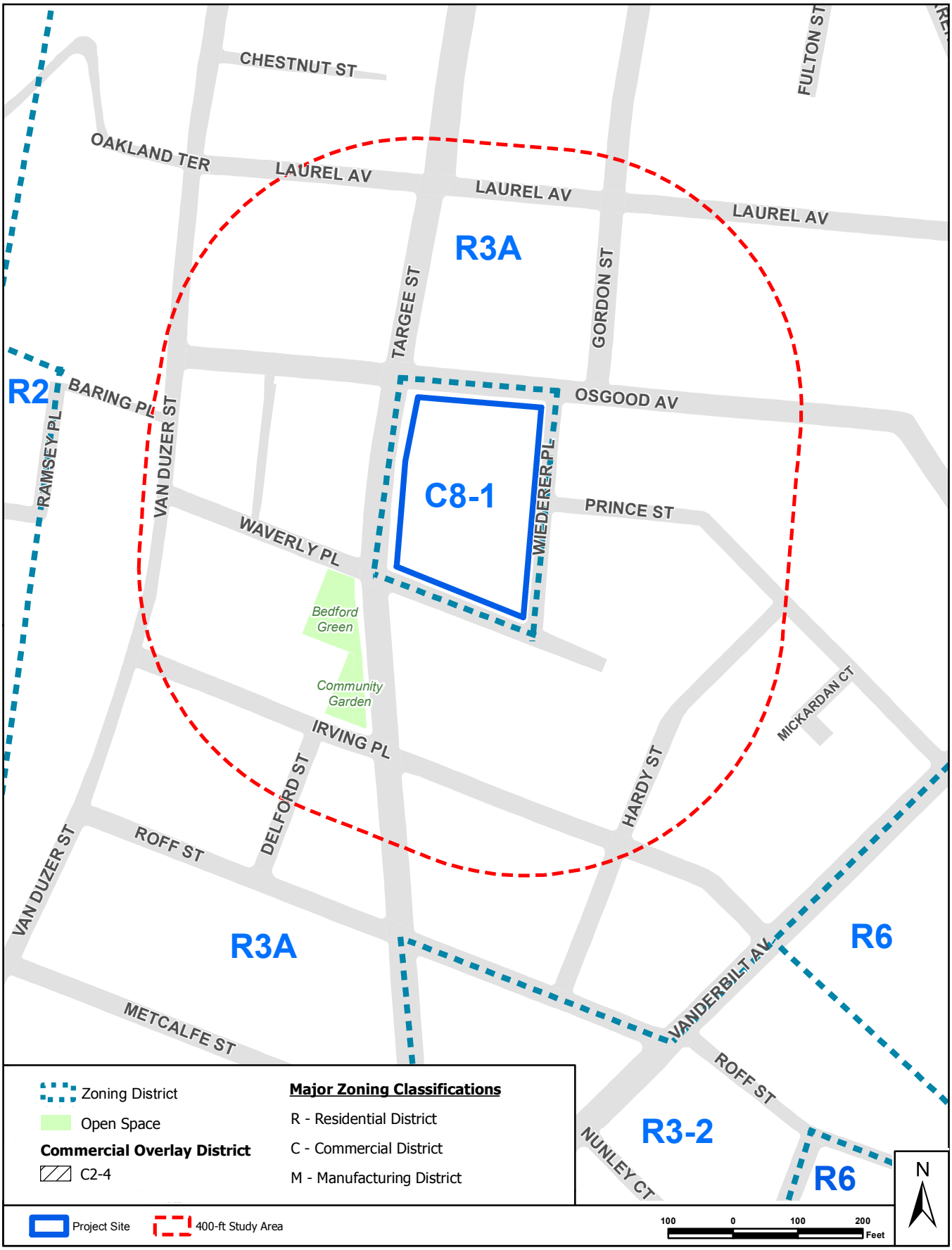
A R3A contextual lower-density residential zoning district is mapped over the entire study area (outside of the proposed project site). R3A contextual districts feature modest single- and two-family detached residences on zoning lots as narrow as 25 feet in width. The R3A district lies within a Lower Density Growth Management Area (LDGMA), which includes special zoning controls aimed to match future development to the capacity of supporting services and infrastructure in parts of the city experiencing rapid growth. Community Districts 1, 2 and 3 on Staten Island are designated Lower Density Growth Management Areas. A Special Purpose District, known as the Special Hillsides Preservation District (HS), is located within the western portion of the study area (west of Van Duzer Street). The HS guides development in the steep slope areas of Staten Island's Serpentine Ridge, an area of approximately 1,900 acres in the northeastern part of the borough. The purpose of the district is to reduce hillside erosion, landslides and excessive stormwater runoff by preserving the area's hilly terrain, trees and vegetation.

Other than zoning, there are no specific public policies applicable to the project site (e.g., 197-a plan or Waterfront Revitalization Plan).

Waterfront Revitalization Program. As the proposed project site does not fall within the City's designated coastal zone, the proposed action was not assessed for its consistency with the policies of the City's Local Waterfront Revitalization Program.

The project site and study area are located in Flood Zone X, which is area determined to be outside the 1% annual chance floodplain (100-year flood) and 0.2% annual chance floodplain (500-year flood).

According to the best available flood hazard data for Sandy affected counties in New York and New Jersey, the project site is not located within a flood hazard area (http://fema.maps.arcgis.com/home/).



Source: NYC Department of City Planning, 2016; STV Incorporated, 2018.

Figure 2-3

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

ZONING

B. The Future Without the Project

LAND USE

If the proposed PS 70 is not built, no changes to the project site are expected to occur by the 2022 Build Year. The existing project site would remain as a vacant warehouse building with parking.

According to a review of the Land Use and CEQR Application Tracking System (LUCATS) data, provided by the New York City Department of City Planning (NYCDCP) and accessed via http://a030-lucats.nyc.gov/lucats/welcome.aspx on February 26, 2018, there are no additional development projects or rezonings planned to be undertaken within the vicinity of the project site.

ZONING AND PUBLIC POLICY

No changes to zoning or public policy are expected to occur by the 2022 Build Year; zoning and public policy currently in effect for the project site and study area will remain in effect in 2022.

C. Potential Effects of the Proposed Project

LAND USE

The proposed project would entail the demolition of the vacant three-story warehouse building on the project site. After the site is cleared for construction, the proposed school building, which would be a structure of three to four stories, plus a partial cellar, would be built on both the southern and western portions of the project site. The new school would contain approximately 96,307 gsf, with its main entrance on Waverly Place. The project would also develop an approximately 18,321 sf main play yard and an approximately 2,730 sf early childhood play yard on the northeastern portion of the project site, adjacent to both Osgood Avenue and Wiederer Place. The new school facility would provide space for approximately 748 primary school students.

The proposed school would be consistent with surrounding uses in the study area, which are comprised of a mix of residential, institutional, open space, light industrial/warehouse, commercial, mixed uses, and vacant lots. The proposed project would replace a vacant warehouse building with a compatible community facility use. It would be a different building form and active, rather than vacant, but the new school would be compatible with surrounding land uses. No significant adverse impacts to land use would result from the proposed PS 70.

ZONING AND PUBLIC POLICY

The project site is located within a C8-1 district, in which schools are not permitted as-of-right; however, the area surrounding the project site is located within a R3A residential zoning district where schools are permitted as-of-right. The proposed project would not conform to the use regulations of the site's C8-1 zoning designation. Therefore, it is expected that the SCA would request zoning overrides from the Deputy Mayor for Housing and Economic Development to allow the proposed use (community facility) and for non-compliance with the FAR, maximum

heights and required setbacks, and off-street parking spaces.[1] As the zoning overrides would pertain only to the proposed project, no significant adverse impacts to zoning and public policy would occur.

D. Sustainability

Per the guidance of the *CEQR Technical Manual*, large publicly sponsored projects must conduct a sustainability assessment to determine whether the project is consistent with the planning goals and objectives of PlaNYC. As the proposed project would result in the construction of a new approximately 748-seat public school facility to provide additional public school capacity in CSD No. 31, and is not considered to be a large publicly sponsored project, the proposed project was not assessed for its consistency with the goals and objectives established in PlaNYC.

[1] Zoning analysis provided by the SCA (February, 2018)

Chapter 3: Socioeconomic Conditions

Socioeconomic impacts may occur when an action would directly or indirectly change population, housing stock, or economic activities in an area. Changes may be substantial but not adverse, or beneficial to some groups and adverse to others. This chapter discusses potential impacts to socioeconomics and identifies their significance.

A detailed socioeconomic analysis is typically conducted if an action would create substantial socioeconomic changes in an area, such as direct displacement of residential population or of substantial numbers of businesses or employees. Other analysis criteria pertain to new development that may be markedly different from existing uses or that would attract substantial residential or worker populations to the area, such as development of 200 or more residential units or more than 200,000 sf of commercial space. Under CEQR, if an action could affect the real estate market over a larger area or if it could adversely affect economic conditions of a specific industry, a socioeconomic analysis may be necessary. The proposed action would include neither residential nor commercial elements; the proposed action is the construction of a new school building, thus increasing school district capacity to address existing overcrowding and meet projected demand. Therefore, no detailed socioeconomic analysis is required.

A. Existing Conditions

The proposed school site is currently occupied by a vacant warehouse building. The immediate uses around the project site primarily consist of low-rise residential uses. Commercial uses are present directly across the street from the project site at the northwest corner of Waverly Place and Targee Street; other commercial and mixed uses are interspersed throughout the area. Businesses include delicatessens and restaurants.

B. The Future Without the Project

If the proposed PS is not built, no changes to the project site are expected to occur by the 2022 Build Year. No other developments are anticipated for the study area by the 2022 Build Year, and socioeconomic conditions are generally expected to resemble existing conditions.

C. Potential Effects of the Proposed Project

The proposed school would replace an existing, vacant warehouse building in a commercial district. The proposed project would introduce approximately 748 primary school students and a total of approximately 75 teachers, administrators, and support staff to the project site. The proposed PS would not result in the displacement of any residents or businesses, as the existing building is currently unoccupied. Additional jobs for teachers and support staff would be created as a result of the new school.

Although the proposed project would result in new construction, the construction activities would be generally contained within the site. In addition, the construction of the new school building would be a localized activity of limited duration, without the potential to affect a larger area or the conditions of any specific industry. Significant adverse impacts to socioeconomic conditions from the proposed project would not result, and no further analysis is required.

Chapter 4: Community Facilities and Services

According to the *CEQR Technical Manual,* "…community facilities are public or publicly funded schools, libraries, child care centers, health care facilities and fire and police protection." The *CEQR Technical Manual* calls for analysis of impacts on community facilities where there are direct effects (a physical alteration or displacement) or indirect effects (addition to population of an area and a concomitant increase in demand for community services). The proposed project would not directly displace a community facility or introduce new resident population or otherwise increase demand on facilities; therefore, no direct or indirect effects to community facilities are expected and a detailed analysis is not required.

A. Existing Conditions

Police Services. Police protection is provided by the City of New York Police Department (NYPD) 120th Police Precinct, which has jurisdiction over the project site. Its headquarters are located at 78 Richmond Terrace, approximately 2.2 miles north of the site.

Fire Services. Fire protection services would be provided by the City of New York Fire Department (FDNY). The facilities closest to the project site that would serve the proposed school include Engine Company 153 and Ladder Company 77, located approximately 0.7miles northeast of the project site at 74 Broad Street.

B. The Future Without the Project

Police Services. No significant change in the demand for service or in the provision of service to community residents is expected.

Fire Services. No significant change in the demand for service or in the provision of service to community residents is expected.

C. Potential Effects of the Proposed Project

The proposed action would create a new public school facility on a site currently developed with a vacant warehouse building. The proposed PS would serve approximately 748 students in grades pre-kindergarten through five within CSD No. 31. The proposed project would not introduce new residents to the area, therefore creating little new demand for community facilities and services.

Police Protection. It is expected that the proposed school would have no significant impact on police protection in the community as a result of the project.

Fire Protection. The proposed school would be constructed to meet all existing fire code regulations and would generate a negligible increase to the potential workload of the FDNY. It is expected that the proposed project would not adversely impact the FDNY's ability to provide fire protection to its service area.

Further, the proposed new school facility would provide an additional community resource for area residents and expand the public school capacity in CSD No. 31; however, the new PS would not change the service area of this school district. No significant adverse impacts to community facilities and services would occur as a result of the proposed project, and no further analysis is required.

Chapter 5: Open Space

The *CEQR Technical Manual* calls for analysis of open space impacts if there could be direct effects on an open space (physical loss of public open space by encroachment or displacement); or indirect impacts (increase in demand through the addition of 200 residents or more, or 500 employees or more). As the proposed project would not directly eliminate or alter open space or increase the utilization of neighborhood open spaces (e.g., as through the addition of 200 or more residents or 500 or more employees), a detailed open space analysis is not required.

A. Existing Conditions

The project site does not contain any publicly accessible open space. The 400-foot study area contains a park (Bedford Green) and a community garden, both located directly southwest of the project site. Bedford Green, located at the southwest corner of Waverly Place and Targee Street, is approximately 0.11 acres and includes grass and mature trees. The community garden, located at the northwest corner of Irving Place and Targee Street (adjacent to and south of Bedford Green), is enclosed by chain-link fencing and contains individual garden plots for fruits and vegetables maintained by neighborhood volunteers.

B. The Future Without the Project

In the absence of the proposed project, no significant change is expected regarding open space resources within the study area.

C. Potential Effects of the Proposed Project

The construction of a new school facility on the project site would not have any direct or indirect impacts on open space. The need for physical education at the school would be met within the project site itself with the provision of a gymatorium and exercise room within the proposed school building and two outdoor play yards on the northeastern portion of the project site, including an approximately 18,321 sf main play yard and an approximately 2,730 sf early childhood play yard. Therefore, the open space needs of the students and staff associated with the proposed PS 70 would be met on site, and the new school facility would not result in any significant adverse impacts to open space resources.

Chapter 6: Shadows

This section discusses the potential impacts of the proposed project with regard to shadows. Per the guidance of the *CEQR Technical Manual*, a shadow is defined 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." An adverse impact may occur if a proposed action would result in a new structure (or addition to an existing structure of 50 feet or more) or is located adjacent to, or across the street from, a resource that has been identified as sunlight sensitive.

A. Existing Conditions

The existing three-story warehouse building on the western portion of the project site is the only eligible historic resource in the study area; however, its architectural importance is not linked to sunlight-sensitive features. There are no historic buildings surrounding the project site, and the project site is not part of a historic district. As noted in the land use and open space analyses, the 400-foot study area contains a park (Bedford Green) and a community garden, both located directly southwest of the project site.

The existing three-story warehouse building is approximately 44 feet in height and casts a maximum shadow of approximately 189 feet. As shown on Figure 6-1, the maximum extent of shadows of the existing warehouse building covers the northern portion of Bedford Green.

B. The Future Without the Project

If the proposed PS 70 is not constructed, then the conditions related to shadows, both on the project site and in the surrounding area generally would remain the same as existing conditions.

C. Potential Effects of the Proposed Project

The proposed project would result in a new school building of three to four stories, which would be over 50 feet in height. Therefore, a screening for shadow impacts has been performed. With an estimated height of approximately 80 feet, the proposed school building's maximum shadow would extend approximately 344 feet.

Following both Tier 1 and Tier 2 screenings for shadows, performed in the manner prescribed by the *CEQR Technical Manual*, it has been determined that the only potentially sunlight-sensitive resource within 344 feet of the proposed school building is Bedford Green, which is located directly southwest of the project site. Please refer to Figure 6-1.

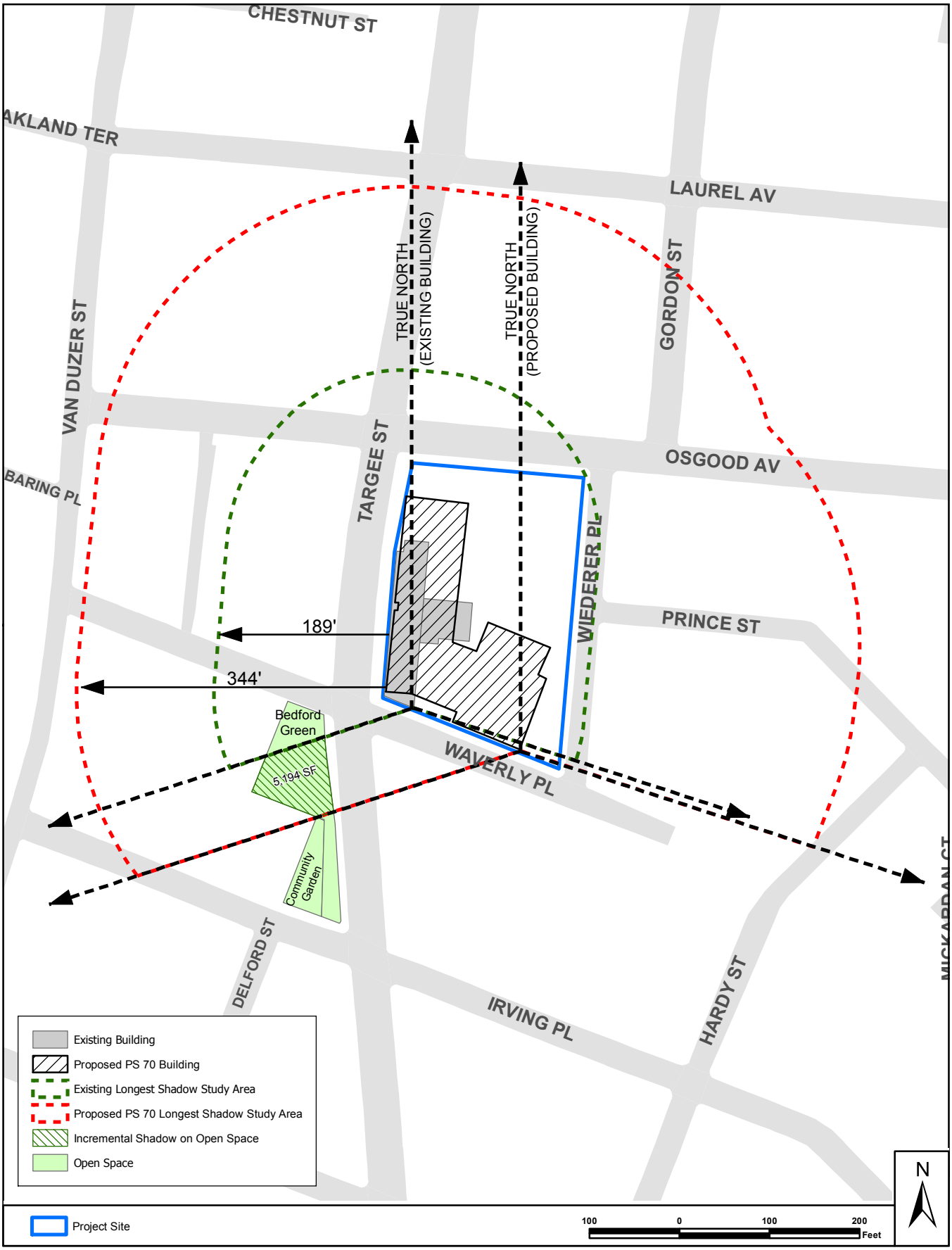
Figure 6-1 illustrates the maximum extent of shadow that would be expected with the new school building. Given that the proposed school building would be located on both the southern and western portions of the project site, the longest shadow cast by early morning sun would extend across the middle and southern portions of Bedford Green.

As shown on Figure 6-1, the existing warehouse building on the project site already casts a shadow on the northern portion of Bedford Green. A detailed analysis has been performed to assess the incremental shadow that would be attributable to the proposed school building,

specifically, which would be built upon demolition of the existing structure on site. Further, the detailed analysis allows for a clearer understanding of seasons and time of day that shadowing would be present on this resource.

As shown on Figures 6-2a and 6-2b, the June and August shadows would, in their maximum extent, reach the middle and southern portions of Bedford Green where there is grass and mature trees. This shadow would be an incremental shadow that is attributable to the proposed school building, and that would not be present in the future without the project. As shown on Figures 6-2a and 6-2b, the maximum shadow would occur at 5:57 AM on June 21st and 6:27 AM on August 6th. These early morning shadows, however, would not be expected to result in substantially decreased sunlight on this portion of Bedford Green, particularly as ample direct sunlight would be available for most of the day throughout the entire year to support the growth of grass and trees, as well as to support the public use and enjoyment of this passive recreation space.

Therefore, while incremental shadow attributable to the proposed school building would reach a nearby park, the shadow would not result in significant adverse impacts.



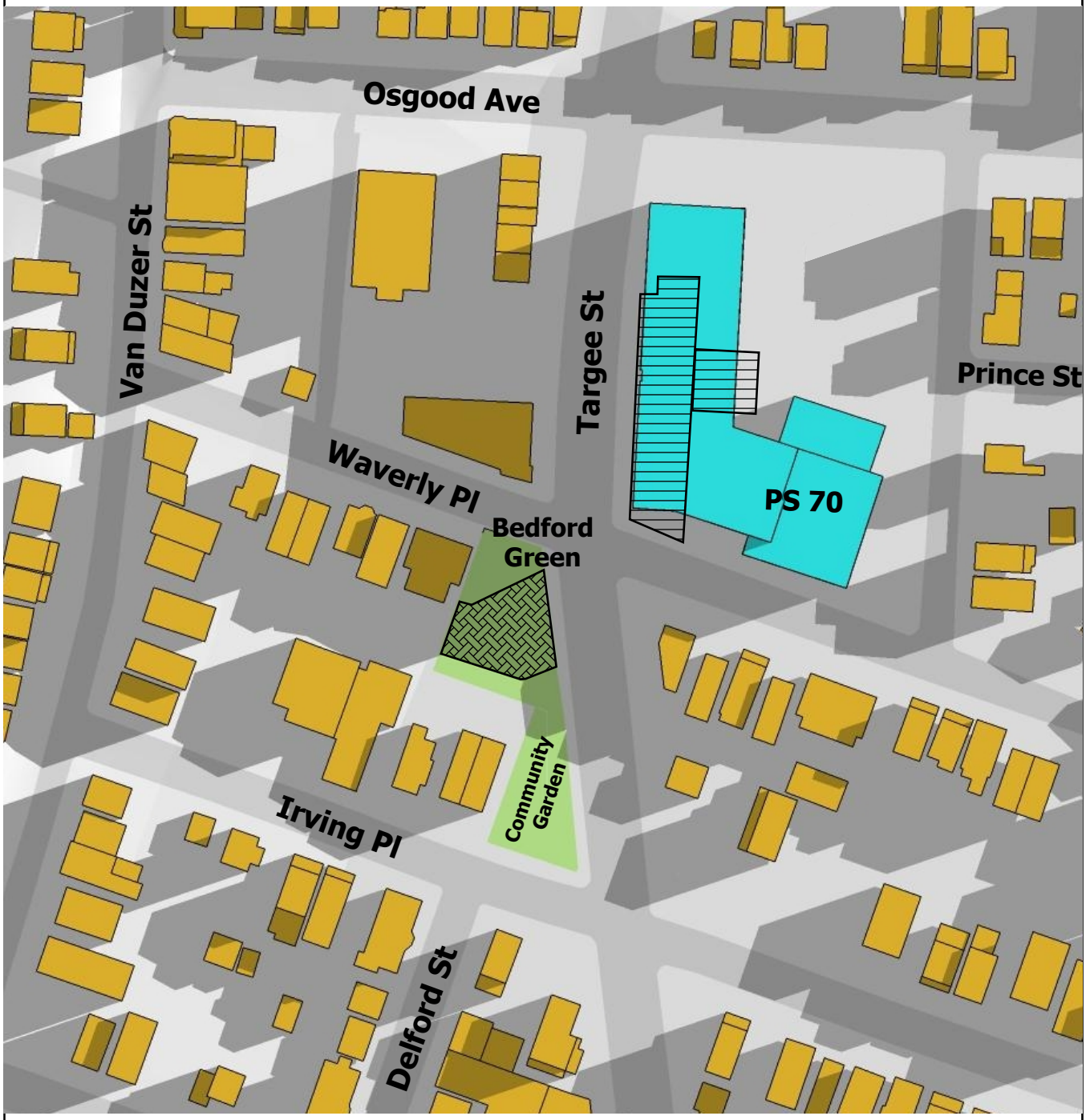
Source: STV Incorporated, 2018.

Figure 6-1

SHADOW ANALYSIS
TIER II SCREENING

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

Maximum Incremental Shadow on June 21st at 5:57 AM



Source: STV Incorporated, 2018.

Figure 6-2a

DETAILED SHADOW ANALYSIS

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

Source: STV Incorporated, 2018.

Figure 6-2b

DETAILED SHADOW ANALYSIS

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

Chapter 7: Historic and Cultural Resources

This section considers the potential impact of the construction of the proposed PS 70 on archaeological and historic resources on or near the project site. For archaeological resources, the *CEQR Technical Manual* recommends a detailed evaluation if there would be in-ground disturbance of an area not previously excavated. For historic resources, the *CEQR Technical Manual* recommends a detailed assessment if a proposed action would result in an adverse effect on historic buildings, structures, objects, sites or districts.

A. Existing Conditions

ARCHAEOLOGICAL RESOURCES

Precontact Sensitivity. From what is known of precontact period settlement patterns in New York City, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. In its natural state, there was a perennial stream that ran through the adjacent block to the west. Original soils on the site would have been well drained. However, there has been considerable disturbance to the property from the construction of the existing building, various former buildings located behind the present building, and subsurface utility installation associated with the structures. Soil borings confirm disturbance to the upper few feet of the soil column, where precontact period archaeological resources normally would be located. The soil borings do not suggest a buried soil horizon beneath the disturbed soils. Based on these factors, although in its natural state the project site could have had an elevated precontact sensitivity, today there is minimal remaining precontact sensitivity. Therefore, further research and study concerning precontact archaeological resources is not recommended.

Historical Sensitivity. The project site was undeveloped until the 1890s, when the present building was constructed on the property. The property was used for industrial and commercial purposes from the 1890s to the present. Historic period archaeological sensitivity for the project site is low.

Please refer to Appendix A – Cultural Resources Memorandum for a Preliminary Assessment/Disturbance Record study, which addresses archaeological sensitivity of the project site.

HISTORICAL RESOURCES

The existing warehouse building on the project site was constructed in 1886 and has been determined eligible for inclusion in the State and National Registers of Historic Places by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). According to OPRHP's Resource Evaluation form (December 19, 2016), the former Peter Wiederer Mirror Factory is an intact and surviving example of a late nineteenth century industrial building on Staten Island. It is noted as important in the areas of manufacturing/technology as well as social/ethnic history for its association with German immigrant families and workers. The structure, comprised of three connected masonry buildings, is severely deteriorated due to age, long term lack of maintenance, water infiltration, and fire damage.

The project site is not located within a historic district or within close proximity to any historic landmark or district.

B. The Future Without the Project

In the absence of the proposed construction of the PS facility, there would be no new construction on the project site and no excavation or further disturbance of the project site. No potential cultural resources would be affected.

There are no historic resources within close proximity to the project site that are slated for review or expected to be designated in the future without the project. Therefore, in the future without the project, there would be no historic resources near the project site.

C. Potential Effects of the Proposed Project

ARCHAEOLOGICAL RESOURCES

The Preliminary Assessment/Disturbance Record study completed for the proposed project site determined that no further research and study of archaeological resources is warranted, based on a low sensitivity for both precontact and historical period archaeological resources, coupled with significant disturbance to the original ground surface on the project site. Construction of the proposed new school facility on the project site would not result in significant adverse impacts to archaeological resources.

HISTORICAL RESOURCES

The proposed project would require that the existing on-site warehouse building be demolished to accommodate the DOE's Program of Requirements (POR) for a new, modern primary school. As described above, the existing former Peter Wiederer Mirror Factory on the project site has been determined eligible for inclusion in the State and National Registers of Historic Places by OPRHP. As such, under Section 14.09 of the State Historic Preservation Act of 1980 (SHPA), this is likely to result in an adverse effect to the historic resource, and may constitute a significant adverse impact to historic resources.

As required under Section 14.09, consultation with OPRHP was undertaken by the SCA as part of the proposed development of a new public school facility on the project site. OPRHP commented in its letter of January 2, 2018, that based on their review of the SCA's Structural Condition Assessment Report (July 28, 2017), which outlined the conditions of the warehouse building on the project site, they concurred with the SCA's determination that there are no prudent and feasible alternatives to demolition of the historic building (OPRHP Project Review Number 16PR08451). As described in the Structural Condition Assessment Report, the age of the building, long term lack of maintenance, water intrusion, and fire damage have diminished the original building's stability and structural capacity. Therefore, for safety reasons, the existing warehouse building cannot be used as an educational facility, nor can it be incorporated into an educational facility. Upon OPRHP's recommendation, the SCA has developed and signed a Letter of Resolution (LOR) which outlines the agreement between the SCA and OPRHP and identifies proper mitigation measures to be incorporated into the work (see Appendix B – Agency

Correspondence). Mitigation measures include documentation, salvage of certain building components and continued consultation with OPRHP as the new building is designed. In the LOR between the SCA and OPRHP, it is stated that the proposed project may proceed subject to the following stipulations:

(1) Consultation with OPRHP on the design of the new school;

(2) Historic Documentation: The building located at 357 Targee Street, Staten Island (Richmond County), NY shall be photographically documented including the following views:

- All elevations;
- Overall and select detail views providing an accurate visual representation of the property and its significant features;
- OPRHP shall be provided with one copy of the documentation that shall be for archival storage in the New York State Archives. A second copy of the documentation shall also be provided to Historic Richmond Town (Staten Island Historic Society) or the local history division of the Staten Island Public Library. The documentation shall be provided to OPRHP in photocopy and digital formats for retention in the OPRHP files. The documentation shall be submitted to OPRHP prior to any demolition activities by the SCA;

(3) The SCA's design will incorporate certain preserved elements from the existing building in order to preserve some of its history. Approximately thirty square feet of interior tin ceiling and twenty (20) structural decorative metal stars have been identified for incorporation into the design of the new school facility; and that the SCA will consult with OPRHP on the incorporation of these elements into the new school design.

Chapter 8: Urban Design and Visual Resources

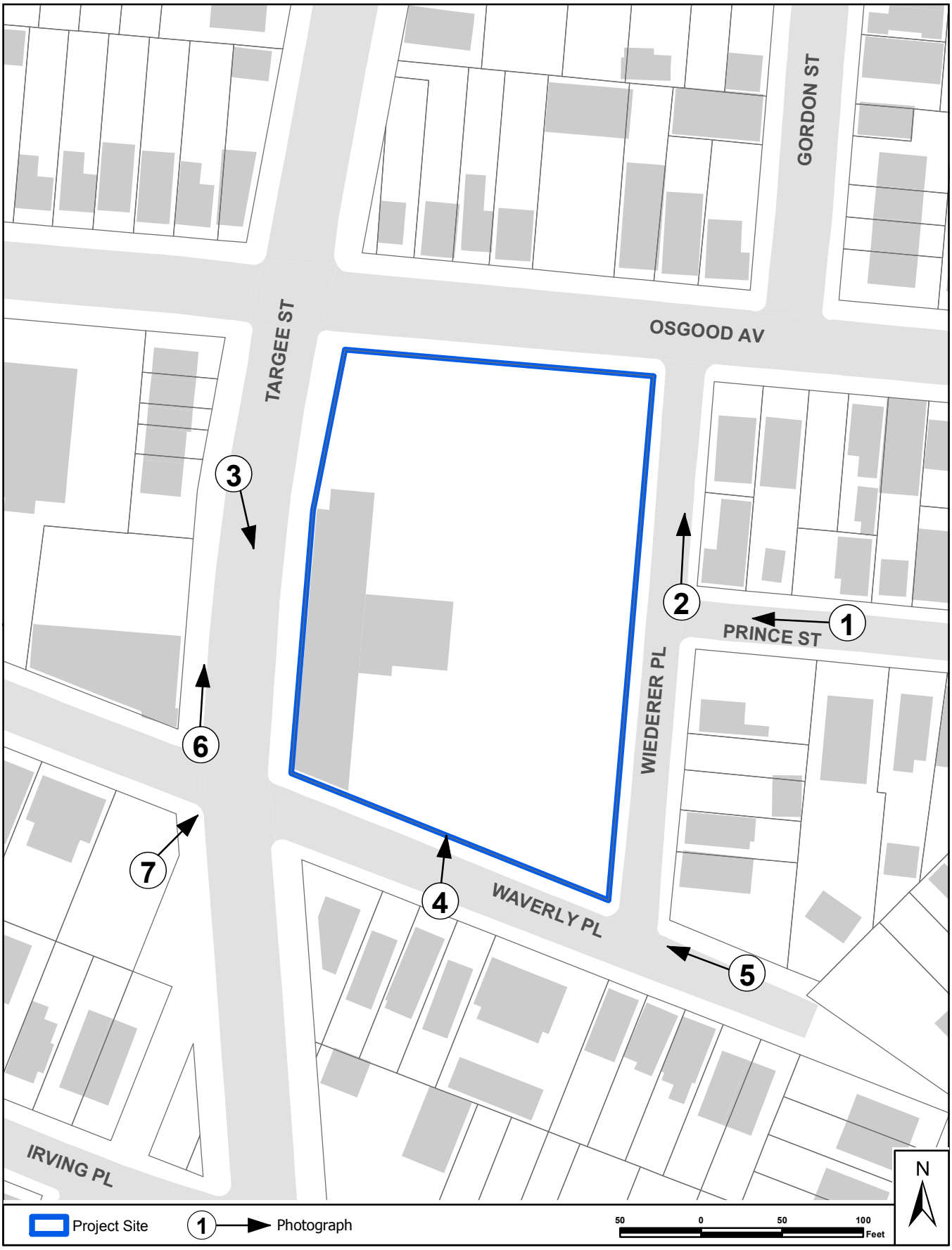
Urban design is the physical appearance of the neighborhood, including building bulk, use and type, building arrangement, block form and street pattern, street hierarchy, streetscape elements, and natural features. Visual resources are the unique or important public view corridors, vistas, or natural or built features of the area. The assessment of urban design is concerned with the potential changes to the pedestrian experience that may result from a proposed action. The *CEQR Technical Manual* recommends a preliminary assessment to determine whether physical changes proposed by the project could rise to the level of potential significant adverse impact. A detailed assessment of urban design and visual resources may be appropriate when a project would have substantially different bulk or setbacks than exist in an area, and when substantial new, above-ground construction would occur in an area that has important views, natural resources or landmark criteria.

A. Existing Conditions

As described in Chapter 2, "Land Use, Zoning and Public Policy," the project site is located on Staten Island, surrounded by low-rise residential and a mix of other uses. Photographs of the project site and of streetscapes throughout the study area are provided to illustrate the urban design characteristics of the project site and surrounding neighborhood. The location from which each photograph was taken is identified on Figure 8-1.

PROJECT SITE

The project site is part of the block bounded by Osgood Avenue to the north, Waverly Place to the south, Wiederer Place to the east, and Targee Street to the west. A vacant three-story warehouse building is situated on the western portion of the site, and is surrounded by an asphalt and gravel parking lot. The existing warehouse building, which was constructed in the late nineteenth century, has been determined eligible for inclusion in the State and National Registers of Historic Places by OPRHP. The structure, comprised of three connected masonry buildings, is severely deteriorated due to age, long term lack of maintenance, water infiltration, and fire damage. At three stories, the warehouse building on the project site is taller than the surrounding one-story commercial buildings and two-story residential buildings. The site is enclosed by chain-link fencing that permits visibility into the site from all surrounding streetscapes (see Photos 8-1 through 8-4).



Source: STV Incorporated, 2018.

Figure 8-1

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

PHOTOGRAPH KEY

Photo 8-1: View of project site, facing west across Wiederer Place from Prince Street.

Photo 8-2: View north along Wiederer Place; northeastern portion of the project site is visible to the left in photograph.

Photo 8-3: View of western façade of the warehouse building, which stands on the western side of the project site; facing southeast along Targee Street.

Photo 8-4: View of warehouse building located on project site, looking north from Waverly Place.

STUDY AREA

Building bulk, use and type. The study area surrounding the project site consists of two- and three-story single-family detached houses, a three-story walk-up apartment building, one- and two-story light industrial/warehouse buildings, one-story commercial buildings, and two-story mixed use buildings (see Photos 8-5 and 8-6).

Except for one three-story walk-up apartment building, most residential building types in the study area include detached single-family houses, typically two stories in height. Such houses line Wiederer Place adjacent to the project site on the east and are also found throughout the study area.

The block southwest of the project site contains two light industrial/warehouse buildings, which are one and two stories tall. In addition, there are also several institutional uses present within the study area, including the Staten Island Mental Health Society Osgood Avenue Head Start Program and a mosque (Masjid Rahmatillah). The Head Start facility is housed in a two-story brick building that has landscaping in front, as well as two playgrounds located on the eastern and southern portions of the property. The mosque is a simple, two-story brick building that resembles adjacent residential buildings.

Building arrangement. The site occupies the entire block bounded by Osgood Avenue to the north, Waverly Place to the south, Wiederer Place to the east, and Targee Street to the west. Residential building arrangement (single-family, detached) is consistent throughout the study area. Detached houses are typically not built to the front lot line, but instead have front yard areas, or wider sidewalk; this arrangement is typical of residences throughout the study area, as well as the buildings containing the Head Start facility and mosque. Study area residences typically have off-street parking and landscaping.

The two light industrial/warehouse uses in the study area are constructed as detached buildings with no landscaping. The vacant light industrial/warehouse use located to the southeast of the project site on Irving Place is built to its front lot line and contains an open storage and parking area on one side. The light industrial/warehouse uses located on Irving Place to the southwest of the project site are also constructed as detached buildings. The vacant two-story building is built to its side lot lines and contains an open parking and storage area in front of the building, whereas the adjacent one-story electrical company is built to its front and side lot lines.

Street hierarchy, block form, and street pattern. The street pattern surrounding the project site forms irregularly shaped blocks within the study area. Except for the project site and the block to the west, which includes the Head Start facility, most city blocks in the study area are divided into a series of small lots.

Streetscape elements. Moderately well maintained sidewalks serve most residential uses in the study area, as well as along the project site on Targee Street and Osgood Avenue. Curbing is discontinuous surrounding the project site, however, and the edges of the project site along Waverley Place and Wiederer Place do not contain sidewalks or curbing; these southern and eastern edges of the project site are instead surrounded by a grass perimeter.

The one- and two-family residences throughout the study area feature shallow yards with landscaping, including hedges and small ornamental plantings, as well as driveways for off-street parking. Residences with larger yards in the study area tend to have more landscaping, including trees and perennials.

Street trees are present in the study area, including the streetscapes directly surrounding the project site. The Head Start facility features a series of mature street trees, bushes, and manicured lawn in front of its main building. Additionally, Bedford Green and a community garden provide green open space areas southwest of the project site along Targee Street.

Street lighting fixtures throughout the study area are utilitarian rather than decorative and do not promote any unique or meaningful design statement. Curbside parking is present along local streets and utilized throughout the study area. There are no benches or other street furniture.

Visual Resources. No distinctive historic properties or districts, or view corridors related to such resources, have been identified in the study area. However, Bedford Green and a community garden are located southwest of the project site. Bedford Green occupies the corner of Targee Street and Waverly Place and a community garden occupies the corner of Irving Place and Targee Street. Bedford Green includes mature trees and a grassy area that is open to the public (see Photo 8-7). The community garden is private and surrounded by chain-link fencing; it is open to members of the community who wish to partake in the Green Thumb program.

Photo 8-5: View of streetscape along Waverly Place facing west across Wiederer Place; project site is visible to the right in photo.

Photo 8-6: View of commercial buildings on Targee Street directly west of the project site; facing north along Targee Street from Waverly Place.

Photo 8-7: View toward project site, facing northeast across Waverly Place from Bedford Green.

B. The Future Without the Project

If the proposed construction of the new PS 70 does not occur, then it is expected that the proposed project site would resemble current conditions, with the existing structure remaining vacant and in a state of disrepair. No other developments are anticipated for the study area by the 2022 Build Year, and urban design and general visual quality are generally expected to resemble existing conditions. Therefore, future conditions without the project would generally resemble existing conditions.

C. Potential Effects of the Proposed Project

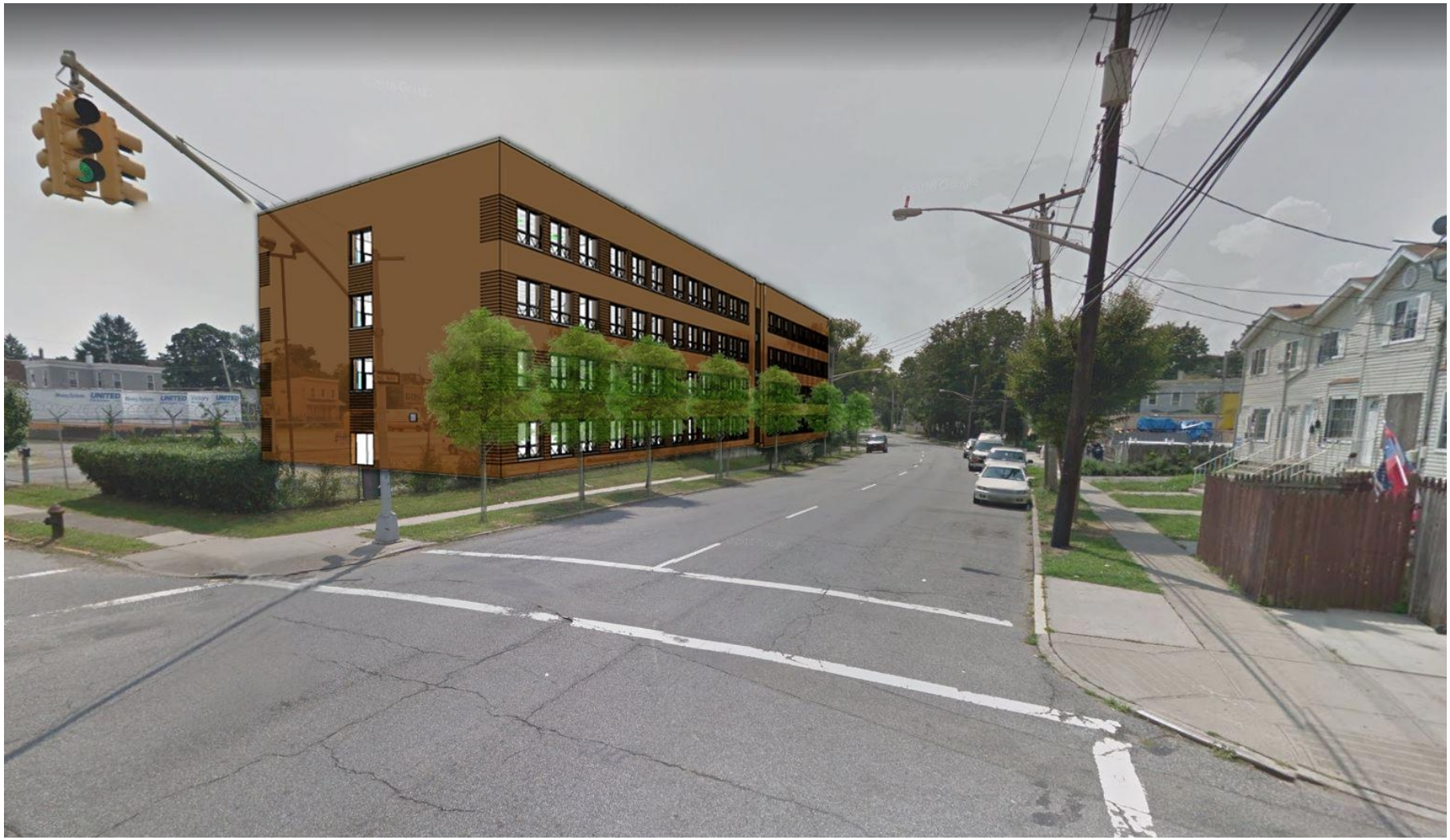
Building bulk, use and type. At its tallest, the new school building would stand four stories (approximately 80 feet) tall, including parapet and rooftop mechanical structures (see Figure 8-2). As such, the proposed school building would stand as the tallest structure in the area. The four-story portion of the proposed PS 70, as currently designed, would be positioned along Targee Street and Waverly Place. As discussed in Chapter 2, "Land Use, Zoning and Public Policy," zoning overrides would be sought to allow the proposed use (community facility) and for non-compliance with the FAR, maximum heights and required setbacks, and off-street parking spaces.

Consequently, the proposed new school would represent greater bulk on the project site than would be present in the future without the proposed action. However, the project site is already developed with the tallest building in the study area, and one with bulk similar to the light industrial/warehouse uses also present in the study area. Therefore, the increased bulk on the project site would not represent a substantial change to the urban design of the study area.

Further, the introduction of an active use on the project site would represent an improvement, and the introduction of the school at this location would expand the presence of institutional uses already present in the area; the existing Head Start facility is located on the block directly west of the project site on Osgood Avenue. Therefore, the proposed new school would be of a building bulk, use, and type that is consistent with the study area.

Building arrangement. The proposed new school would be developed on a site comprising an entire city block. The proposed PS 70 would cover the southern and western portions of the project site and would be built to the lot line, similar to the design of the vacant building currently standing on the site. This building arrangement would be consistent with the fabric of the surrounding area, and it would represent an improvement over existing conditions, which include unbuilt areas along three street frontages of the project site. In particular, the new school would establish a continuous streetwall along the Targee Street frontage, thereby contributing, via building arrangement, to the form of the streetscape.

Street hierarchy, block form, and street pattern. The proposed project would not alter the street hierarchy of the study area, nor would it affect the street hierarchy of the broader area. The proposed new PS 70 would not alter the arrangement or configuration of blocks, nor would it affect the current street pattern and prevailing form of blocks in the study area.



Scale: NTS
Source: NYCSCA; STV Incorporated, 2018.

Figure 8-2

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

MASSING DIAGRAM

Streetscape elements. New sidewalks and curbing would be installed around the perimeter of the project site, substantially improving the current streetscapes surrounding the one-block site. New street trees would also be planted along the surrounding sidewalks, which would be replaced and/or repaired as appropriate as part of the proposed project. These improvements to sidewalks, curbing, and then introduction of new trees would enhance the attractiveness of all surrounding streetscapes and would improve the visual character of the surrounding neighborhood.

Visual Resources. While both Bedford Green and the community garden are important visual resources in the study area, changes to the project site would not result in visual impacts to these open spaces. Views from these open spaces toward the project site would be improved with the demolition of the vacant building currently occupying the project site, and its replacement with new building built to the lot line. The perimeter of the project site would be improved with sidewalks, curbing, and street trees, thereby contributing to an attractive streetscape in the vicinity of these visual resources and improving the general aesthetic character of their environs.

The proposed development of the project site as a new school, in accordance with the design currently considered and the stipulations outlined in the Letter of Resolution (LOR) between the SCA and OPRHP, would improve the urban design of the study area and visual quality of the surrounding streetscapes. Therefore, the proposed PS 70 would have a positive effect with regard to the proposed design for the project site; no significant adverse impact to urban design and visual quality would result with the proposed project, and no further analysis is warranted.

Chapter 9: Natural Resources

Under CEQR, a natural resources assessment considers species in the context of the surrounding environment, habitat or ecosystem, and examines a project's potential to impact those resources. The *CEQR Technical Manual* recommends that an assessment may be appropriate if a natural resource is present on or near the site of the project and disturbance of that resource is caused by the project.

A. Existing Conditions

The project is located within an urbanized area and is not in close proximity to any significant terrestrial or aquatic resources. There are no visible wetlands, water bodies or streams located on or near the site. Flood potential is evaluated by the Federal Emergency Management Agency (FEMA), which delineates the floodplain for 100- and 500-year flood events. According to information obtained through the on-line FEMA Map Services Center (www.msc.fema.gov), the area of the project site is not located within a 100- or 500-year flood zone. Therefore, this does not represent an environmental concern for the project site.

Further, the New York State Department of Environmental Conservation (NYSDEC), Division of Fish, Wildlife & Marine Resources was contacted for information concerning protected species that may be present on the project site or in the study area. In its letter of November 4, 2016, NYSDEC stated that threatened vascular plants (Green Milkweed) and a significant natural community (Upland/Terrestrial Communities - Serpentine Barrens) from the New York Natural Heritage Program database have been documented north of the project site and within 0.5 mile of the project site (see Appendix B – Agency Correspondence). In a subsequent follow-up letter on February 27, 2018, NYSDEC confirmed the initial response.

B. The Future Without the Project

Without the proposed project, no significant changes are expected with regard to natural resources.

C. Potential Effects of the Proposed Project

There are no known natural resources (e.g., terrestrial ecological features, wetlands, water bodies, streams, or special flood hazard area) on or adjacent to the project site, and none would be affected by the proposed project. The site is part of a well-developed urban context.

In the correspondence from NYSDEC (November 4, 2016), NYSDEC states that given the nature of the proposed work and of the land use between the project site and the locations of the rare plants and significant natural community, they do not have any concerns regarding potential impacts from the project on the rare plants or significant natural community (see Appendix B).

None of the CEQR criteria for detailed natural resources analyses are met; significant adverse impacts to natural resources would not result, and no additional analysis is necessary.

Chapter 10: Hazardous Materials

This section addresses environmental conditions at the location of the proposed PS 70, hereafter referred to as the proposed project site. A Phase I Environmental Site Assessment (ESA) of the proposed project site was completed by TRC Engineers, Inc. (TRC) on behalf of the SCA in April 2015. The main objective of the Phase I ESA was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products which are defined in ASTM International (ASTM) Standard Practice E 1527-13 as recognized environmental conditions (RECs). In addition, other environmental issues or concerns such as radon, methane, and asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB)-containing equipment were evaluated. The Phase I ESA included a site inspection, a review of the existing data on geology and hydrology of the area, and a review of historical maps, local agency records, and other documents to assess past and current uses of the proposed project site and adjacent areas.

The Phase I ESA identified the following on-site recognized environmental conditions (RECs) associated with the site: the potential presence of fill material from demolition of structures; evidence of soil borings advanced on the site by others; the historic use of the site for manufacturing including silvering and varnishing, as a foundry, and as a laundry; the historic use of coal and oil for heating system fuels; and the potential presence of an on-site underground storage tank (UST). Identified off-site RECs with the potential to impact the site included: the use of nearby properties as a hat factory, for manufacturing, for woodworking, for automobile repair, for television repair, as a paint store and as a laundry; and, an adjacent upgradient property listed in regulatory agency databases for hazardous waste generation and historic auto repair. Additionally, environmental concerns include potential ACM, LBP and PCB-containing materials in existing and buried structures, and methane from historic landfilling near the site. A prior Phase II Environmental Site Investigation (ESI) was conducted at the proposed project site by Advanced Cleanup Technologies, Inc. (ACT) in May 2015 for the property owner, Victory Worldwide Transportation, Inc. The ACT Phase II ESI consisted of a geophysical survey; inspection of interior floor drains; the advancement of five soil borings; installation of one temporary well point south of the site building, one exterior soil vapor probe, and four sub-slab vapor probes; and the collection and laboratory analysis of soil, groundwater, and sub-slab vapor and soil vapor samples. The results of ACT's geophysical survey identified anomalies indicative of USTs. The ACT Phase II ESI sub-slab vapor and soil vapor sampling results identified several petroleum-related volatile organic compounds (VOCs) that were detected at concentrations exceeding New York State Department of Health (NYSDOH) published background concentrations. Several metals and pesticides were detected in soil at concentrations above New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives (SCOs). Additionally, the VOCs tetrachloroethene (PCE), acetone, and xylenes were detected in the soil sample collected from one floor drain at elevated concentrations, significantly exceeding Unrestricted Use SCOs. VOCs were not detected in the groundwater sample above NYSDEC Class GA Values.

A Phase II ESI for the proposed project site was completed by TRC on behalf of the SCA between April and August 2016 to assess the RECs and the environmental concern with respect to methane identified in the Phase I ESA and to further investigate the environmental conditions and findings in the prior ACT Phase II ESI.

A. Existing Conditions

The proposed project site is located at 45 Waverly Place/357 Targee Street, Staten Island, New York 10304. The legal description for the proposed project site is Block 635, Lot 1. The proposed project site consists of a 51,552-square foot lot containing a three-story building (which encompasses an approximately 19,400 square foot footprint) and a parking lot; the site is currently vacant.

The site was developed in 1898 with a three-story building located along Targee Street. Since 1898, the site has been occupied by clothing and furniture manufacturers, a laundry, and currently is occupied by a moving and storage company. Historic ancillary buildings and structures, including a foundry, a chimney, and a carpenter's shop, were demolished by the 1930s. The main portion of the site building is three stories, and there is a one-story attached garage on the north side and a one- to two-story attached building on the east side. The one- to two-story attached building on the east side contains three areas: a one-story storage area, a one-story former mechanic area, and a two-story portion referred to as the former "clock room."

The Phase II ESI consisted of geophysical surveys; inspection of two floor drains, truck scale manhole covers, and an underground structure (formerly identified as a "suspect dry well"); the advancement of soil borings, installation of temporary sub-slab vapor/soil vapor probes, and temporary groundwater monitoring wells; and the collection and laboratory analysis of a water sample from the underground structure and ambient air, soil vapor, sub-slab vapor, soil, and groundwater samples.

Fill material consisting of asphalt, ¾-inch sub-base material and crushed concrete was encountered at the proposed project site to a maximum depth of approximately one foot below ground surface (bgs). The subsurface below the identified fill material consisted of light brown and red silt and silty sand to the terminal depths of the borings which ranged from 20 to 60 feet bgs. Clay was identified in one boring, TRC-SB-8, at a depth of approximately 5.5 to 16.5 feet bgs. Perched groundwater was encountered at approximately 6 to 22 feet bgs and regional groundwater was encountered at approximately 33 to 35 feet bgs. The groundwater flow direction in the area of the site is expected to be to the east.

The geophysical survey identified a probable UST area (approximately 12 feet wide by 18 feet long) south of the site building. The presence of a UST was noted in the prior Phase II ESI completed by ACT; however, based on the results of the geophysical survey completed by TRC, this area may contain two USTs. An underground structure, approximately 6 feet in diameter and 8 feet deep was identified during the geophysical survey located south of the site building. This structure was noted as a suspect dry well in ACT's Phase II ESI; however, the function and historic use of this underground structure could not be confirmed. Additionally, three anomalies (one approximately 2.5 feet by 2.5 feet, one approximately 5 feet in diameter, and one approximately 6 feet in diameter) were identified within the site building. The anomaly identified in the southern portion of the site building (which was approximately 6 feet in diameter) was listed in ACT's Phase II ESI as a potential UST area; however, the geophysical survey completed by TRC did not indicate a UST was present in this area.

Elevated photoionization detector (PID) readings, visual and/or olfactory indications of contamination were not observed in soil borings, with the exception of samples collected from

TRC-SB-5 between depths of 7 to 9 feet bgs, TRC-SB-11 between 5 to 7.5 feet bgs, TRC-SB-12 between 8 to 10 feet bgs, and TRC-SB-14 between 7 to 9 feet bgs.

Fifteen discrete soil samples from 12 borings were analyzed for Target Compound List (TCL) and CP-51 listed VOCs plus tentatively identified compounds (TICs) by United States Environmental Protection Agency (EPA) Method 8260; TCL/CP-51 listed semi-volatile organic compounds (SVOCs) plus TICs by EPA Method 8270; PCBs by EPA Method 8082; Target Analyte List (TAL) metals (less Al, Ca, Fe, K, Mg, and Na) by EPA Method 6000/7000 series; and pesticides by EPA Method 8081. Additionally, eleven soil samples from ten borings were analyzed for herbicides by EPA Method 8151. Four additional soil samples from three borings were analyzed for TCL/CP-51 listed VOCs plus TICs and TCL/CP-51 listed SVOCs plus TICs. Additionally, in support of pre-design waste classification objectives, four soil samples from four borings were selected for laboratory analysis for total petroleum hydrocarbons (TPH) gasoline range organics (GROs) and TPH diesel range organics (DROs) by EPA Method 8015-modified, cyanide by EPA Method 9012, and hexavalent chromium EPA Method 7196. Based on the total analyte concentrations, two soil samples from two borings were selected for lead analysis by Toxicity Characteristic Leaching Procedure (TCLP). Five soil vapor samples and three sub-slab vapor samples were collected for analysis for a list of 26 petroleum and chlorinated solvent-related VOCs by USEPA Method TO-15 and methane by USEPA Method 3C. Five groundwater samples and one sample from the underground structure were analyzed for TCL/CP-51 listed VOCs plus TICs, TCL/CP-51 listed SVOCs plus TICs, unfiltered and field filtered TAL metals (less Al, Ca, Fe, K, Mg and Na), and PCBs. Additionally, one groundwater sample and the sample from the underground structure were analyzed for pesticides. One groundwater sample was analyzed for New York City Department of Environmental Protection (NYCDEP) Sewer Use Parameters. Two groundwater samples were analyzed for TCL/CP-51 VOCs plus TICs only.

A review of the soil vapor and sub-slab vapor sample analytical results indicated that petroleum- and chlorinated solvent-related VOCs were detected in sub-slab vapor and soil vapor at concentrations exceeding NYSDOH published background concentrations. PCE was detected above the NYSDOH Air Guideline Value (AGV) in one (1) soil vapor sample (TRC-SG-1) and one sub-slab vapor sample (TRC-SG-5). Soil samples collected from the borings advanced adjacent to these soil vapor/sub-slab vapor locations and analyzed during the Phase II ESI did not exhibit concentrations of PCE above the Unrestricted Use SCO. ACT indicated in their Phase II ESI report that PCE was detected at a concentration above the Unrestricted Use SCO in a soil sample collected from a floor drain in the former mechanic area. The highest concentration of PCE detected by TRC was in a sub-slab vapor sample collected in the former mechanic area. The detections of PCE in sub-slab vapor and soil vapor above the AGV may be attributable to historic on-site operations. Methane was not detected in any of the soil vapor/sub-slab vapor samples.

A review of the analytical results for the soil samples indicated that total xylenes were detected in one soil sample at a concentration slightly above the Unrestricted Use SCO and CP-51 SCL. No other VOCs were detected in the soil samples at concentrations above Unrestricted Use SCOs or CP-51 SCLs. No SVOCs or PCBs were detected in the soil samples at concentrations above Unrestricted Use SCOs or CP-51 SSCOs/SCLs. The metals chromium, copper, lead, mercury, nickel and zinc, and the pesticide 4,4'-DDT were detected in soil samples at concentrations above Unrestricted Use SCOs. The metals concentrations exceeding the regulatory criteria can be attributed to naturally occurring constituents, the characteristics of site soil and/or historic on-

site operations. The elevated pesticide concentration exceeding the Unrestricted Use SCO can be attributed to historic activities on the site. Two soil samples contained lead concentrations with the potential to exhibit the hazardous waste characteristic of toxicity for lead; therefore, the two samples were analyzed by the TCLP for lead. Lead was not detected at concentrations exceeding the TCLP regulatory limit. In support of pre-design waste characterization, four soil samples were selected for analysis for cyanide, hexavalent chromium, total petroleum hydrocarbons (TPH) diesel range organics (DROs) and TPH gasoline range organics (GROs). Hexavalent chromium and cyanide were not detected in the soil samples analyzed. TPH-DROs were detected in all four soil samples analyzed and TPH-GROs were not detected in any of the soil samples analyzed. There are no applicable regulatory comparison criteria for TPH. TPH results provide information on soil disposal options for soil excavated for construction, since regional disposal facilities typically require TPH analyses prior to accepting soil for disposal. The TPH results will not affect potential soil disposal options.

A review of the groundwater sample analytical results indicated that the VOC chloroform was detected at concentrations marginally above its Class GA Value in groundwater. Chloroform is commonly found in potable drinking water as a by-product of chlorination. Based on the absence of detections of chloroform in soil samples, the presence of this compound slightly above the Class GA Value is attributed to historic on-site operations (i.e., leaking water pipes or dry wells). SVOCs were detected in three groundwater samples at concentrations exceeding Class GA Values. Several metals were detected in two unfiltered groundwater samples at concentrations exceeding Class GA Values. However, in filtered groundwater samples, only manganese and nickel were detected above Class GA Values in two groundwater samples. The SVOCs and metals detected in unfiltered groundwater at concentrations above Class GA Values may be attributed to an off-site source or the characteristics of site soil. PCBs and pesticides were not detected at concentrations above the Class GA Values in any of the groundwater samples. One groundwater sample collected at the site was analyzed for NYCDEP Sewer Use Discharge Limits. Total suspended solids were detected above the NYCDEP Sewer Use Discharge Limits. There were no other parameters detected above the NYCDEP Sewer Use Discharge Limits.

One sample of standing water was collected from the underground structure located south of the site building. The function and historic use of this underground structure is not known, it may be a former sanitary or drainage feature. There were no VOCs, PCBs, or pesticides detected above Class GA Values in the standing water sample. SVOCs and metals (antimony, arsenic, chromium, lead, manganese and mercury) in the unfiltered standing water sample were detected at concentrations exceeding Class GA Values. The metals concentrations in a filtered sample of the standing water did not exceed Class GA Values. The concentrations of metals detected in the unfiltered sample above Class GA Values and the concentrations of SVOCs detected above Class GA Values are likely attributable to the historic use of the underground structure and/or the characteristics of suspended solids in the standing water.

B. The Future Without the Project

Without the proposed project, the project site is expected to remain in its current condition and it would not be developed with the proposed PS 70 school building.

C. Potential Effects of the Proposed Project

The proposed project would not result in impacts from contaminated media and building materials. For the site to be suitable for construction of a public school, a vapor barrier and sub-slab depressurization system would be incorporated into the foundation design. The USTs and underground structures would be cleaned and removed and confirmatory endpoint samples would be collected. Excavated soil would be characterized to identify material handling, reuse, and/or disposal requirements; and, two feet of environmentally clean fill would be placed over all landscaped areas. Any dewatering necessary during construction activities would be performed in accordance with applicable local, State, and Federal regulations. Suspect asbestos-containing material (ACM), lead-based paint (LBP), and/or polychlorinated biphenyl- (PCB-) containing building materials, including buried structures, affected by site development, would be properly managed. In addition, to minimize any potential for exposure by construction workers and the surrounding public, standard industry practices, including appropriate health and safety measures, would be utilized. With the implementation of these measures, there would be no significant potential for significant adverse effects related to hazardous materials.

Chapter 11: Water and Sewer Infrastructure

The *CEQR Technical Manual* sets the following relevant criteria for the preparation of a detailed infrastructure assessment: if an action would have an exceptionally large water requirement (greater than 1 million gallons per day), or is located in a portion of the water supply distribution system known to have limited supply capacity, a detailed analysis is appropriate. For water usage, the proposed action would need to meet the CEQR criteria of demanding a very large quantity of water, which is not typical of school projects. Therefore, no detailed analysis of water supply is needed.

Stormwater management can be a concern if it transmits new or increased levels of pollutants to the City's water bodies, such as may occur as a result of industrial facilities, large impervious surfaces or project activities or construction that would increase the potential for soil erosion and sedimentation of water bodies. The *CEQR Technical Manual* lists industrial activities that may require assessment and indicates that clearing, grading and excavation activities affecting an area of less than five acres (and not also part of a larger plan of development) would not require a State Pollution Discharge Elimination System (SPDES) permit.

A. Existing Conditions

Publicly-supplied infrastructure includes water, sewage, and solid waste services. Privately-supplied infrastructure includes electrical and gas service, as well as telephone service.

Water Supply. Water is supplied to the site from the Delaware and Catskill reservoir systems through New York City's municipal water distribution system, which has a cumulative storage capacity of 550 billion gallons. Within the City, a grid of underground distribution mains provide potable water for both process and sanitary requirements, and also supply fresh water for the proposed school's fire sprinkler system. Water pressure throughout the City system is generally about 20 pounds per square inch (psi), which, according to the *CEQR Technical Manual*, is the minimum pressure acceptable for uninterrupted service.

The existing building on the project site is currently unoccupied; therefore, there is currently no on-site water usage.

Storm/Sanitary Sewers. The site is located within the Port Richmond Wastewater Treatment Plant (WWTP) drainage area, which serves the northern portion of Staten Island. The Port Richmond WWTP is permitted to treat 60 million gallons per day (mgd). Effluent from the plant is regulated by NYSDEC under SPDES.

Sanitary wastewater generated at the project site is currently discharged to the New York City sewer system, which carries wastewaters to the Port Richmond WWTP.

There is currently no sanitary wastewater generation at the project site since the on-site building is unoccupied.

B. The Future Without the Project

Without the proposed action, no substantial change is expected with regard to water usage and sewage flow at the project site.

C. Potential Effects of the Proposed Project

Water Supply. According to the *CEQR Technical Manual*, each occupied school seat is estimated to consume approximately 10 gallons per day (gpd) of water, and it is assumed each staff member would consume approximately 10 gpd. In addition, 0.17 gpd would be required per square foot of space for air conditioning an educational facility. The proposed school would include approximately 748 seats and 75 faculty and staff, and thus, daily water usage would be approximately 7,480 gpd for students and 750 gpd for staff, for a total of 8,230 gpd. The proposed school building would contain approximately 96,307 gsf, and thus, would consume an additional 16,372 gpd for air conditioning, for a total of 24,602 gpd during the cooling season. No significant adverse impacts to water supply would result.

Storm/Sanitary Sewers. The amount of sewage generated by the proposed school would be approximately 8,230 gpd, and would be minimal in comparison to the treatment plant's permitted capacity; no adverse impacts would result, and no further analysis is warranted.

Chapter 12: Solid Waste and Sanitation Services

A solid waste assessment determines whether a proposed project would cause a substantial increase in solid waste production that would overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP) or with state policy related to the City's integrated solid waste management system. According to the *CEQR Technical Manual*, if a project's generation of solid waste in the With-Action condition would not exceed 50 tons per week, it may be assumed that there would be sufficient public or private carting and transfer station capacity in the metropolitan area to absorb the increment, and further analysis generally would not be required. The *CEQR Technical Manual* recommends that the solid waste to be generated by a project be disclosed, using the citywide average rates for solid waste generation.

A. Existing Conditions

Solid waste collection and disposal is the responsibility of the New York City Department of Sanitation (DSNY) and private carters. DSNY is responsible for collecting and disposing of solid waste from public facilities and residences while commercial entities must retain private carters.

As the project site consists of an unoccupied structure, there is currently no solid waste generated on the project site.

B. The Future Without the Project

Without the proposed action, no substantial change is expected with regard to solid waste generation at the project site. No solid waste would be generated at the project site without the proposed project.

C. Potential Effects of the Proposed Project

Using the solid waste generation rates for a public primary school use, which is 3 pounds per pupil per week and 13 pounds per employee (office building rate), the proposed school would generate approximately 3,219 pounds of solid waste per week, or 13,796 pounds per month.

DSNY is responsible for collecting and disposing of solid waste from residences and public facilities, including schools. The typical DSNY collection truck for commercial carters typically carries between twelve and fifteen tons of waste material per truck. Therefore, with 3,219 pounds of solid waste per week, or 13,796 pounds per month, to be generated by occupants of the proposed school facility, there would be no significant adverse impact anticipated with solid waste collection and disposal.

Chapter 13: Energy

Energy analyses are appropriate when an action could significantly affect the transmission or generation of energy, or generate substantial indirect consumption of energy. A detailed assessment of energy impacts would be limited to projects that may significantly affect the transmission or generation of energy. Although significant adverse energy impacts are not anticipated for the great majority of projects analyzed under CEQR, a discussion of the proposed school's projected amount of energy consumption during long-term operation is discussed below.

A. Existing Conditions

The neighborhood surrounding the project site along with other parts of New York City is supplied with electricity by the Consolidated Edison Company of New York (Con Edison), and natural gas by National Grid. Both Con Edison and National Grid are state-regulated and have sufficient capacity to meet the area's electrical and natural gas needs. Both companies can increase their capacities by purchasing from other utility companies. Energy demand for the proposed project consists of the building loads for heating, ventilation, and air conditioning (HVAC) systems, and for lighting and other electrical power.

Currently, the structure on the project site is unoccupied and creates no demand for energy.

B. The Future Without the Project

Without the proposed action, no substantial change is expected with regard to energy demand at the project site and, therefore, there would be no demand for energy at the project site in the future without the proposed project.

C. Potential Effects of the Proposed Project

Electrical utility service would continue to be provided by Con Edison and natural gas from National Grid. The proposed project would be required to comply with the New York State Energy Conservation Construction Code. This code governs performance requirements for heating, ventilation, and air conditioning systems, as well as the exterior building envelope. The code, promulgated on January 1, 1979, pursuant to Article Eleven of the Energy Law of the State of New York, requires that new and recycled buildings (both public and private) be designed to ensure adequate thermal resistance to heat loss and infiltration. Consequently, the proposed school facility is expected to be substantially more energy efficient than conventional pre-code buildings. In addition, it provides requirements for the design and selection of mechanical, electrical, and illumination systems.

The proposed project would incorporate energy conservation measures. The proposed project has been designed following the NYC Green Schools Rating System (guidelines specific to the design, construction and operation of New York City public school buildings) and is in compliance with site-related credits to achieve a LEED-certified or higher rating.

The proposed project would include the creation of new educational space plus support facilities, staff support spaces, food service and related building support services. Following construction, the new school is expected to consume approximately 250,700 BTUs per square foot per year. Therefore, the estimated annual usage of energy for the proposed approximately 96,307 gsf school facility would be approximately 24.1 billion BTUs, or 18.1 billion BTUs for the nine-month academic year. Nonetheless, the proposed PS 70 would neither affect transmission or generation of energy, nor generate substantial indirect consumption of energy. It is expected that no significant adverse impacts would occur with the capacity of both Con Edison and National Grid to provide service to the project site and surrounding area.

Chapter 14: Transportation

This chapter analyzes the potential traffic, transit, parking, and pedestrian impacts of the proposed PS 70 at 45 Waverly Place/357 Targee Street on Staten Island within CSD No. 31. A study area was defined that considered site location, potential access points to the school, primary streets serving the general area, and key intersections likely to be affected by school-generated trips.

A. Existing Conditions

Roadway Network. The traffic study area comprises nine intersections (four signalized and five unsignalized) along Targee Street and Osgood and Vanderbilt avenues on Staten Island. The following analysis considers the intersections near the site that are most likely to be affected by the project-generated traffic (see Figure 14-1). These include:

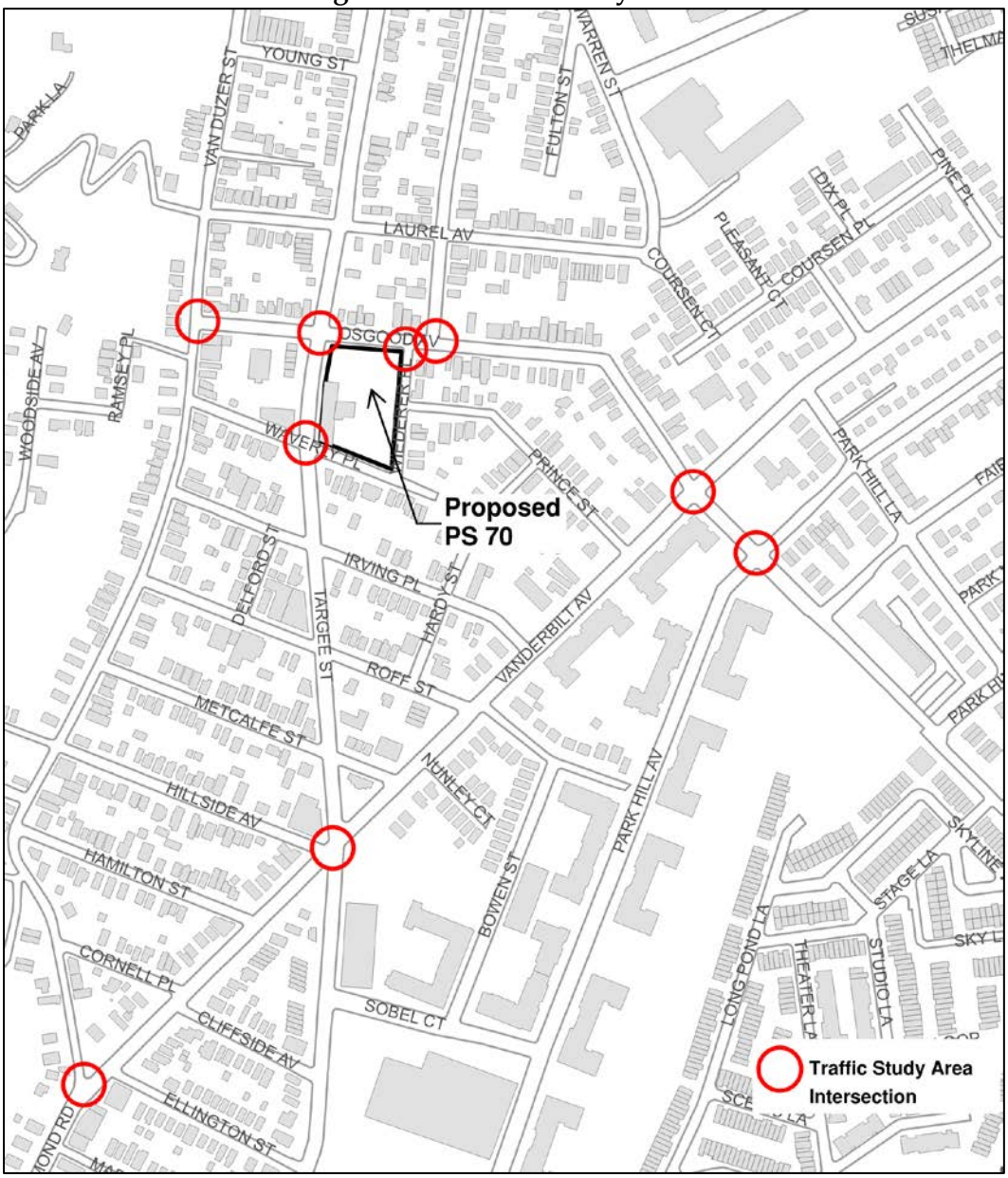
- Osgood Avenue and Van Duzer Street (unsignalized)
- Osgood Avenue and Targee Street (signalized)
- Osgood Avenue and Gordon Street (unsignalized)
- Osgood Avenue and Park Hill Avenue (unsignalized)
- Osgood Avenue and Wiederer Place (unsignalized)
- Vanderbilt Avenue and Van Duzer Street (signalized)
- Vanderbilt Avenue and Targee Street (signalized)
- Vanderbilt Avenue and Osgood Avenue (signalized)
- Targee Street and Waverly Place (unsignalized)

The physical and operational characteristics of the main travel routes in the PS 70 study area are as follows:

- Targee Street is a one-way northbound principal arterial that carries traffic between Richmond Road, south of the Staten Island Expressway, to Van Duzer Street to the north. This roadway operates with two travel lanes and curbside parking on both sides of the street.
- Van Duzer Street is a north-south roadway that operates between Victory Boulevard and Richmond Road, primarily running parallel to Targee Street in the vicinity of the proposed school site. Van Duzer Street intersects with Targee Street to the north of the study area. South of Targee Street, Van Duzer Street operates one-way southbound with one travel lane and areas of curbside parking on the west side of the street. North of Targee Street, Van Duzer Street primarily operates one-way northbound towards Victory Boulevard, with a connection also provided to Bay Street.
- Vanderbilt Avenue is a northeast-southwest roadway that extends between Van Duzer and Bay streets. This roadway operates with one travel lane in each direction with curbside parking on both sides of the street.
- Osgood Avenue is a two-way local street with a single travel lane and curbside parking in both directions. It generally runs east-west through the study area from Van Duzer Street to Mosel Avenue.

- Waverly Place is a narrow (30-foot wide), two-way local street with a single travel lane and curbside parking in both directions. It runs east-west through the study area from Van Duzer Street to a dead-end just east of Wiederer Place.
- Wiederer Place is a narrow (24-foot wide), two-way local street with a single travel lane per direction and curbside parking on the east side of the street. The street runs north-south on the east side of the proposed school site from Osgood Avenue to Waverly Place.

Figure 14-1: Traffic Study Area



Traffic Conditions. Traffic counts, including manual turning movement and vehicle classification counts at the study area intersections, as well as 24-hour automatic traffic recorder (ATR) machine counts, were conducted on:

- Osgood Avenue at Van Duzer Street, Targee Street, Wiederer Place, Gordon Street, and Park Hill Avenue
- Vanderbilt Avenue at Van Duzer Street, Targee Street, and Osgood Avenue
- Targee Street at Waverly Place

These counts were conducted during the week of November 14, 2016 while schools were in session.[2] The peak periods identified for analysis and counted for this project were the weekday AM and mid-afternoon PM peak periods when travel to and from the school would be busiest. A review of the manual count data and the 24-hour ATR data indicated that traffic volumes peak between 7:30 and 8:30 AM in the morning, and between 2:45 and 3:45 PM in the afternoon (see Appendix C – Supplementary Traffic Data for ATR and manual count data).

There is a substantial range of traffic volumes through the study area on the local and arterial streets during both peak periods (see Figures 14-2 and 14-3). The highest traffic volumes are carried along the northbound Targee Street, with up to 1,090 vehicles per hour (vph) in the northbound direction during the AM peak hour and 875 vph during the PM peak hour. Southbound Van Duzer Street generally processes between 700 and 800 vph during the peak hours. The remaining roadways in the study area carry a range of 150 to 450 vph per direction during the AM and PM peak hours.

[2] The Osgood Avenue and Park Hill Avenue intersection was counted on Tuesday, December 6, 2016, and data were adjusted to match the November 2016 traffic counts. The Targee Street at Waverly Place and Osgood Avenue at Wiederer Place intersections were counted on Thursday, February 15, 2018, and data were adjusted to match the November 2016 traffic counts.

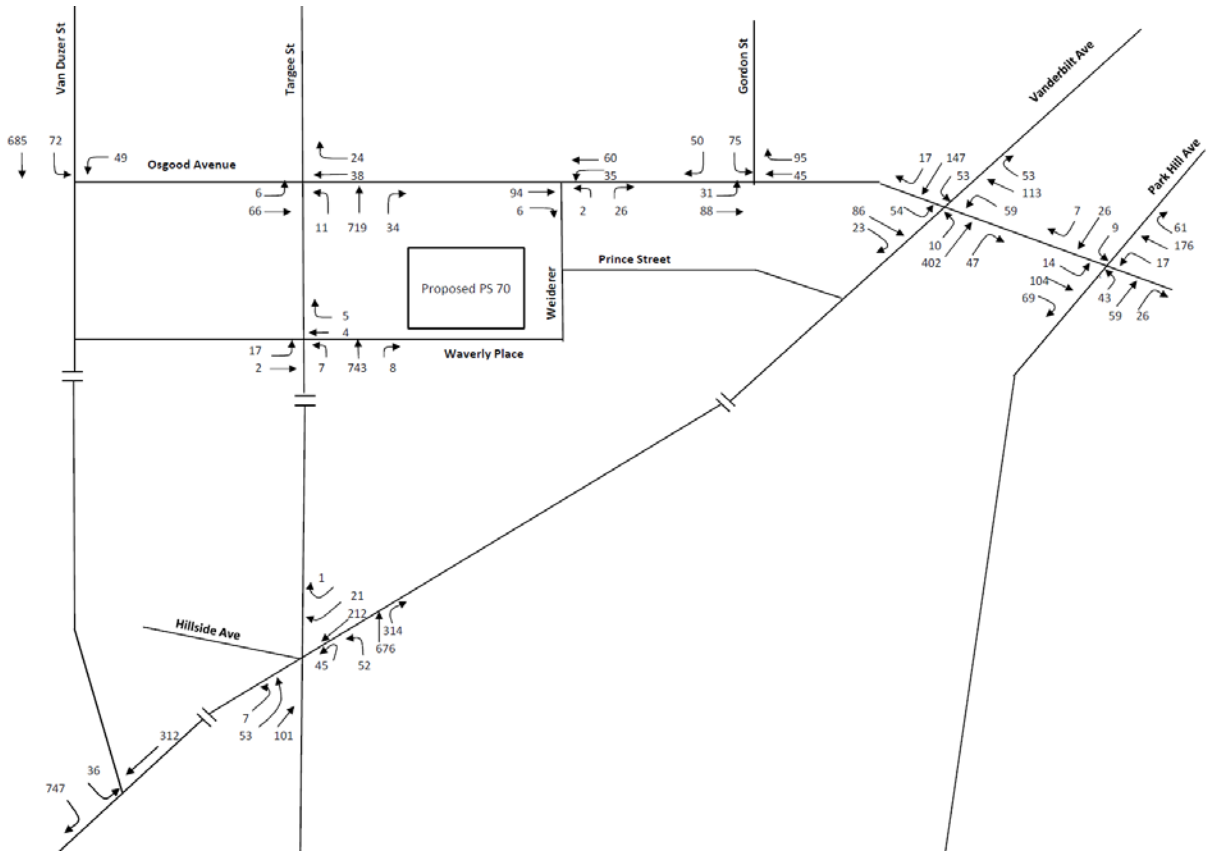


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Figure 14-2: 2016 Existing Conditions AM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

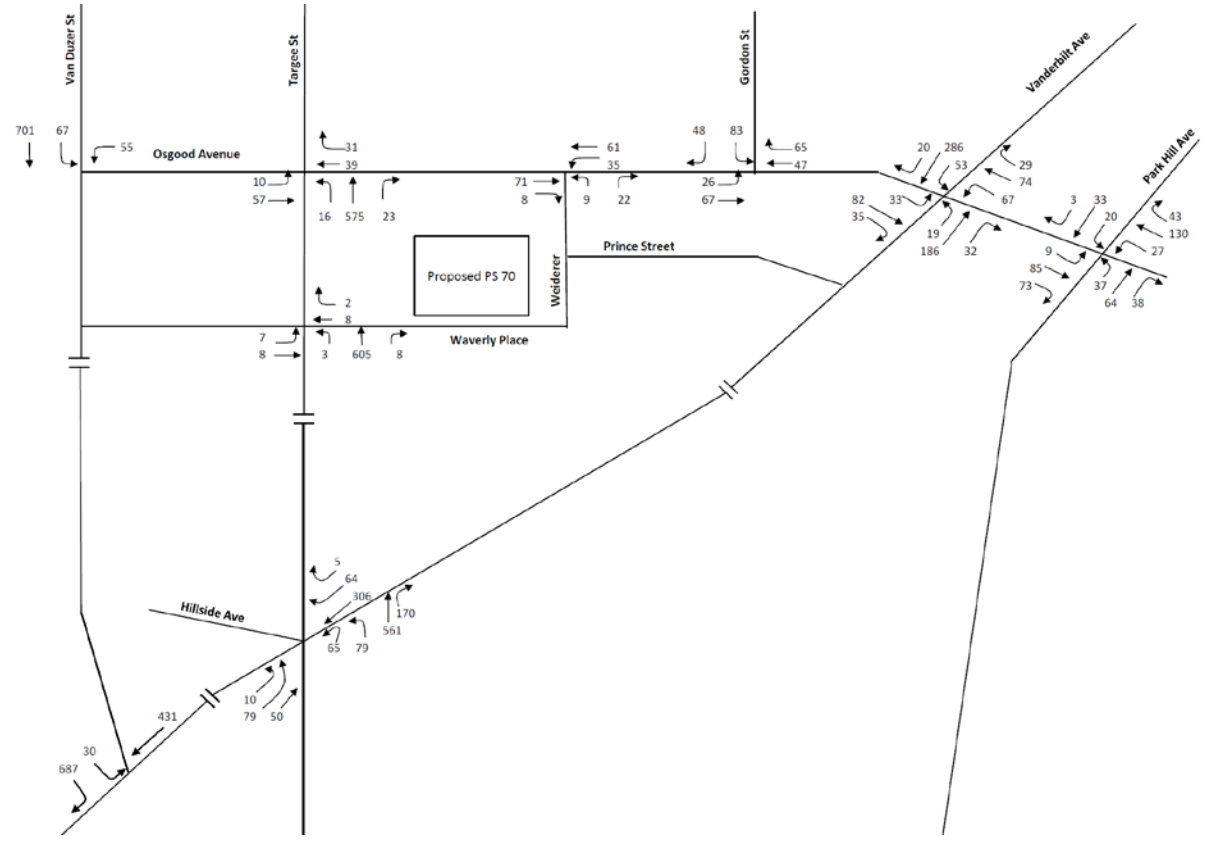

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Figure 14-3: 2016 Existing Conditions PM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

Analysis Methodology and Results. The *Highway Capacity Manual 2000 (HCM2000)* procedures were used to determine the capacities and levels of service for each of the intersections comprising the traffic study area. For a signalized intersection, levels of service are determined for the intersection and its individual lane groups and are defined in terms of the average control delays experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the intersection or lane group is saturated.

The delay levels for signalized intersections are detailed below.

- LOS A describes operations with very low delay, i.e., up to 10 seconds 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 delay in the range of 10 to 20 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 delay in the range of 20 to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping at an intersection is significant at this level, although many still pass through without stopping.
- LOS D describes operations with delay in the range of 35 to 55 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 that do not stop declines.
- LOS E describes operations with delay in the range of 55 to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios.
- LOS F describes operations with delay in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume-to-capacity ratios with cycle failures. Poor progression and long cycle lengths may also be contributing to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

The LOS thresholds for unsignalized intersections differ slightly from those for signalized intersections. Delay levels for unsignalized intersections are detailed below.

- LOS A describes operations with very low delay, i.e., up to 10 seconds per vehicle. This generally occurs when little or no delay is experienced at the intersection.
- LOS B describes operations with delay in the range of 10 to 15 seconds per vehicle. This generally occurs when short traffic delays are experienced at the intersection.
- LOS C describes operations with delay in the range of 15 to 25 seconds per vehicle. This generally occurs when average traffic delays are experienced at the intersection.
- LOS D describes operations with delay in the range of 25 to 35 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable, and longer traffic delays are experienced.

- LOS E describes operations with delay in the range of 35 to 50 seconds per vehicle. At LOS E, there is obvious congestion, and very long traffic delays are experienced at the intersection.
- LOS F describes operations with delay greater than 50 seconds per vehicle. At LOS F, there is heavy congestion, and excessive traffic delays are experienced at the intersection.

For both signalized and unsignalized intersections, LOS A, B, and C are considered acceptable; LOS D is considered marginally acceptable/unacceptable for delays shorter than or equal to/longer than those at mid-LOS D; and LOS E and F are considered unacceptable.

Each of the intersections comprising the traffic study area was analyzed in terms of its capacity to accommodate existing traffic volumes as defined by the resulting levels of service (see Appendix C – Supplementary Traffic Data for HCS analysis). The analyses showed that most of the intersections in the project study area operate at acceptable levels during both the AM and PM peak analysis hours – with overall operations at LOS mid-D or better (see Table 14-1); however, the following movements operate with some congestion:

- East and westbound Osgood Avenue at Targee Street operate at LOS D during the AM peak hour, with delays of 48.1 seconds. This marginally poor LOS condition is primarily attributed to Osgood Avenue receiving less than 20 percent of the available green time within a 120-second signal cycle.
- East and westbound Osgood Avenue at Vanderbilt Street operate at LOS D and E, respectively, during the AM peak hour. Again, this is primarily attributed to Osgood Avenue receiving less than 35 percent of the available green time within a 120-second signal cycle.
- Eastbound Vanderbilt Avenue at Targee Street operates at LOS F condition for the AM peak hour. Vanderbilt Avenue is a one-lane roadway, with more than one-third of eastbound vehicles turning left. Westbound Vanderbilt Avenue at Targee Street operates at LOS D during the AM peak hour with a control delay of 51.5 seconds.
- Westbound Vanderbilt Avenue at Van Duzer Street operates at LOS D and E during the AM and PM peak hours, respectively.

Table 14-1: 2016 Existing Conditions Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Osgood Avenue and Targee Street								
Osgood Avenue	EB	LT	0.37	48.1	D	0.25	30.0	C
	WB	TR	0.36	48.1	D	0.31	31.4	C
Targee Street	NB	LTR	0.35	5.9	A	0.33	7.2	A
Overall Intersection		-		**13.1**	**B**		**11.9**	**B**
Osgood and Vanderbilt avenues								
Osgood Avenue	EB	LTR	0.67	47.2	D	0.48	27.4	C
	WB	LTR	0.86	63.8	E	0.58	31.2	C
Vanderbilt Avenue	NB	LTR	0.58	17.1	B	0.38	13.3	B
	SB	LTR	0.34	12.9	B	0.62	17.9	B
Overall Intersection		-		**32.1**	**C**		**20.8**	**C**
Vanderbilt Avenue and Targee Street								
Vanderbilt Avenue	EB	LT	1.00	107.8	F	0.69	36.5	D
	WB	TR	0.73	51.5	D	0.80	34.9	C
Targee Street	NB	LTR	0.67	19.2	B	0.77	28.3	C
Overall Intersection		-		**35.5**	**D**		**31.2**	**C**
Vanderbilt Avenue and Van Duzer Street								
Vanderbilt Avenue	WB	T	0.72	46.6	D	0.90	62.3	E
Van Duzer Street	SB	LR	0.32	11.4	B	0.26	10.7	B
		R	0.66	17.8	B	0.55	15.1	B
Overall Intersection		-		**24.5**	**C**		**32.3**	**C**
Unsignalized								
Targee Street and Waverly Place								
Waverly Place	EB	LT	0.08	14.0	B	0.04	14.2	B
	WB	TR	0.04	14.7	B	0.04	14.8	B
Targee Street	NB	LTR	0.01	7.3	A	0.00	7.4	A
Osgood Avenue and Wiederer Place								
Osgood Avenue	WB	LT	0.04	7.7	A	0.03	7.7	A
Wiederer Place	NB	LR	0.05	9.4	A	0.04	10.0	A
Osgood Avenue and Gordon Street								
Osgood Avenue	EB	LT	0.03	7.7	A	0.02	7.6	A
Gordon Street	SB	LR	0.20	11.1	B	0.21	10.9	B
Osgood Avenue and Van Duzer Street								
Osgood Avenue	WB	L	0.22	21.6	C	0.23	20.8	C
Van Duzer Street	SB	LT	0.05	7.4	A	0.04	7.4	A
Osgood and Park Hill avenues								
Osgood Avenue	EB	LTR	0.02	8.4	A	0.01	8.1	A
	WB	LTR	0.02	8.3	A	0.03	8.3	A
Park Hill Avenue	NB	LTR	0.43	23.3	C	0.40	20.4	C
	SB	LTR	0.15	18.4	C	0.20	18.5	C

1. "Mvt." refers to the specific intersection approach lane(s) and how the lane(s) operate and/or specific pavement striping. TR is a combined through- right turn lane(s), R or L refers to exclusive right- or left-turn movement lane(s), and LTR is a mixed lane(s) that allows for all movement types.
2. V/C is the volume-to-capacity ratio for the Mvt. listed in the first column. Values above 1.0 indicate an excess of demand over capacity.
3. Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group listed in the Mvt. Column as noted in the 2000 HCM - TRB.
4. The delay calculations for signalized intersections represent the average control delay experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the lane group is saturated.
5. LOS for unsignalized intersections is based upon total average delay per vehicle (sec/veh) for each lane group listed in the Mvt. column as noted in the 2000 HCM -TRB.

Parking. The parking study area is within a quarter-mile (a typical "walkable" radius) of the proposed school site, and is bounded by Broad Street to the north, Van Duzer Street to the east, Hamilton Street and Sobel Court to the south, and Fairway Avenue to the west. The quarter-mile radius extends farther east beyond Van Duzer Street; however, this area is extremely steep with limited on-street parking and is not included in the walkable distance. There are no alternate-side curbside parking restrictions posted within the study area. One and two-hour parking regulations are posted along some blocks of Targee Street. No hourly parking spaces were included in the parking capacity of the study area since the allowable time in these spaces is limited, and therefore, these spaces would be unavailable to school-generated traffic.

An on-street parking survey was conducted on a representative midweek day to determine the number of spaces within an acceptable walking distance (i.e., a quarter-mile radius) of the proposed school site (see Appendix C – Supplementary Traffic Data for parking data). Based on the survey, there are approximately 1,404 legal on-street parking spaces within a reasonable walking distance of the project. The supply for on-street parking spaces has an available existing capacity of 389 spaces (see Table 14-2).

Table 14-2: 2016 Existing On-Street Parking Supply and Demand

Parking Parameter	Weekday
Parking-Space Supply	1,404
Demand (Occupancy Rate)	1,015 (72%)
Spaces Available (Rate)	389 (28%)

Transit and Pedestrians. The area is served by New York City Transit (NYCT), with three local bus routes providing access to the study area. The S74 bus route travels south along Van Duzer Street (one block west of the proposed school site) and north along Targee Street (adjacent to the proposed school site). The S74 bus stops closest to the proposed school site and that students are most likely to use are on Targee Street north of Osgood Avenue and Van Duzer Street north of Waverly Place. Additionally, the S76/S86 route between Oakwood Beach and the St. George Ferry Terminal runs north and south along Vanderbilt Avenue, with north and southbound stops at the intersection of Osgood Avenue, two blocks east of the proposed school site.

Pedestrian flow operating conditions were evaluated using *HCM2000* methodologies and the NYCDOT-approved Excel spreadsheet. The congestion levels of a pedestrian facility are determined by considering pedestrian volumes; measuring the sidewalk, passageway, or crosswalk width; determining the available pedestrian capacity; and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with the LOS standards for flow, measured in terms of either pedestrian space or delay.

At interrupted-flow facilities, such as signalized and stop-controlled intersections, crosswalk and corner operations are often based on crosswalk time-space and pedestrian space, respectively, which are the average effective area per pedestrian of the analyzed element, measured in square feet per pedestrian (sf/ped). The levels of service for all crosswalk elements at a signalized intersection and for all corner elements at both a signalized and unsignalized intersection are defined in terms of these spaces. LOS A occurs when the average time or pedestrian space is greater than 60 sf/ped. LOS B, C, and D occur when the space is in the range of 40 to 60, 24 to 40, and 15 to 24 sf/ped, respectively. LOS E is capacity for a space from eight to 15 sf/ped. LOS F describes jammed conditions with an average space of eight sf/ped or less.

Pedestrian counts were performed in 15-minute intervals during the AM and PM peak periods for all corners and crosswalks at the intersections of Targee Street and Osgood Avenue, Targee Street and Waverly Place, and Osgood Avenue and Wiederer Place. Pedestrian counts were also performed on the east sidewalk of Targee Street and the south sidewalk of Osgood Avenue on the block of the proposed school site.

Pedestrian counts at the study intersections indicate that existing volumes are very low during the peak study periods (see Appendix C – Supplementary Traffic Data for pedestrian count data and analysis). During both AM and PM peak 15-minute periods, the south crosswalk at Targee Street and Osgood Avenue was the most utilized, processing 42 pedestrians during the PM peak hour. All other crosswalks processed 20 or fewer pedestrians during the peak hours. There are no north and south crosswalks on Targee Street at Waverly Place, as this intersection is stop-controlled only on the minor street of Waverly Place, and traffic on Targee Street does not stop. Additionally, there are no east and west crosswalks on Osgood Avenue at Wiederer Place. All analyzed crosswalks, sidewalks, and corners at the intersection of Targee Street and Osgood Avenue currently operate at acceptable LOS conditions (see Table 14-3).

Table 14-3: 2016 Existing Pedestrian Conditions

Intersection and Element	AM Peak		PM Peak	
	Average Space (sf/ped)	LOS	Average Space (sf/ped)	LOS
Osgood Avenue and Targee Street				
Northeast Corner	1,205	A	842	A
Southeast Corner	753	A	417	A
Southwest Corner	716	A	356	A
Northwest Corner	876	A	478	A
North Crosswalk	1,042	A	611	A
East Crosswalk	3,017	A	1,993	A
South Crosswalk	628	A	305	A
West Crosswalk	3,683	A	2,000	A
Southeast Corner - South Sidewalk	7,200	A	731	A
Southeast Corner - East Sidewalk	1,335	A	1,355	A

Note: Average Space is based on the assumption that pedestrians distribute themselves uniformly throughout the effective crosswalk and corner space. LOS designations are based on average pedestrian space expressed as square feet per pedestrian (sf/ped).

Safety. A review of the crash data provided from NYCDOT for the most recent three-year period of 2012 through 2014 indicated that the study intersections along the predominant school walk routes to/from the proposed school site experienced fewer than five pedestrian/bicycle-type crashes in any consecutive twelve-month period (see Appendix C – Supplementary Traffic Data for NYCDOT crash data). According to the *CEQR Technical Manual,* a high-crash location is one where there were 48 or more total crashes or five or more pedestrian/bicycle injury crashes in any consecutive twelve month period. None of the study area intersections are high-crash locations (see Tables 14-4 and 14-5).

Table 14-4: 2012-2014 Crash Summary

Intersection		Crashes, 2012-2014				Injuries	Fatalities
		Total	Motor Vehicle	Pedestrian	Bicycle		
Osgood Avenue	Van Duzer Street	1	0	1	0	1	0
	Targee Street	3	3	0	0	2	0
	Wiederer Place	1	0	0	1	1	0
	Gordon Street	2	1	1	0	2	0
	Park Hill Avenue	9	7	2	0	7	2
Targee Street	Vanderbilt Avenue	16	8	7	1	18	0
Vanderbilt Avenue	Osgood Avenue	5	4	1	0	10	0
	Van Duzer Street	3	3	0	0	2	0
Wiederer Place	Prince Street	0	0	0	0	0	0

Table 14-5: 2012-2014 Detailed Crash Summary by Year

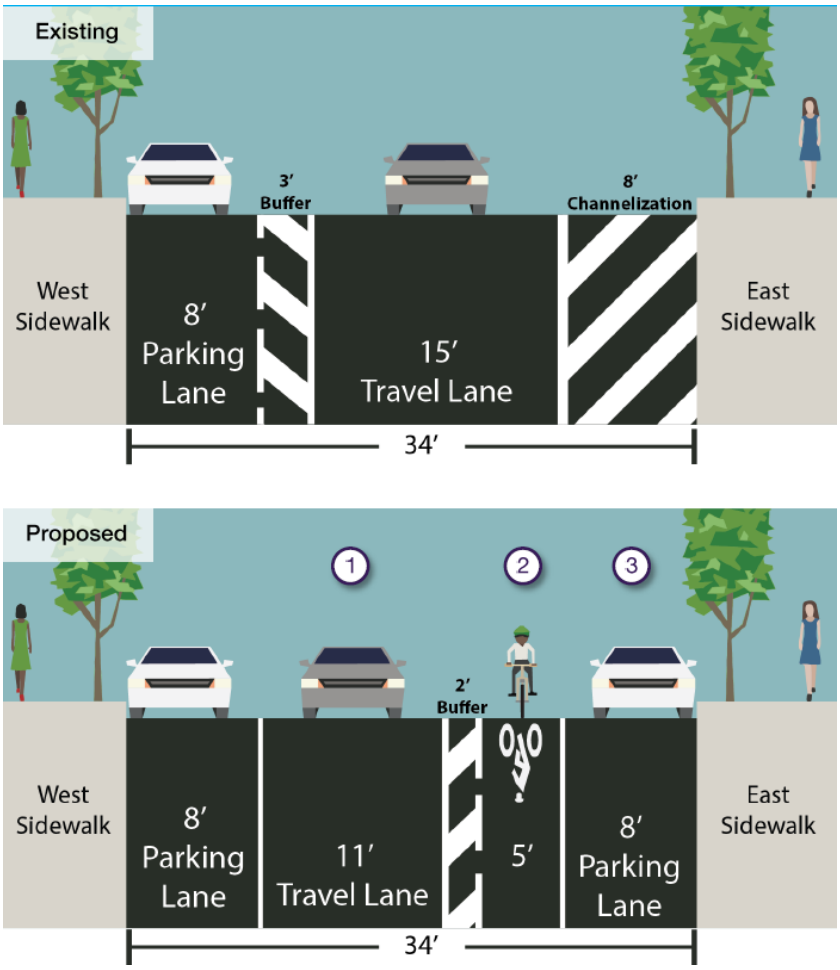
Intersection		Crashes												Injuries			Fatalities		
		Total			Motor Vehicle			Pedestrian			Bicycle								
		2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Osgood Avenue	Van Duzer Street	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
	Targee Street	1	0	2	1	0	2	0	0	0	0	0	0	0	0	2	0	0	0
	Wiederer Place	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	Gordon Street	0	1	1	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0
	Park Hill Avenue	5	3	1	4	2	1	1	1	0	0	0	0	3	3	1	1	1	0
Targee Street	Vanderbilt Avenue	2	6	8	1	3	4	1	2	4	0	1	0	2	9	7	0	0	0
Vanderbilt Avenue	Osgood Avenue	1	1	3	1	1	2	0	0	1	0	0	0	1	5	4	0	0	0
	Van Duzer Street	2	1	0	2	1	0	0	0	0	0	0	0	2	0	0	0	0	0
Wiederer Place	Prince Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The study area is located within an NYCDOT Vision Zero Priority Area. Vanderbilt Avenue has been identified as a Priority Corridor; however no Vision Zero Priority Intersections are located within the study area. A pedestrian safety assessment has been prepared and is included in Appendix D – Pedestrian Safety Assessment.

On January 19, 2017, NYCDOT presented to Staten Island Community Board 1 the *Van Duzer Street Corridor Transportation Improvements* plan. The plan, as part of NYCDOT's Vision Zero initiative, details improvements along Van Duzer and Targee Streets, specifically at six intersections along the Van Duzer Street corridor to address speeding concerns. The plan proposes improvements to transportation conditions for all users along the Van Duzer Street corridor including improvements to discourage vehicle speeding, improve intersection geometries, and add parking, crosswalks, and bicycle routes.

The plan seeks to improve pedestrian access issues along the corridor such as long crossing distances, long distances between pedestrian crossings, and sidewalks ending without pedestrian crossings. Excess channelization of roads, excess travel lanes, and complex intersection designs were identified to result in limited parking along the corridor. The potential for the addition of bicycle lanes, to help calm traffic and improve non-motorized access, has also been proposed along the corridor.

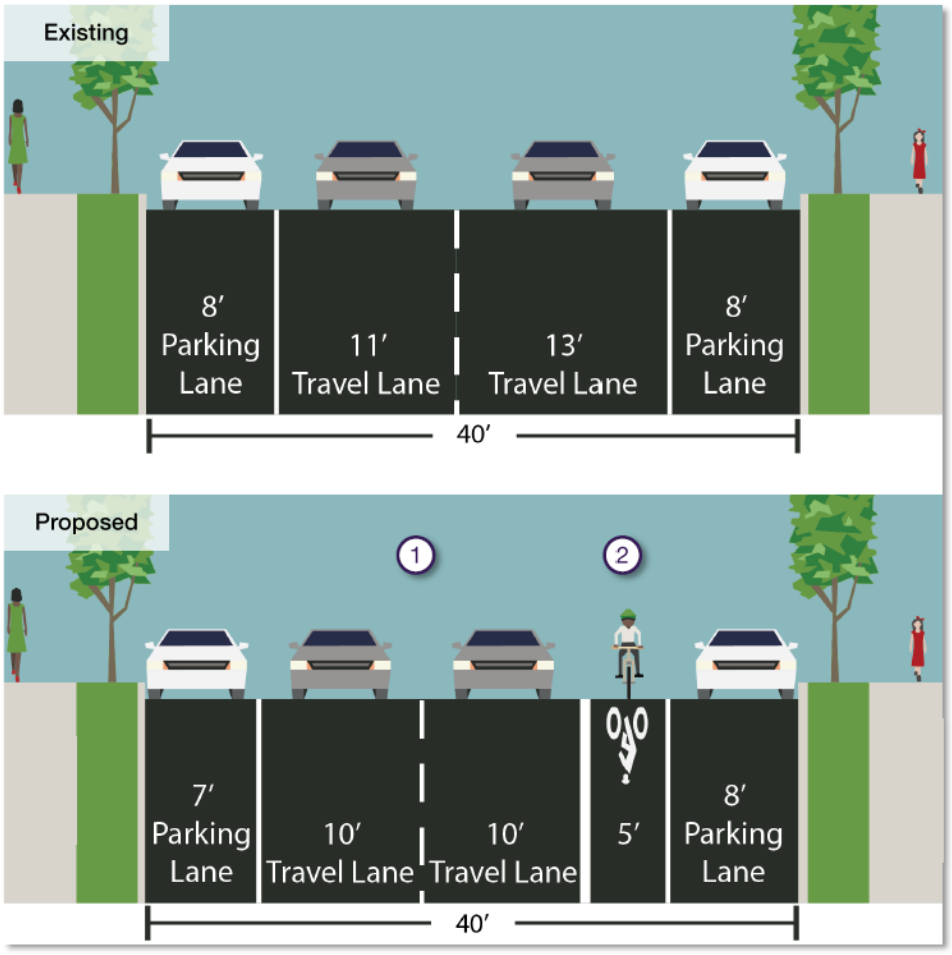
Along Van Duzer Street, between St. Paul's Avenue and Richmond Road/Vanderbilt Avenue, plans include creating a standard width travel lane, a buffered bicycle lane, and additional parking. Existing conditions include an eight-foot parking lane, three-foot buffer, 15-foot travel lane, and eight-foot channelization area. The proposed geometry would include an eight-foot parking lane, eleven-foot travel lane, two-foot buffer, five-foot bicycle lane, and eight-foot parking lane (Figure 14-4). NYCDOT anticipates that the narrower travel lane and adjacent bicycle lane would result in a decrease of vehicular traffic speeds. At the southern boundary of this segment, two travel lanes would be maintained between Cornell Place and Richmond Road to maintain needed capacity.



Source: NYCDOT

Figure 14-4: **Existing and Proposed Roadway Geometry along Van Duzer Street**

Along Targee Street between Narrows Road North to Broad Street, improvements will seek to create standard travel lanes and add a bicycle lane. Existing conditions include an eight-foot parking lane, eleven-foot travel lane, 13-foot travel lane, and eight-foot parking lane. Proposed conditions include a seven-foot parking lane, two ten-foot travel lanes, five-foot bicycle lane, and eight-foot parking lane (Figure 14-5). This roadway improvement has been incorporated into the No Build and Build traffic analyses (see Section B: The Future Without the Project).

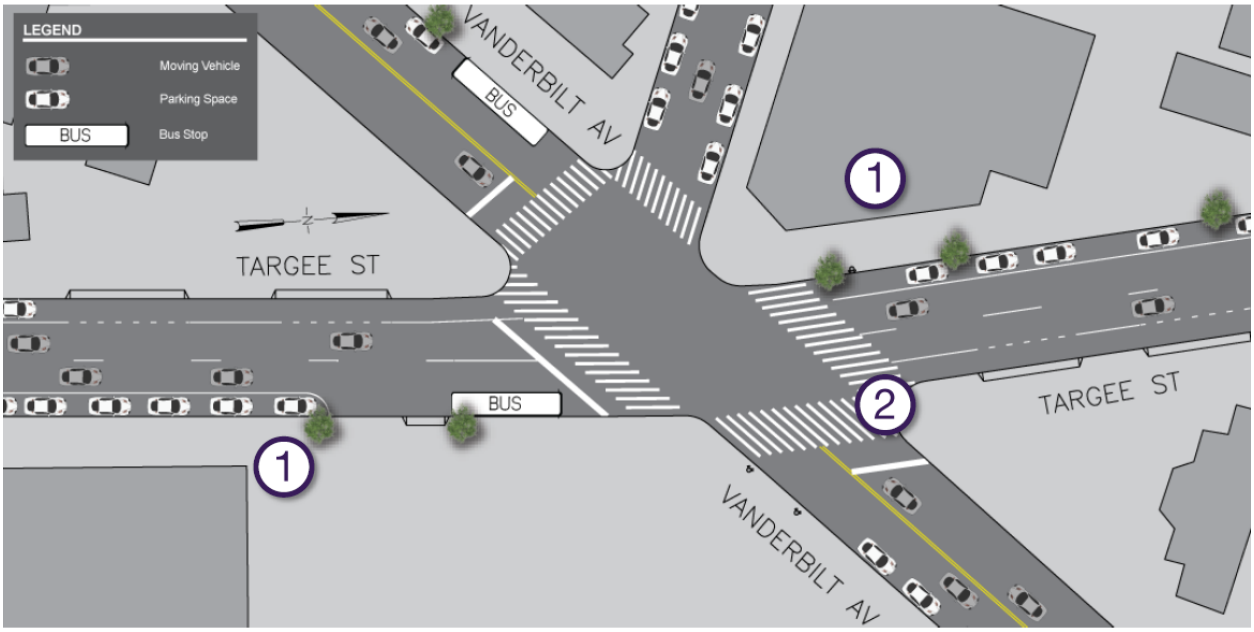


Source: NYCDOT

Figure 14-5: Existing and Proposed Roadway Geometry along Targee Street

At Targee Street and Vanderbilt Avenue, pedestrian improvements will seek to reduce crossing distances in a commercial neighborhood center. Eight people were killed or severely injured between 2010 and 2014, and NYCDOT determined that long crossing distances at this five-way intersection present hazardous conditions for pedestrians. Painted curb extensions, as shown in Figure 14-6, will shorten pedestrian crossing distances and slow vehicular traffic at turns.

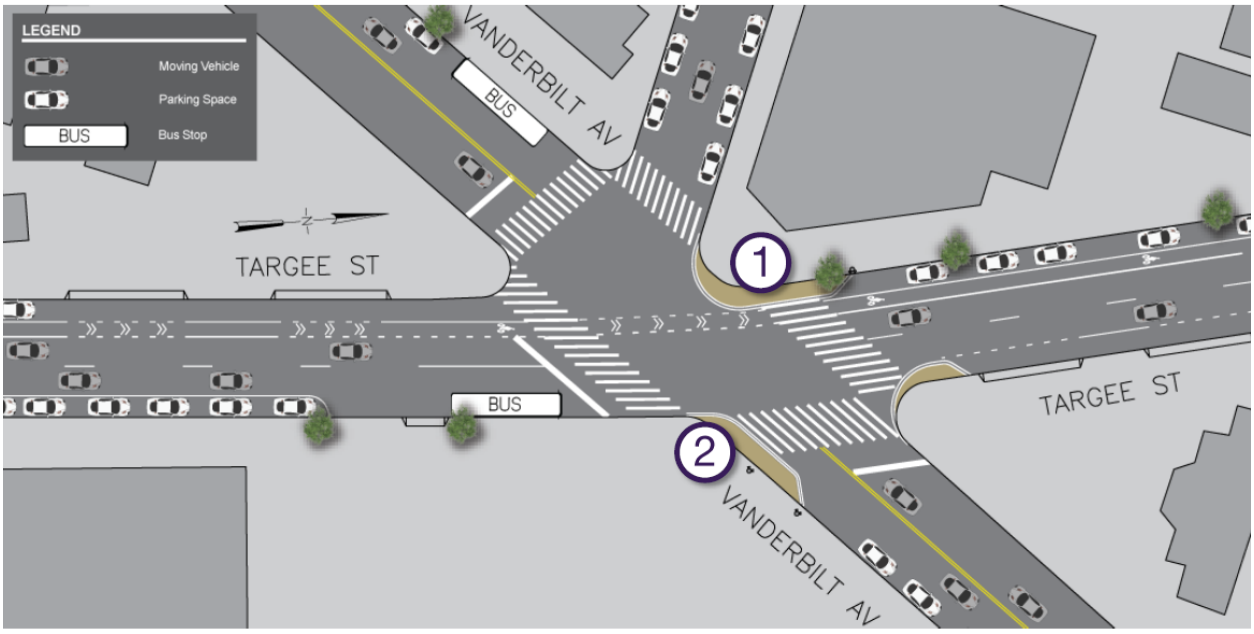
Existing Conditions – Targee St and Vanderbilt Ave



1 Mixed-Use Area
High pedestrian volume near stores and bus stops

2 Long Crossing Distances
Skewed intersection results in long crossings distances

Proposed Design – Targee St and Vanderbilt Ave



1 Shorten Pedestrian Crossings
Painted curb extensions shorten crossing distances

2 Calm Turning Traffic
Higher turning angles slow traffic as they navigate corners

Source: NYCDOT

Figure 14-6: Existing and Proposed Roadway Design at Targee Street and Vanderbilt Avenue

B. The Future Without the Project

The analysis of the future traffic conditions without the proposed school (i.e., the future No Build conditions) serves as the baseline against which impacts of the project are compared. The future No Build analysis includes the traffic volume increases expected due to an overall growth in background traffic through and within the study area, and any other major developments and roadway system changes scheduled to be occupied or implemented by the future 2022 Build Year. A background growth rate of one percent per year in the first five years, and one half percent in year six, resulting in an overall growth of approximately six percent by 2022, was assumed for this area of Staten Island, per *CEQR* standards. No other major projects are expected to impact the study area before the build year of 2022.

NYCDOT has proposed pedestrian and bicycle improvements within the study area. These improvements would narrow existing travel lanes and have conservatively been incorporated into the No Build traffic analysis. Roadway geometries were adjusted at the following intersections to accommodate future bicycle lane additions, as per NYCDOT's proposals (see Section A, Existing Conditions, for more details on NYCDOT's Van Duzer Street Corridor Transportation Improvements):

- Targee Street and Osgood Avenue: northbound travel lanes were narrowed from twelve to ten feet to accommodate proposed bike lane
- Targee Street and Vanderbilt Avenue: northbound travel lanes were narrowed from thirteen to ten feet to accommodate proposed bike lane
- Osgood Avenue and Van Duzer Street: southbound travel lane was narrowed from 11.5 to eleven feet to accommodate proposed bike lane

Future No Build Traffic Conditions. There would be an increase in traffic volumes along the roadways included in the project study area based on the six percent background growth (see Figures 14-7 and 14-8). The study intersections that would experience significant LOS changes (see Table 14-6) due to these No Build adjustments include:

- East and westbound Osgood Avenue at Targee Street would continue to operate at LOS D during the AM peak hour, with increased control delays of 49.0 and 48.6 seconds, respectively.
- East and westbound Osgood Avenue at Vanderbilt Avenue would continue to operate at LOS D and E, respectively, during the AM peak hour.
- Eastbound Vanderbilt Avenue at Targee Street would worsen within LOS F conditions during the AM peak hour, to a control delay of 155.4 seconds in the No Build conditions, compared to 107.8 seconds in Existing conditions. In the PM peak hour, it would deteriorate to mid-LOS D conditions to a control delay of 46.0 seconds in the No Build conditions, compared to 36.5 seconds in Existing conditions.
- Westbound Vanderbilt Avenue at Targee Street would worsen within LOS D conditions during the AM peak hour, to a control delay of 54.4 seconds in the No Build conditions, compared to 51.5 seconds in Existing conditions.
- Westbound Vanderbilt Avenue at Van Duzer Street would deteriorate within LOS D and E during the AM and PM peak hours, respectively.

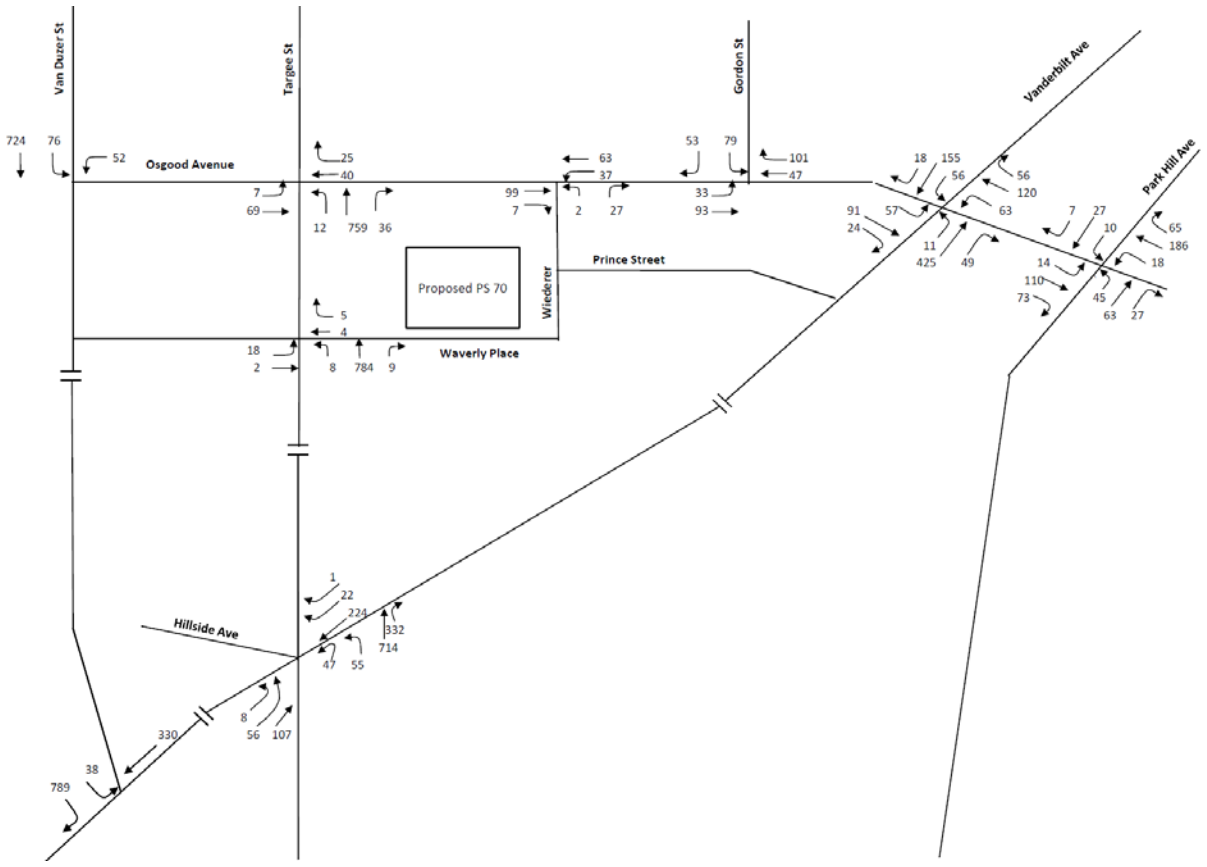


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Figure 14-7: 2022 No Build Conditions
AM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

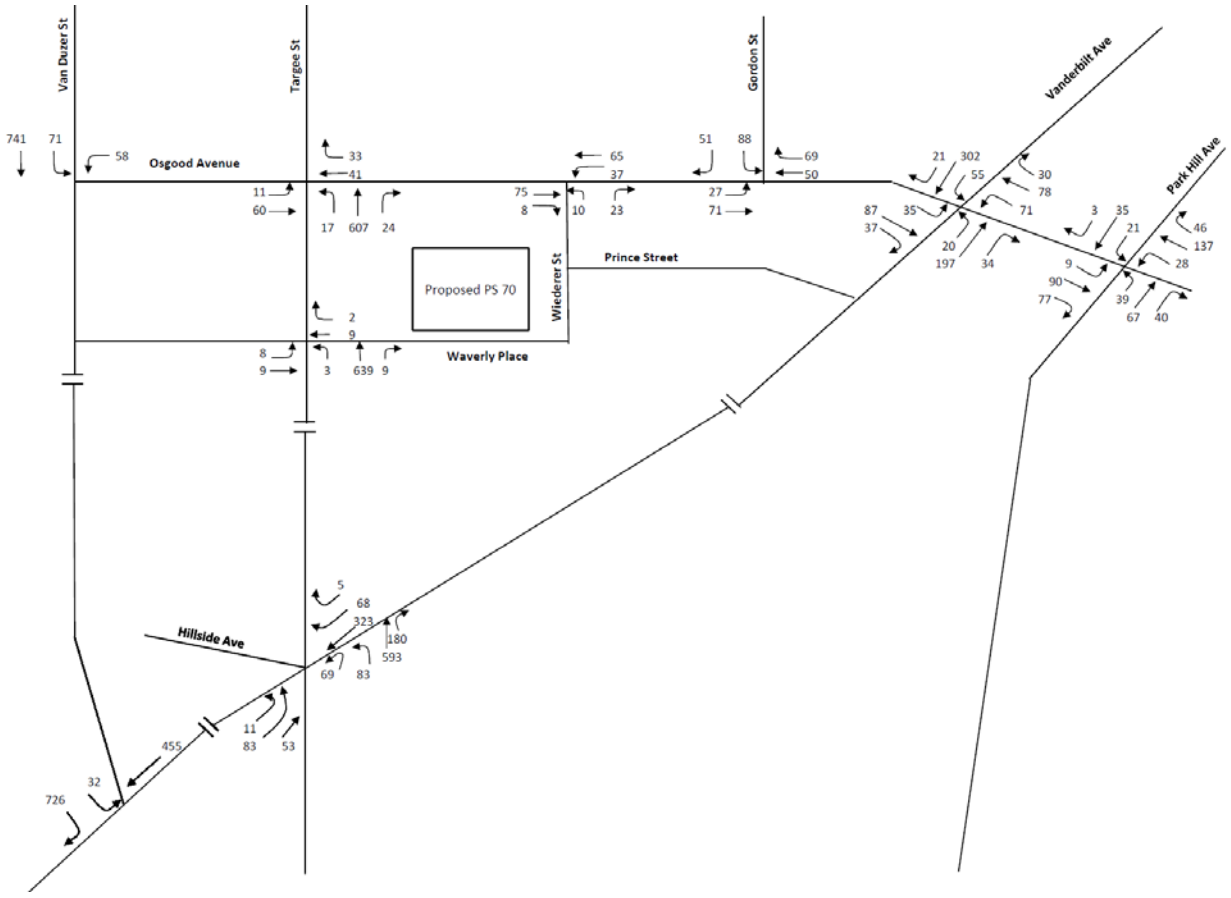

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Figure 14-8: 2022 No Build Conditions
PM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

Table 14-6: 2022 No Build Conditions Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Osgood Avenue and Targee Street								
Osgood Avenue	EB	LT	0.40	49.0	D	0.27	30.3	C
	WB	TR	0.38	48.6	D	0.33	31.8	C
Targee Street	NB	LTR	0.40	6.3	A	0.37	7.6	A
Overall Intersection		-		**13.6**	**B**		**12.2**	**B**
Osgood and Vanderbilt avenues								
Osgood Avenue	EB	LTR	0.72	51.2	D	0.52	28.4	C
	WB	LTR	0.93	75.8	E	0.63	33.0	C
Vanderbilt Avenue	NB	LTR	0.61	17.9	B	0.40	13.6	B
	SB	LTR	0.36	13.2	B	0.65	19.0	B
Overall Intersection		-		**36.1**	**D**		**21.9**	**C**
Vanderbilt Avenue and Targee Street								
Vanderbilt Avenue	EB	LT	1.15	155.4	F	0.78	46.0	D
	WB	TR	0.77	54.4	D	0.85	38.7	D
Targee Street	NB	LTR	0.78	23.3	C	0.90	37.7	D
Overall Intersection		-		**44.7**	**D**		**38.9**	**D**
Vanderbilt Avenue and Van Duzer Street								
Vanderbilt Avenue	WB	T	0.76	49.0	D	0.95	71.3	E
Van Duzer Street	SB	LR	0.33	11.6	B	0.27	10.9	B
		R	0.69	19.0	B	0.58	15.8	B
Overall Intersection		-		**25.8**	**C**		**36.0**	**D**
Unsignalized								
Targee Street and Waverly Place								
Waverly Place	EB	LT	0.08	14.4	B	0.05	14.6	B
	WB	TR	0.04	15.3	C	0.05	15.5	C
Targee Street	NB	LTR	0.01	7.3	A	0.00	7.4	A
Osgood Avenue and Wiederer Place								
Osgood Avenue	WB	LT	0.04	7.8	A	0.03	7.7	A
Wiederer Place	NB	LR	0.06	9.5	A	0.05	10.1	B
Osgood Avenue and Gordon Street								
Osgood Avenue	EB	LT	0.03	7.8	A	0.02	7.6	A
Gordon Street	SB	LR	0.22	11.4	B	0.23	11.1	B
Osgood Avenue and Van Duzer Street								
Osgood Avenue	WB	L	0.25	23.5	C	0.25	22.6	C
Van Duzer Street	SB	LT	0.05	7.4	A	0.05	7.4	A
Osgood and Park Hill avenues								
Osgood Avenue	EB	LTR	0.02	8.4	A	0.01	8.1	A
	WB	LTR	0.02	8.4	A	0.03	8.4	A
Park Hill Avenue	NB	LTR	0.49	26.4	D	0.44	22.4	C
	SB	LTR	0.18	19.9	C	0.23	19.9	C

Parking. Demand for parking was assumed to increase proportionally to the traffic growth in the study area by one percent per year in the first five years and one half percent in year six, resulting in an increase of six percent in the occupancy rate of the available on-street parking. The existing surplus of 389 spaces would be reduced to an availability of 332 spaces in the future No Build conditions (see Table 14-7).

Table 14-7: 2022 No Build On-Street Parking Supply and Demand

Parking Parameter	w/o Regs
Parking-Space Supply	1,404
Demand (Occupancy Rate)	1,072 (76%)
Spaces Available (Rate)	332 (24%)

Transit and Pedestrians. The numbers of transit riders and pedestrians in the study area were also assumed to increase by one percent per year in the first five years and one half percent in year six, resulting in an overall growth of approximately six percent, in proportion to traffic volumes. Transit service and operational conditions were expected to remain similar to the current conditions. There are no major planned developments in the area, and the applied growth factor would not significantly alter conditions from existing conditions. Pedestrian activity near the project site and in the study area was also anticipated to remain similar to existing conditions (see Table 14-8).

Table 14-8: 2022 No Build Pedestrian Conditions

Intersection and Element	AM Peak		PM Peak	
	Average Space (sf/ped)	LOS	Average Space (sf/ped)	LOS
Osgood Avenue and Targee Street				
Northeast Corner	1,141	A	797	A
Southeast Corner	712	A	394	A
Southwest Corner	677	A	336	A
Northwest Corner	829	A	452	A
North Crosswalk	983	A	576	A
East Crosswalk	2,854	A	1,886	A
South Crosswalk	594	A	288	A
West Crosswalk	3,485	A	1,893	A
Southeast Corner - South Sidewalk	6,817	A	692	A
Southeast Corner - East Sidewalk	1,264	A	1,283	A

C. Potential Effects of the Proposed Project

The analysis of future conditions with the project in place requires the determination of the number of trips by travel mode expected to be generated by the proposed school, the assignment of these vehicle trips to the street network approaching the site, and the determination of projected levels of service at the critical locations analyzed.

Also, as part of the school project, the SCA will expand the width of Wiederer Place to a 60-foot right-of-way to provide additional on-street parking, maintain two-way traffic operations, and facilitate bus movements to the school.

Trip Generation. The proposed PS would provide a total capacity of 748 students. For trip generation purposes, it was conservatively assumed that the new school would be filled to capacity (i.e., no absentee rate was applied).

Trip generation estimates were derived from a travel survey that was administered in November 2016 to the students and staff of PS 57 (140 Palma Drive), which is located near the proposed school site. The current school program assumes the proposed 748-seat school at 45 Waverly Place/357 Targee Street would be a public school serving grade levels pre-kindergarten through five.

The school catchment area was estimated based on a review of NYC Department of Education school boundary maps. The existing PS catchment area extends approximately 1.5 miles south from the proposed school site to Clove Road and West Featherbed Road to the south, Steuben Street to the east, and Signal Hill Road to the west. Students would arrive at and depart from school by a number of travel modes, including private autos, public transit, school buses, and walking from the nearby residences (see Table 14-9). In the AM and PM peak hours, the majority of students would walk to/from school (64 percent), 30 percent would be driven to/from school by a parent or guardian, five percent would take school buses, and the remaining one percent of students would commute to school by local buses. It is assumed that students would be accompanied on the walk and transit trips by a parent or guardian.

It is expected that the new school would employ an estimated 75 staff members. Based on the travel survey, approximately 92 percent of the staff would travel in private automobile, five percent would utilize public transit, two percent would walk to/from school, and one percent would be dropped off.

School bus and auto drop-off trips were assumed to make a complete in-and-out cycle within the AM and PM peak hours, i.e., arrive full and depart empty within the AM study peak hour and arrive empty and depart full in the PM study peak hour. The travel survey indicated private auto vehicle occupancy rates of 1.9 for PS students and 1.2 for staff which were applied to the vehicle trips.

Temporal Distribution. It is assumed that all students would arrive at the school during the AM peak hour and depart the school during the PM peak hour. This would result in 120 student vehicle arrivals and 120 student vehicle departures (autos and buses) during the AM and PM peak hours. All staff were assumed to travel during the AM and PM peak analysis hours,

resulting in 59 staff vehicle arrivals and one vehicle departure during the AM peak hour, and 59 staff vehicle departures and one vehicle arrival during the PM peak hour.

The total number of new school-generated vehicle trips (autos and school buses) is projected to be 179 arrivals and 121 departures during the AM, and 121 arrivals and 179 departures during the PM peak hour.

Table 14-9: Modal Split and Trip Generation Data

Travel Mode		PS Student			PS Parent			Staff		
		%	Person Trips	Vehicle Trips	%	Person Trips	Vehicle Trips	%	Person Trips	Vehicle Trips
Walk		64	479	N/A	N/A	736	N/A	2	1	N/A
Auto	Drop-off	30	224	236	N/A	N/A	N/A	1	1	2
	Self-drove	N/A	N/A	N/A	N/A	N/A	N/A	92	69	58
General Ed. School Bus		5	38	4	N/A	N/A	N/A	N/A	N/A	N/A
Public Transit / Other		1	7	N/A	N/A	12	N/A	5	4	N/A
TOTAL		**100**	**748**	**240**	**N/A**	**748**	**N/A**	**100**	**75**	**60**

Notes:
1. No absentee rate was applied for the proposed school. The school was assumed to be at full capacity during both the AM and PM peak hours.
2. The number of parent walk trips assumes one parent walking per 1.3 students. The parent walk trips include two trips, a roundtrip to and from the school.
3. The number of student auto trips consist of 118 arrivals and 118 departures during the AM and PM analysis hours, assuming a vehicle occupancy rate of 1.9 persons per auto.
4. The staff auto trips consists of 59 arrivals to the area and one departure from the area during the AM analysis hour and one arrival and 59 departures during the PM analysis hour, assuming a vehicle occupancy of 1.2 per auto.
5. A mini school bus was assumed in the forecast with a vehicle occupancy of approximately 30 students per bus. The number of school bus trips consist of two arrivals and two departures during the AM and PM analysis hours.

Vehicle Assignment. The distribution of new vehicle trips to the proposed school site is developed based on the concentration of residential developments surrounding the school, the existing school catchment areas, and location of the nearest primary school. Given that there is an existing elementary school south of the proposed school site within the existing elementary school catchment area, the majority of PS students to the proposed school site would primarily reside in the northern half of this elementary school catchment area and likely in the abutting catchment areas to the north and east.

The student drop-offs and pick-ups were assumed to take place in front of the new PS on Waverly Place or Targee Street. Targee Street is a one-way northbound street. For those student vehicle trips originating north of the school, it is assumed they would travel south on Van Duzer Street, turn left on Waverly Place, then left on to Targee Street to drop-off or pick-up and return north via Targee Street. The majority of the student vehicle trips would originate south and east of the school. Trips coming from the east would likely use westbound Osgood Avenue to southbound Wiederer Place, then right on to westbound Waverly Place to drop off at the school's main entrance. These return trips would head north on Targee Street and then east on Osgood Avenue. Trips originating in the south would be distributed among a number of major roadways, and

would likely all collect along Targee Street as the main access road to the proposed school site. These return trips would head south on either Van Duzer Street or along Vanderbilt Avenue.

Most of the staff were assumed to approach the new school via northbound Targee Street from either the Staten Island Expressway or from communities south of the expressway such as Todt Hill and Dongan Hills. Staff that reside in the northeast portion of Staten Island (Port Richmond, St. George) were assumed to approach the school via southbound Van Duzer Street and the remaining staff from points east were assumed to use eastbound Osgood Avenue.

Figures 14-9 and 14-10 show the volumes of vehicle trips that would be generated by the proposed school and travel through the study intersections during the AM and PM peak hours, respectively. Figures 14-11 and 14-12 indicate the total Build volumes during the AM and PM peak hours, respectively.

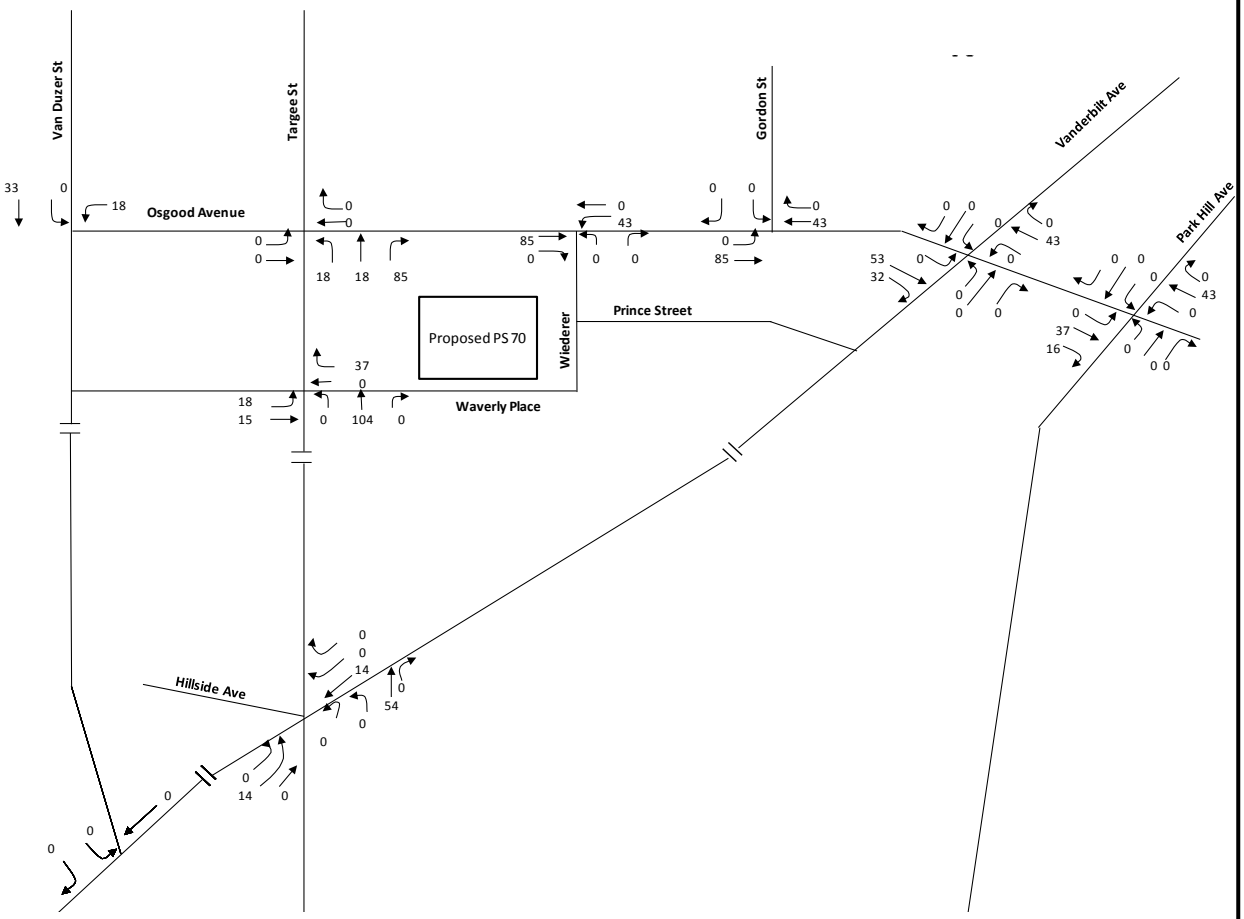

Figure 14-9: 2022 Build Increments
AM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

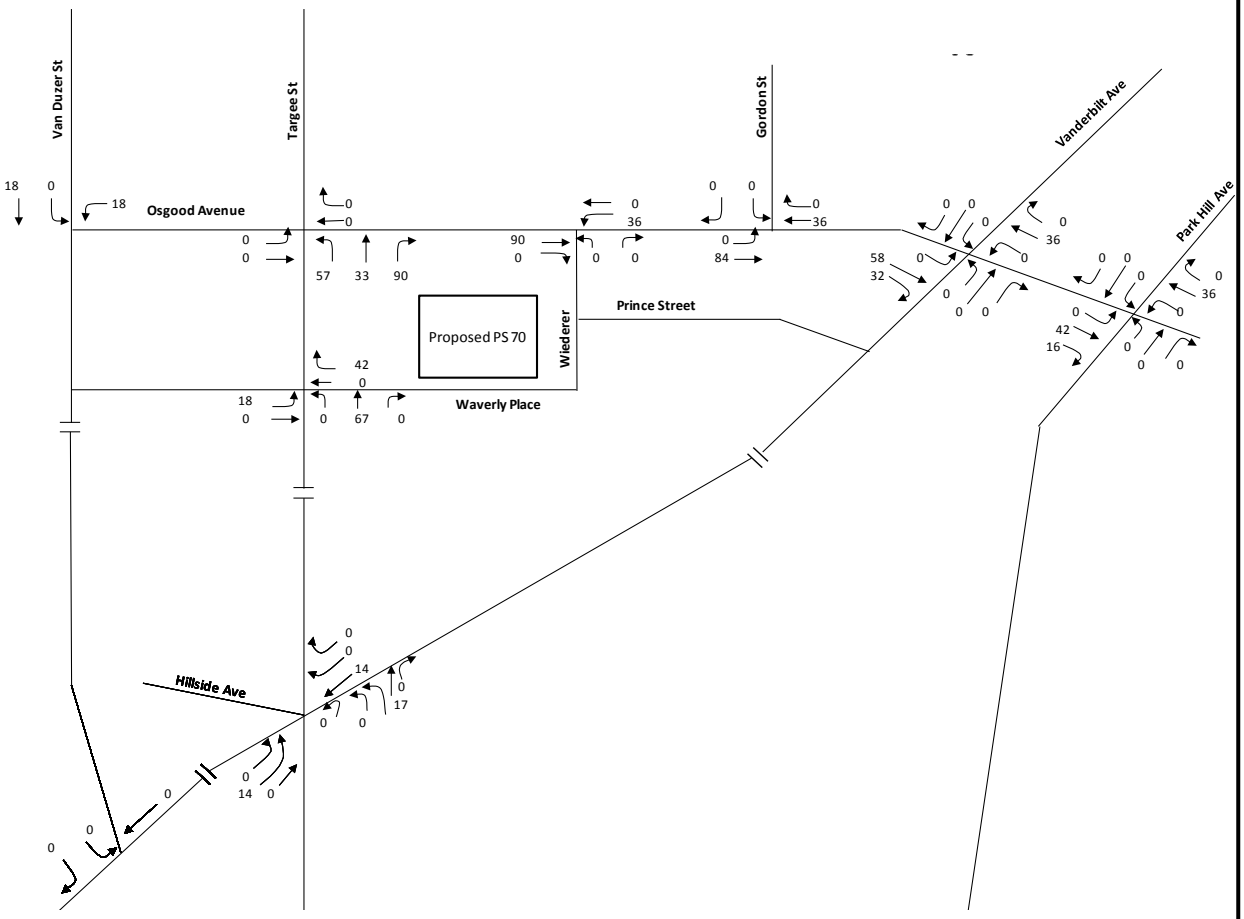

Figure 14-10: 2022 Build Increments
PM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

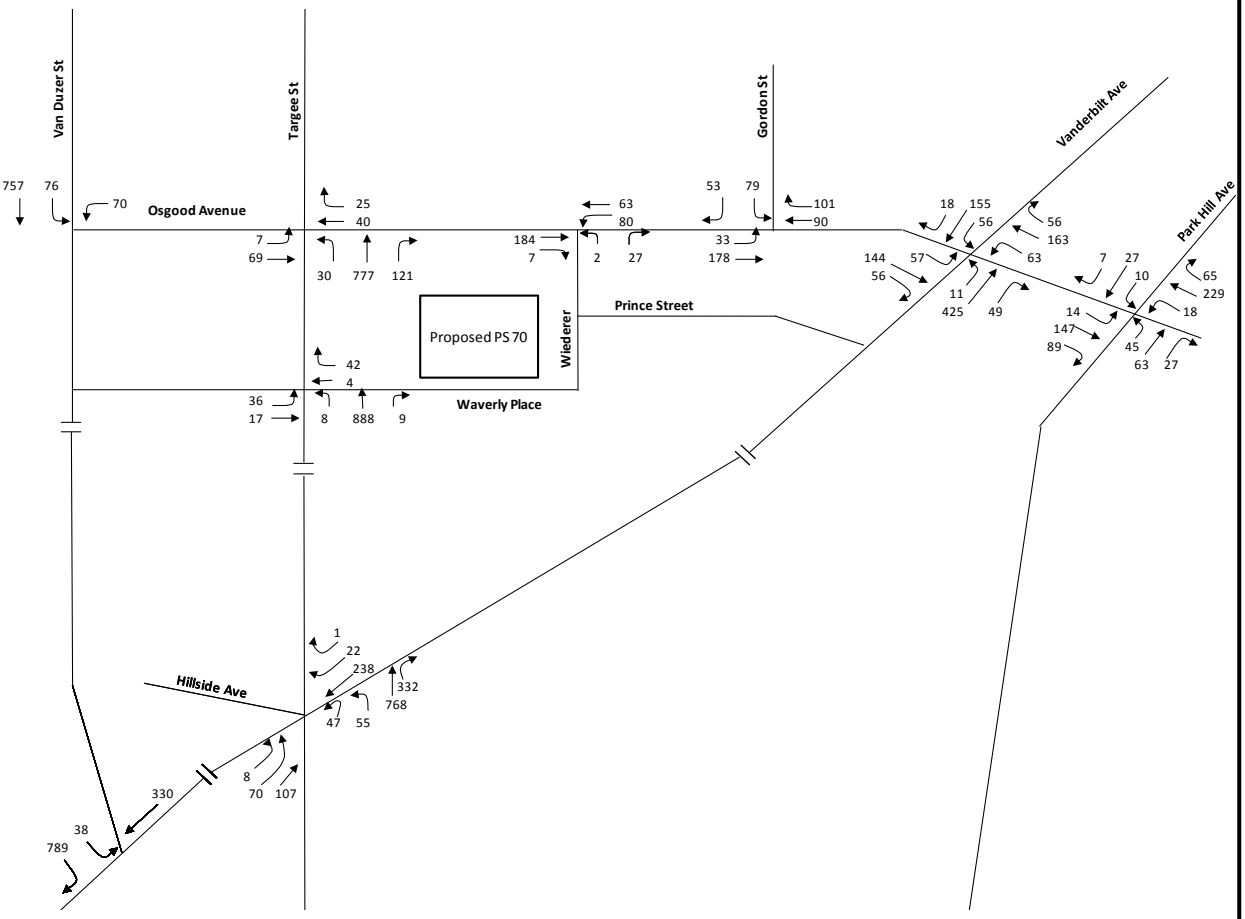

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Figure 14-11: 2022 Build Conditions
AM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

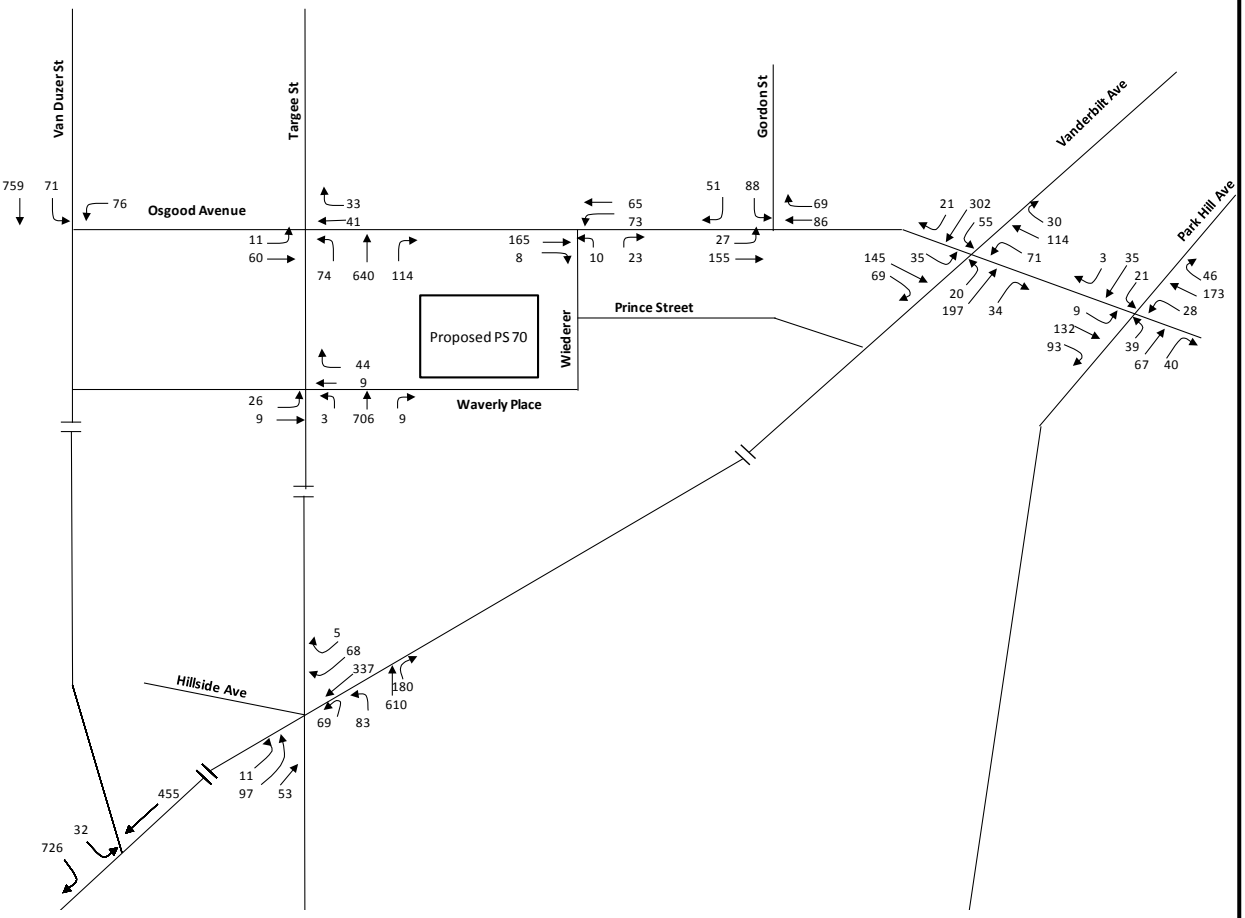

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Figure 14-12: 2022 Build Conditions
PM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

Significant Impact Criteria. The identification of potential significant traffic impacts was based on criteria for signalized intersections defined in the *CEQR Technical Manual*. A deterioration from LOS A, B, or C No Build conditions to unacceptable LOS D, E, or F Build conditions is considered a significant impact. Improvements must be made such that the unacceptable levels of service operate at mid-LOS D or better (with delays per vehicle of 45 and 30 seconds or less for signalized and unsignalized intersections, respectively). A deterioration from No Build LOS D conditions to unacceptable LOS D, E, or F Build conditions and an increase of five or more seconds of delay is also considered significant. For No Build LOS E conditions, an increase of four or more seconds of Build delay is significant. For No Build LOS F conditions, an increase of three or more seconds of Build delay is considered significant. However, if the No Build LOS F conditions already have delays in excess of 120 seconds, an increase of one or more seconds of Build delay is significant, unless the proposed action would generate less than five vehicles through a signalized intersection in the peak hour. In addition to these requirements, for the minor street of an unsignalized intersection to create a significant impact, at least 90 Passenger Car Equivalents (PCEs) must be identified in the future Build conditions. If significant impacts are identified for movements that operated as LOS D, E, or F for No Build conditions, improvements must be made to achieve the same or better delays as for the No Build conditions.

Future Build Traffic Conditions. The level-of-service analysis for the Build conditions (see Table 14-10) indicated that a significant traffic impact would be expected at the following locations:

- The east and westbound approaches on Osgood Avenue at Vanderbilt Avenue are expected to deteriorate to LOS F in the AM peak hour (LOS D and E in the No Build, respectively).
- The eastbound approach on Vanderbilt Avenue at Targee Street is expected to be impacted in both the AM and PM peak hours. In the AM peak hour, the approach would worsen within LOS F, and in the PM peak hour, the approach would deteriorate from LOS D in the No Build to LOS F in the Build conditions.

The east and westbound approaches on Waverly Place at Targee Street are expected to deteriorate to LOS E and F conditions in the AM and PM peak hours. According to the *CEQR Technical Manual*, this would not be considered a significant traffic impact as there are less than 90 PCEs on each minor street approach to this unsignalized intersection during the peak hours.

Table 14-10: 2022 Build Conditions Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Osgood Avenue and Targee Street								
Osgood Avenue	EB	LT	0.41	49.3	D	0.27	30.5	C
	WB	TR	0.42	50.5	D	0.36	32.9	C
Targee Street	NB	LTR	0.48	7.0	A	0.50	8.9	A
Overall Intersection		-		**13.6**	**B**		**12.6**	**B**
Osgood and Vanderbilt avenues								
Osgood Avenue	EB	LTR	1.06	110.9	F	0.79	41.0	D
	WB	LTR	1.16	142.6	F	0.79	44.5	D
Vanderbilt Avenue	NB	LTR	0.61	17.9	B	0.40	13.6	B
	SB	LTR	0.36	13.2	B	0.65	19.0	B
Overall Intersection		-		**68.3**	**E**		**28.0**	**C**
Vanderbilt Avenue and Targee Street								
Vanderbilt Avenue	EB	LT	1.49	295.9	F	0.98	84.7	F
	WB	TR	0.81	57.9	E	0.88	41.8	D
Targee Street	NB	LTR	0.82	24.9	C	0.92	39.5	D
Overall Intersection		-		**64.5**	**E**		**45.5**	**D**
Vanderbilt Avenue and Van Duzer Street								
Vanderbilt Avenue	WB	T	0.76	49.0	D	0.95	71.3	E
Van Duzer Street	SB	LR	0.33	11.6	B	0.27	10.9	B
		R	0.69	19.0	B	0.58	15.8	B
Overall Intersection		-		**25.8**	**C**		**36.0**	**D**
Unsignalized								
Targee Street and Waverly Place								
Waverly Place	EB	LT	1.11	218.3	F	0.29	41.8	E
	WB	TR	0.21	67.7	F	0.62	69.0	F
Targee Street	NB	LTR	0.01	7.9	A	0.00	8.0	A
Osgood Avenue and Wiederer Place								
Osgood Avenue	WB	LT	0.13	9.7	A	0.05	9.4	A
Wiederer Place	NB	LR	0.10	13.4	B	0.09	14.8	B
Osgood Avenue and Gordon Street								
Osgood Avenue	EB	LT	0.04	8.8	A	0.03	8.6	A
Gordon Street	SB	LR	0.37	18.2	C	0.37	17.4	C
Osgood Avenue and Van Duzer Street								
Osgood Avenue	WB	L	0.35	27.4	D	0.34	25.4	D
Van Duzer Street	SB	LT	0.05	7.4	A	0.05	7.4	A
Osgood and Park Hill avenues								
Osgood Avenue	EB	LTR	0.02	8.6	A	0.01	8.3	A
	WB	LTR	0.02	8.6	A	0.03	8.6	A
Park Hill Avenue	NB	LTR	0.57	33.7	D	0.51	27.5	D
	SB	LTR	0.21	23.1	C	0.27	23.6	C

Parking. The estimated number of new staff vehicle trips (self-drove) generated by the proposed school would increase the parking demand by 58 vehicles. It is not anticipated that parking would be provided on-site. It is anticipated that curbside parking regulations adjacent to the proposed PS 70 would be modified to accommodate the new school. Specifically, curbside parking restrictions during school hours are likely for the north curb of Waverly Place and east curb of Targee Street adjacent to the school to facilitate student pick-up/drop-off activity, which would result in a net loss of approximately 20 parking spaces. Approximately three parking spaces on the south side of Waverly Place may need to be removed to facilitate bus turns from Wiederer Place to Waverly Place.

Wiederer Place will be widened to a 60-foot right-of-way street as part of the project to maintain two-way traffic operations, facilitate bus movements to the school, and provide curbside parking on both sides of the street. This roadway improvement would add about 13 on-street parking spaces adjacent to the proposed school on Wiederer Place. Overall, with the proposed project, the parking space supply would decrease by approximately ten spaces.

The parking analysis indicates that the available capacity of on-street parking within a reasonable walking distance of the proposed school site can accommodate the proposed parking demand, with a remaining surplus of 264 spaces (see Table 14-11).

Table 14-11: 2022 Build On-Street Parking Supply and Demand

Parking Parameter	w/o Regs
Parking-Space Supply	1,394
Demand (Occupancy Rate)	1,130 (81%)
Spaces Available (Rate)	264 19%

Transit and Pedestrian Assignment. It is expected that 17 project-generated transit trips would be generated to the school and six transit trips from the school in the AM peak hour. The PM peak hour would experience six project-generated transit trips to the school and 17 transit trips from the school. It is assumed that all transit trips to and from the school would be bus trips. According to general thresholds used by the *CEQR Technical Manual* and NYCT, if the proposed action is projected to result in fewer than 200 peak hour transit riders at a single subway station or 50 peak hour bus trips in one direction, the action is considered unlikely to create a significant transit impact. Thus, no further analyses are needed.

Pedestrian trips to the proposed school site include walk trips as well as other modes that have a pedestrian component, such as the walk portion of bus trips from the bus stop. Approximately 479 new students would be expected to walk to the proposed PS during the AM and PM peak hours. The walk component of transit trips adds seven student walk trips in the AM peak hour, and seven student walk trips in the PM peak hour. It is assumed that one parent would accompany every 1.3 students and the parent trip would include two trips, a roundtrip to and

from the school. This results in an additional 748 new parent walk trips in the AM and PM peak hours (374 parent walk trip to the school and 374 parent walk trips from the school during each peak hour). Staff trips add one walk and four transit trips in both the AM and PM peak hours. The total number of new project-generated pedestrian trips is projected to be 1,239 trips (865 to and 374 away from the school) during the AM peak hour and 1,239 trips (374 to and 865 away from the school) during the PM peak hour.

According to the *CEQR Technical Manual*, an increase of 200 or more pedestrians per hour at any pedestrian element may be considered a significant impact. The crosswalks, corners, and sidewalks near the proposed school site are anticipated to have incremental pedestrian volumes at or above the 200 pedestrian trip threshold, as shown on Figures 14-13 and 14-14. It is assumed that no pedestrians would cross Targee Street at Waverly Place, as no crosswalks are present. A pedestrian safety assessment for the proposed PS 70 has also been prepared and is included in Appendix D – Pedestrian Safety Assessment. The pedestrian safety assessment inventories the existing conditions of sidewalks and roadways in the study area, and provides recommendations of conceptual improvements to address pedestrian safety issues.

In addition, *CEQR* guidelines further dictate that, for corner, crosswalk, and sidewalk analyses, the proposed action should not create a significant impact unless analyses resulted in average occupancies of less than 24 sf/ped (LOS D). As listed in Table 14-12, all analyzed pedestrian elements would continue to function at acceptable levels.

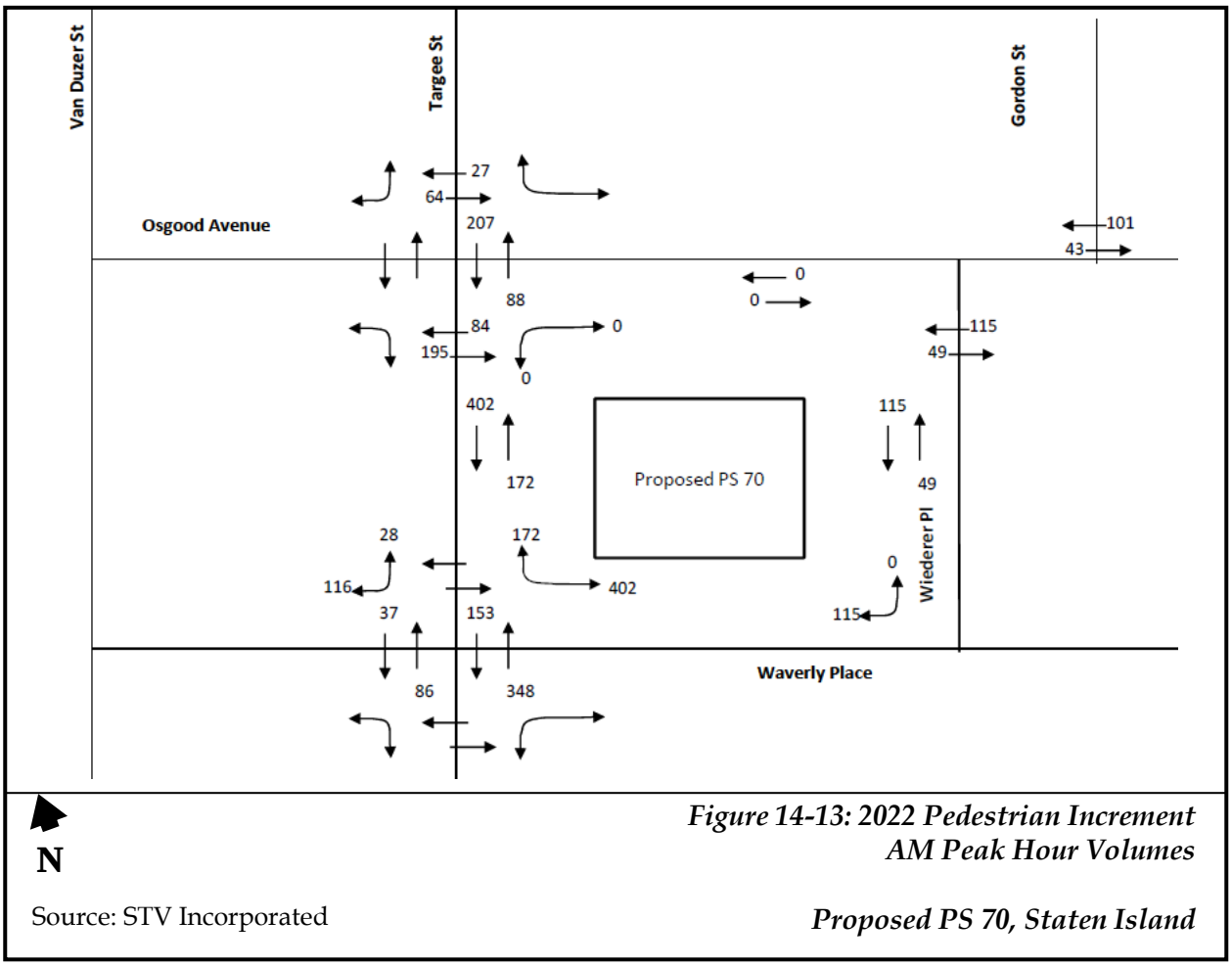


Figure 14-13: 2022 Pedestrian Increment AM Peak Hour Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

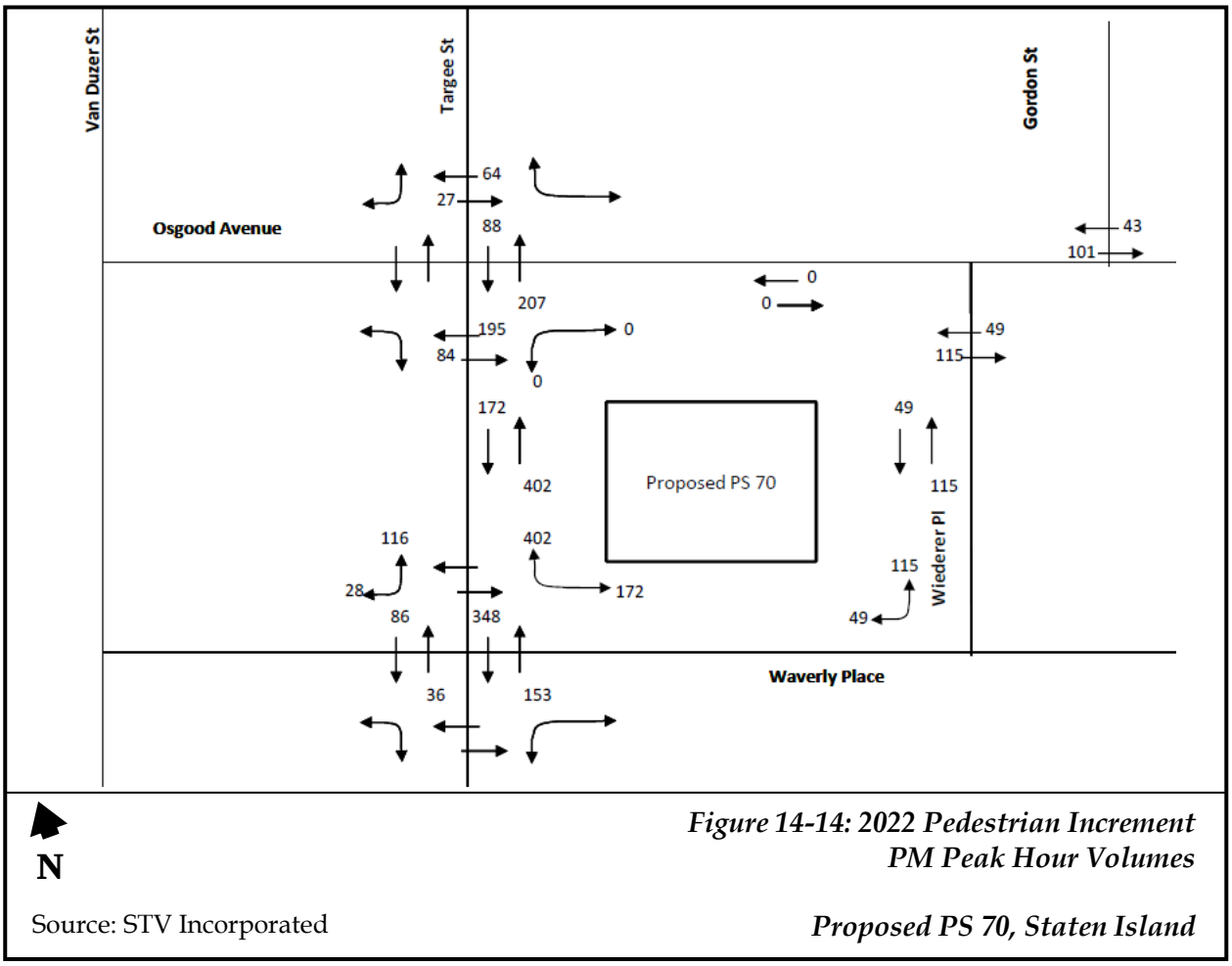


Figure 14-14: 2022 Pedestrian Increment PM Peak Hour Volumes

Source: STV Incorporated

Proposed PS 70, Staten Island

Table 14-12: 2022 Build Pedestrian Conditions

Intersection and Element	AM Peak		PM Peak	
	Average Space (sf/ped)	LOS	Average Space (sf/ped)	LOS
Osgood Avenue and Targee Street				
Northeast Corner	74	A	79	A
Southeast Corner	24	C	35	C
Southwest Corner	38	C	48	B
Northwest Corner	133	A	131	A
North Crosswalk	85	A	101	A
East Crosswalk	104	A	104	A
South Crosswalk	25	C	36	C
West Crosswalk	3,459	A	1,840	A
Southeast Corner - South Sidewalk	7,200	A	704	A
Southeast Corner - East Sidewalk	28	C	50	B

D. Proposed Mitigation Measures

In order to eliminate the significant traffic delay increase that would result from the proposed project, mitigation measures were identified which, if implemented, would avoid the projected impacts to traffic in the vicinity of the project site.

Traffic. Avoidance of potential traffic impacts could be achieved by signal timing changes and "daylighting" parking, as noted below (see Table 14-13). "Daylighting" is a simple traffic mitigation measure achieved by removing parking spaces adjacent to the curb at an intersection approach to provide an additional travel lane or enhance safety by increasing visibility for pedestrians and drivers.

- Osgood Avenue and Vanderbilt Avenue: Shifting seven seconds of green time from Vanderbilt Avenue to Osgood Avenue during the AM peak hour would restore the LOS for east and westbound Osgood Avenue to No Build conditions, and would avoid project-generated traffic impacts.

- Vanderbilt Avenue and Targee Street: Shifting four seconds of green time from Targee Street to Vanderbilt Avenue during the AM peak hour would eliminate the significant impacts to east and westbound Vanderbilt Avenue. Shifting two seconds of green time from Targee Street to Vanderbilt Avenue during the PM peak hour and "daylighting" 150 feet of the right-side parking on the eastbound approach and 150 feet of the left and right-side parking on the northbound approach would eliminate the significant impact to eastbound Vanderbilt Avenue.

Table 14-13: 2022 Mitigated Build Conditions Traffic Operations

INTERSECTION & APPROACH		Mvt.	No Build			Build			Mitigated Build			Improvement Measures
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	
AM Peak												
Osgood and Vanderbilt avenues												
Osgood Avenue	EB	LTR	0.72	51.2	D	1.06	110.9	F	0.84	54.9	D	- Shift 7.0 seconds of green time from the Vanderbilt Avenue northbound/ southbound phase to the Osgood Avenue eastbound/westbound phase.
	WB	LTR	0.93	75.8	E	1.16	142.6	F	0.92	66.9	E	
Vanderbilt Avenue	NB	LTR	0.61	17.9	B	0.61	17.9	B	0.68	24.1	C	
	SB	LTR	0.36	13.2	B	0.36	13.2	B	0.40	17.4	B	
Overall Intersection		-		**36.1**	**D**		**68.3**	**E**		**40.3**	**D**	
Vanderbilt Avenue and Targee Street												
Vanderbilt Avenue	EB	LT	1.15	155.4	F	1.49	295.9	F	1.09	130.6	F	- Shift 4.0 seconds of green time from the Targee Street northbound phase to the Vanderbilt Avenue eastbound/westbound phase.
	WB	TR	0.77	54.4	D	0.81	57.9	E	0.72	47.4	D	
Targee Street	NB	LTR	0.78	23.3	C	0.82	24.9	C	0.87	30.5	C	
Overall Intersection		-		**44.7**	**D**		**64.5**	**E**		**46.0**	**D**	
PM Peak												
Vanderbilt Avenue and Targee Street												- Shift 2.0 seconds of green time from the Targee Street northbound phase to the Vanderbilt Avenue eastbound/westbound phase. Daylight 150' of the right-side parking on the eastbound approach and 150' of the left and right-side parking on the northbound approach.
Vanderbilt Avenue	EB	LT	0.78	46.0	D	0.98	84.7	F	0.82	49.0	D	
	WB	TR	0.85	38.7	D	0.88	41.8	D	0.83	35.4	D	
Targee Street	NB	LTR	0.90	37.7	D	0.92	39.5	D	0.94	44.4	D	
Overall Intersection		-		**38.9**	**D**		**45.5**	**D**		**42.3**	**D**	

E. Conclusions

In summary, with the proposed project, significant adverse traffic impacts would be expected at two signalized intersections. Mitigation measures are recommended to mitigate the significant traffic impacts at the intersections of Vanderbilt Avenue at Osgood Avenue and at Targee Street. These mitigation measures include signal timing adjustments and "daylighting" (i.e., temporary removal of parking adjacent to the curbs).

The east and westbound Waverly Place approaches at Targee Street are expected to deteriorate to Level of Service (LOS) E and F conditions in the AM and PM peak hours. This would not be considered a significant traffic impact as the traffic volumes on east and westbound Waverly Place (minor street approaches) do not exceed the 90 PCEs threshold during the peak hours. However, given that this unsignalized intersection is projected to operate at a poor level of service and is close to the proposed main entrance of the new school, the SCA will coordinate with the New York City Department of Transportation (NYCDOT) to monitor traffic and safety operations at this intersection to determine if any operational and/or safety improvements are needed.

No pedestrian impacts would be expected. The proposed school is projected to generate approximately 1,240 pedestrian trips during the peak hours. Analysis of the pedestrian elements adjacent to the proposed school site that would process the highest school-generated volumes would continue to operate at an acceptable LOS C condition or better.

No significant transit impacts would be expected. Less than 200 incremental peak hour transit trips would be generated by staff, students, and accompanying adults; therefore, the proposed school is unlikely to create a significant transit impact.

No significant parking impacts would be expected. The proposed school would increase the parking demand by 58 vehicles. The parking analysis indicates that the available capacity of on-street parking within a reasonable walking distance of the proposed school site can accommodate the proposed parking demand, with a remaining surplus of 264 spaces.

The SCA will continue to consult with NYCDOT regarding these recommended measures to mitigate traffic impacts and recommendations provided to address any potential pedestrian safety issues along primary walk corridors to and from the proposed PS 70.

Chapter 15: Air Quality

The *CEQR Technical Manual* requires an assessment of air quality for projects that would increase traffic volumes or increase concentrations of air pollutants, especially where they may affect residential or other sensitive uses (such as a school). In this area of Staten Island, a mobile source analysis is required if 170 or more project-generated vehicles would pass through a signalized intersection in any given peak period. In addition, based on the intersections studied for the traffic analysis, the New York City Department of Environmental Protection (NYCDEP) has established a screening threshold limit for particulate matter, for which a detailed analysis is required if more than 23 project-generated diesel trucks or buses would pass through a signalized intersection in any given peak period. Analyses are also required if new sensitive land uses are to be permitted within 400 feet of existing industrial facilities and if a project's heating plant may affect nearby sensitive land uses (or the heating system of nearby buildings may affect the proposed project).

According to the *CEQR Technical Manual*, a greenhouse gas (GHG) emissions assessment is required for projects that would result in development of 350,000 sf or greater unless the building usage is particularly energy-intense, such as a data processing center or a healthcare facility.

SCREENING ASSESSMENT

Mobile Sources. Based on the data obtained from the traffic studies associated with this project, the number of project-generated vehicles is not expected to exceed 170 peak hour vehicles at any signalized intersection near the project site. Since the number of generated vehicles is below the established threshold, no adverse air quality impacts from carbon monoxide (CO) are expected to occur due to this project and no further analysis is required. The traffic data also shows that the number of project-generated heavy-duty diesel vehicles (trucks & buses) would not exceed 23 at any of the studied traffic intersections during the peak hours. Therefore, the project is not expected to cause any adverse particulate matter ($PM_{2.5}$) impacts and no further analysis is required.

Stationary Sources. The proposed school building would be four stories high with a partial cellar and have a total area of approximately 96,000 gsf. The proposed school would use natural gas to run its heating and hot water systems and is assumed to have rooftop stacks at a height of approximately 80 feet above ground level. However, since there are no large residential apartment buildings (of equal or greater height to that of the proposed school's emission stacks) in the vicinity of the proposed school structure, as per guidance in the *CEQR Technical Manual*, it is unlikely that emissions from the school's heating and hot water systems would result in impacts to the surrounding neighborhood. As a result, no impacts from project-related stationary sources are anticipated.

Also of concern would be existing emission sources (such as manufacturing, processing plants or large emission sources) in the study area which could potentially impact the proposed project. However, field reconnaissance of the surrounding area did not identify any manufacturing or processing plant emission sources within 400 feet of the proposed school site. In addition, there are no major pollutant sources within 1,000 feet of the school site. As a result, no impacts on the proposed project are expected and no further analysis is required.

Greenhouse Gases. The proposed school would be considerably smaller in size than 350,000 sf and is subsequently not considered an energy-intense source. Therefore, the proposed project would not result in a significant adverse GHG emissions impact, and no additional analysis is necessary.

Conformity with the State Implementation Plan. Impacts to air quality from the proposed school facility are not expected, and therefore, the project as formulated would be consistent with the New York SIP for the control of carbon monoxide.

The proposed school would not result in a significant number of project-induced traffic, and therefore it would not adversely affect surrounding mobile source air quality conditions. In addition, existing stationary source emissions in the immediate vicinity of the project site would not have a detrimental effect on the health of students or staff at the proposed school nor would the school's operations result in stationary source impacts within the surrounding community.

Chapter 16: Noise

The *CEQR Technical Manual* requires a detailed assessment of potential mobile source noise impacts if a proposed project would at least double the existing Passenger Car Equivalents (PCEs) near a sensitive receptor. A stationary source noise assessment is required if a substantial generator of noise, such as a playground, is proposed to be located near a noise-sensitive receptor.

CEQR Mobile Noise Impact Thresholds. New York City Department of Environmental Protection (NYCDEP) has established standards for noise exposure at sensitive receptors resulting from the implementation of a project. These standards are based on a daytime threshold noise level of 65dBA which should not be significantly exceeded. The impact thresholds are described below:

- A significant impact would occur if the daytime period noise level significantly exceeds 65 dBA.
- An increase of 5 dBA or greater over the No Build noise level would be an impact if the No Build noise level is 60 dBA or less.
- If the No Build noise level is 62 dBA or more, a 3 dBA increase or greater would be considered significant.
- A significant impact would occur during the nighttime period (defined by CEQR standards as being between 10 PM and 7 AM) if there is a change in noise levels of 3 dBA or more.

CEQR Noise Exposure Standards. NYCDEP has promulgated standards that apply to a proposed project if it is also a sensitive receptor such as a residence, hospital, or school. In addition, NYCDEP has established four categories of acceptability based on receptor type and land use for vehicular traffic, rail, and aircraft-related noise sources. The categories include "generally acceptable," "marginally acceptable," "marginally unacceptable," and "clearly unacceptable." Identified in Table 16-1 are attenuation values and external noise exposure standards as they relate to traffic, aircraft, and rail noise.

SCA Noise Criteria. The SCA has developed a criterion of an increase of 5 dBA as the impact criterion for noise from project-generated traffic and playgrounds. If project-related playground noise levels would increase by less than 5 dBA, the SCA noise-impact threshold, no significant impact is predicted. The level of 5 dBA was selected because it is an increase that is clearly perceptible to the public, and represents a change at which sporadic complaints about noise may be registered.

Table 16-1: Noise Exposure Standards for Use in City Environmental Impact Review[1]

Receptor type	Time Period	Acceptable General External Exposure	Airport Exposure[3]	Marginally Acceptable General External Exposure	Airport Exposure[3]	Marginally Unacceptable General External Exposure	Airport Exposure[3]	Clearly Unacceptable General External Exposure	Airport Exposure[3]
1. Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	---------- $L_{dn} \leq 60$ dBA ----------		---------- $60 < L_{dn} \leq 65$ dBA ----------		-- (I) $65 < L_{dn} \leq 70$ dBA, (II) 70 dBA $\leq L_{dn}$ ----------		---------- $L_{dn} \leq 75$ dBA ----------
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
3. Residence, residential hotel or motel	7 AM - 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM - 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient health facility		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM – 10 PM)	
5. Commercial or office		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM – 10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Source:
New York City Department of Environmental Protection (adopted by DEP for use in CEQR-1983)

Notes:
In addition, any new activity shall not increase the ambient noise level by 3 dBA or more:

1. Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by ANSI Standards; all values are for the worst hour in the time period.
2. Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential of the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.
3. One may use FAA-approved Land contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.
4. External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

New York City Noise Code. Shown in Table 16-2 are allowable noise levels by octave band. According to the noise code, no person shall cause or permit a sound source operating with any commercial or business enterprise to exceed these designated decibel levels within the assigned octave bands. These criteria, as they relate to the proposed project, would apply to noise from the project's HVAC systems or other outdoor machinery.

Table 16-2: New York City Noise Code

Octave Band Frequency (Hz)	Maximum Sound Pressure Levels (dB) as measured within a receiving property as specified below	
	Residential Receiving Property for mixed-use buildings and residential buildings (as measured within any room of the residential portion of the building with windows open, if possible).	Commercial Receiving Property (as measured within any room containing offices within the building with windows open, if possible).
31.5	70	74
63	61	64
125	53	56
250	46	50
500	40	45
1000	36	41
2000	34	39
4000	33	38
8000	32	37

Source: Section 24-232 of the Administrative Code of the City of New York, as amended December 2005.

A. Existing Conditions

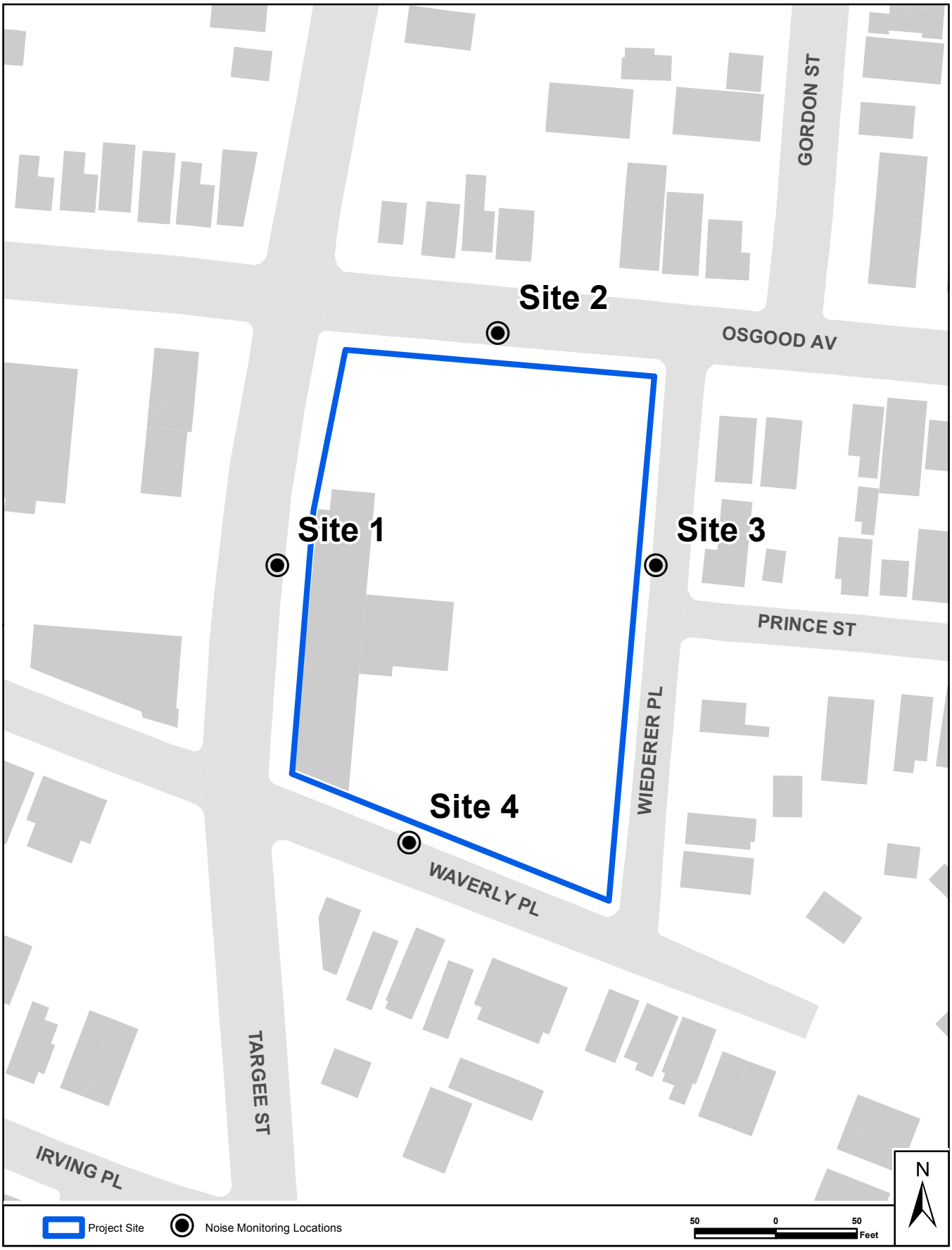
The project site is an entire block bounded by Osgood Avenue to the north, Waverly Place to the south, Wiederer Place to the east, and Targee Street to the west. The neighborhood consists primarily of one- and two-family residential land uses with a few local commercial uses along Targee Street. As a result, the primary sources of existing community noise typically come from automobile traffic. In general, light traffic exists along the streets surrounding the project site. There are no major stationary sources of noise in the study area.

Noise Monitoring. To determine the influence of existing traffic noise, peak-hour noise measurements were conducted at four locations representative of existing or future sensitive locations and, when applicable, where roadways with the greatest project-generated increases in traffic volumes are likely to occur. The monitoring sites were representative of residential land uses and were situated at or near the property line. Locations were monitored for the AM, Midday, and PM peak time periods on September 21 and October 13, 2016. An additional Midday monitoring was also conducted on February 21, 2018 to more accurately reflect the location of the proposed playground area on the project site. The AM, Midday, and PM peak periods were defined as 7:00-9:00 AM, 12:00-1:00 PM, and 2:00-4:00 PM, respectively. These time periods are the weekday peak hours when the majority of existing and any future project-generated traffic would be passing these locations. Weekday AM and PM noise monitoring takes into account the

peak work week and school traffic. The duration of measurements ranged from 20 minutes to one-hour to ensure that a representative traffic noise sample was obtained. During measurements, simultaneous traffic counts were taken. The noise descriptors recorded during field measurements included L_{eq} and $L_{10.}$ Table 16-3 shows the results of the noise monitoring program. Figure 16-1 shows the location of the noise monitoring locations in relationship to the project site and the surrounding area.

Noise measurements were taken with a Larson & Davis Model LxT Type I sound level meter. A windscreen was placed over the microphone for all measurements. The meter was properly calibrated for all measurements using a Larson & Davis Model Cal200 calibrator. There were no significant variances between the beginning and ending calibration measurements. Weather conditions during all measurement periods were dry and consisted of temperatures ranging from approximately 70 to 80 degrees Fahrenheit.

Traffic and classification counts at each location were conducted concurrently with the noise monitoring. Traffic and classification counts are used to calculate the maximum hourly PCEs. PCEs are used to account for the different types of motor vehicles (i.e., cars, trucks etc.) and their varying levels of sound. According to the *CEQR Technical Manual*, the relationships used for calculating PCEs are as follows: 1 automobile is equivalent to 1 PCE; 1 medium truck is equivalent to 13 PCEs; 1 bus is equivalent to 18 PCEs; and 1 heavy truck is equivalent to 47 PCEs. In other words, the noise level produced by a medium truck would be the same as that from 13 cars, and the noise level from a heavy truck would be equivalent to that of 47 cars.



Source: STV Incorporated, 2018.

Figure 16-1

NOISE MONITORING LOCATIONS

Proposed PS 70
45 Waverly Place/357 Targee Street, Staten Island

Table 16-3: Proposed PS 70 Monitored Peak Hour Noise Levels

Site #1: 357 Targee Street (Project Site)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	67.4	71.5	63.0	53.1
PM	65.4	69.9	59.0	50.8
Site #2: 48 Osgood Avenue (Private Residence)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	62.7	65.2	57.1	51.8
Midday	65.7	60.9	55.1	52.0
PM	59.6	62.8	56.6	52.5
Site #3: 33 Wiederer Place (Private Residence)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	62.1	63.8	55.5	52.5
Midday	57.7	59.8	52.0	49.1
PM	61.9	62.5	54.7	51.0
Site #4: 52 Waverly Place (Private Residence)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	55.5	57.3	52.8	47.6
PM	55.9	58.8	51.8	46.5

Based on Table 16-1, the noise monitoring results in Table 16-3 indicate that noise levels for the studied peak traffic periods along Osgood Avenue, Wiederer Place, and Waverley Place are within the "Acceptable" or "Marginally Acceptable" range for nearby sensitive noise receptors, as shown in Table 16-1. However, for the monitoring location along Targee Street (Site #1), the AM peak hour period is within the "Marginally Unacceptable" range for nearby sensitive noise receptors.

B. The Future Without the Project

In the No Build condition, as noted in the traffic analysis, there would not be a sufficient number of new vehicular trips to double the PCEs through any intersection. The *CEQR Technical Manual* threshold for detailed analysis would not be met. Therefore, the No Build condition is not expected to result in any substantial change to noise levels over the existing conditions.

C. Potential Effects of the Proposed Project

Mobile Source Noise Impact Screening. To determine whether a significant noise impact would occur (requiring the implementation of a rigorous noise analysis), a screening analysis (as per CEQR guidelines) for noise impacts was conducted for the AM and PM traffic periods. According to CEQR guidelines, to cause a significant noise impact, the project would have to induce traffic that would at least double the existing PCEs near any sensitive receptor. If the PCEs more than doubled along studied traffic routes from the Existing to the Build scenario, the site was selected for further analysis. This doubling of PCEs is the minimum increase in traffic volume that would result in a 3 dBA increase in the corresponding noise level.

As shown in Table 16-4, existing PCEs would double at Waverly Place (Site #4) for the proposed project; therefore, a detailed noise analysis was required for this location. The threshold for detailed analysis (as outlined in the *CEQR Technical Manual*) is not met at the other locations and, therefore, no further vehicular noise analysis is required for those locations.

Table 16-4: Proposed PS 70 Noise Screening Analysis

Site#1: 357 Targee Street (between Osgood Avenue and Waverly Place)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	765	219	No
PM	614	213	No
Site#2: 51 Osgood Avenue (between Targee Street and Wiederer Place)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	195	112	No
PM	175	104	No
Site#3: 33 Wiederer Place (between Waverly Place and Osgood Avenue)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	69	44	No
PM	74	-11	No
Site#4: 52 Waverly Place (between Targee Street and Wiederer Place)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	19	19	Yes
PM	26	60	Yes

To determine future noise levels without the proposed project (No Build), noise from existing conditions and expected traffic generated by No Build projects were combined. To determine future noise levels with the proposed project, noise from existing conditions, No Build traffic, and project-generated traffic were combined. This procedure is simply expressed, with a logarithmic equation which utilizes existing noise levels and existing PCEs along with future PCEs. The equation is described below:

F NL = 10Log (F PCE/E PCE) + E NL

Where:

F NL = Future Noise Level
F PCE = Future PCEs
E PCE = Existing PCEs
E NL = Existing Noise Level

Site #4 is representative of typical sensitive land uses along Waverly Place. This location was modeled for the weekday AM and PM time periods. Table 16-5 shows the predicted noise levels at the site for the Existing, No Build, and Build conditions.

Table 16-5: Proposed PS 70 Leq(1-hr)(dBA) Noise Levels for Existing, No Build, and Build Conditions

Site #4: 52 Waverly Place (between Targee Street and Wiederer Place)				
Time of Day	Existing Noise Level	No Build Noise Level	Build Noise Level	Build Increase
AM	55.5	56.1	58.9	2.8
PM	55.9	56.4	61.2	4.9

Table 16-5 shows that for the proposed project, the maximum difference in noise levels between the No Build and Build noise levels on Waverly Place (Site #4) was less than 5 dBA. Therefore, according to the *CEQR Technical Manual* impact criteria described above, the proposed project would not result in any significant mobile source noise impacts.

Stationary Source – Playground Noise Assessment. As part of the proposed project, an approximately 18,321 sf main play yard and an approximately 2,730 sf early childhood play yard would be provided on the northeastern side of the project site along both Wiederer Place and Osgood Avenue. As a result, potential future school-related noise impacts at these sensitive locations were examined for the proposed project.

Potential noise impacts attributable to the proposed school play yards were determined using methodology based on those outlined in the "SCA Playground Noise Study"[3] produced for the SCA. The methodology is based on an assumed worst case noise level of 71.0 dBA measured at the property line of a typical middle school playground. This noise level was derived from numerous monitoring programs conducted for the SCA at several playgrounds within New York City. The noise prediction methodology also takes into account the geometric spreading and consequent dissipation of sound energy with increasing distance from a typical playground noise source to a sensitive noise receiver. Based on this methodology, the potential impact of playground noise was considered during the Midday period as this peak period would not be influenced by fluctuations in peak hour traffic noise.

Based upon these measurements and acoustical principles, noise levels are assumed to decrease by the following values at specified distances from the play yard boundary: 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, and 9.1 dBA at 40 feet. For all distances between 40 and 300 feet, a 4.5 dBA reduction per doubling of distance from the play yard boundary was assumed. Table 16-6 shows the total Build noise level at the residential receiver window locations were calculated by

[3] AKRF – *SCA Playground Noise Study* (1992) and *Development of Noise Assessment Method for School Playground Noise* (2006)

logarithmically adding the adjusted future playground noise to the No Build (assumed to be unchanged) traffic noise level for the proposed project. Based on the overall playground assessment, the increase in the future project noise levels *would not* exceed the 5 dBA SCA impact criteria during the Midday period. As a result, noise impacts related to the proposed main play yard and early childhood play yard affecting any surrounding sensitive noise receptors are not anticipated.

Table 16-6: Expected Noise Impact Summary with School (noise levels are L_{eq} reported in dBA)

Location	Building Window Façade	Distance to Affected Window Locations (feet)	Floor	Total No Build Noise	Build Playground Noise	Total Build Noise	Decibel Change in Noise Due to School
33 Wiederer Place	West	75	1	57.7	57.9	60.8	3.1
	West	76	2	57.7	57.8	60.8	3.1
	North	71	1	57.7	58.2	61.0	3.3
41 Wiederer Place	West	125	1	57.7	54.5	59.4	1.7
	West	126	2	57.7	54.5	59.4	1.7
69 Prince Street	West	75	1	57.7	57.9	60.8	3.1
	West	76	2	57.7	57.8	60.8	3.1
	South	75	1	57.7	57.9	60.8	3.1
	South	80	1	57.7	57.5	60.6	2.9
	South	85	1	57.7	57.1	60.4	2.7
	South	75	2	57.7	57.9	60.8	3.1
	South	80	2	57.7	57.5	60.6	2.9
	South	85	2	57.7	57.1	60.4	2.7
60 Osgood Avenue	West	53	1	65.7	60.1	66.8	1.1
	West	54	2	65.7	60.0	66.7	1.0
	West	82	2	65.7	57.3	66.3	0.6
37 Osgood Avenue	South	62	1	65.7	59.1	66.6	0.9
	South	63	2	65.7	59.0	66.5	0.8
39 Osgood Avenue	South	62	1	65.7	59.1	66.6	0.9
	South	63	2	65.7	59.0	66.5	0.8
43 Osgood Avenue	South	62	1	65.7	59.5	66.6	0.9
	South	63	2	65.7	59.4	66.6	0.9
51 Osgood Avenue	South	62	1	65.7	59.5	66.6	0.9
	South	63	2	65.7	59.4	66.6	0.9
53 Osgood Avenue	South	64	1	65.7	59.3	66.6	0.9
	South	65	2	65.7	59.2	66.6	0.9
55 Osgood Avenue	South	76	1	65.7	58.2	66.4	0.7
	South	77	2	65.7	58.1	66.4	0.7

NYC Noise Code and SCA Noise Impact Criteria. The proposed school's HVAC equipment, along with any other project-related mechanical devices, would be designed to meet the NYC Noise Code Standards described in Table-16-2.

School Interior Noise Levels. Based on the noise monitoring measurements, the maximum L_{10} noise exposure level in the project area was found to 71.5 dBA along Targee Street, as shown in Table 16-3. This noise level includes the effect of traffic noise from local streets. As a result, based on the CEQR noise exposure standards, the school's exterior noise exposure would be in the "Marginally Unacceptable" category. As outlined in the *CEQR Technical Manual*, these noise levels are required to be attenuated to an acceptable interior noise level of 45 dBA or below.

D. Proposed Improvement Measures

In order to reduce the exterior noise exposure level experienced by the proposed school, improvement measures were identified. To reduce the exterior noise exposure level to the required interior noise level of 45 dBA or below, attenuation measures (e.g., double glazed windows), which are a standard feature of new facilities, would be incorporated into the new school facility's design and construction. Standard double-glazed windows are available which would result in the required attenuation value of 26.5 dBA. The walls and doors of the proposed school building would also have to attain a minimum attenuation value of 26.5 dBA. With these measures, the proposed school building would meet NYCDEP interior noise level requirements, and would not experience any noise exposure impacts.

Chapter 17: Public Health

Public health includes the activities that society undertakes to create and maintain conditions in which people can be healthy. The goal of CEQR with respect to public health is to determine whether adverse impacts on public health may occur as a result of a proposed project and, if so, to identify measures to mitigate such effects.

For most proposed projects, a public health analysis is not necessary. Where no significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, no public health analysis is warranted.

No impacts related to air quality, water quality, or noise are anticipated as a result of the proposed project. Hazardous materials are anticipated to be present on site, based on the Phase I ESA and Phase II ESI prepared for the project site. However, with any such existing on-site contamination appropriately addressed through proper handling and disposal, and other measures (including the incorporation of a vapor barrier and sub-slab depressurization system into the foundation design; the cleaning and removal of USTs and underground structures and the collection of confirmatory endpoint samples; the characterization of excavated soil to identify material handling, reuse, and/or disposal requirements; and, the placement of two feet of environmentally clean fill over all landscaped areas), no public health issues are expected with the proposed project. Therefore, the proposed project would not result in significant adverse impacts to public health, and no additional analysis is necessary.

Chapter 18: Neighborhood Character

The *CEQR Technical Manual* defines neighborhood character as the amalgam of various elements that give neighborhoods their distinct personality, including land use, urban design, visual resources, historic resources, socioeconomic conditions, traffic, and noise. The *CEQR Technical Manual* recommends an assessment of potential impact on neighborhood character when the proposed project has the potential to result in any significant adverse impacts in the following areas: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise. An assessment of neighborhood character is also a means of summarily describing whether the proposed school facility would be compatible with its surroundings.

A. Existing Conditions

As described in Chapter 1, "Project Description," the project site is located on Staten Island and is currently unoccupied. The study area includes portions of well-established residential streets, with some local commercial uses, light industrial/warehouse uses, institutional uses, and open space. The streetscapes immediately surrounding the site are primarily residential along its northern, southern, and eastern sides. The Targee streetscape to the west of the site is occupied by commercial uses and residential development.

The project site currently contains a vacant three-story warehouse situated on the western end of the site along Targee Street. The remaining portions of the site are occupied by an asphalt and gravel parking lot. The condition of the project site detracts from the visual quality of surrounding streetscapes, particularly as it is surrounded by chain-link fencing and discontinuous sidewalk and curbing. Further, given its underutilized state, it does not contribute to neighborhood activity and does not contribute positively to any aspect of neighborhood character in the immediate area or the larger study area or surrounding neighborhood.

The side streets in the residential blocks surrounding the project site have a moderately consistent visual character and urban design, characterized by low-rise residential uses, which include detached single-family houses and several multi-family residential buildings. The homes and buildings in the neighborhood are well maintained. The single-family homes have front yards with landscaping and off-street parking spaces that enhance the residential character of the streetscape. This streetscape also includes Bedford Green and a community garden, both of which are well maintained. The streetscape to the southwest of the project site includes a light industrial/warehouse use that contributes little pedestrian activity to the area.

The area to the west of the project site is developed with residential development, similar to the other surrounding streetscapes, and a couple of low-scale commercial buildings across from the project site at the corner of Targee Street and Waverly Place. The Staten Island Mental Health Society Osgood Avenue Head Start Program is located on the southern side of Osgood Avenue to the west of the project site. The facility features attractive landscaping including a series of mature street trees, bushes, and manicured lawn in front of its main building. The facility, together with the surrounding development of rowhouses, contribute to the distinctively residential character of the neighborhood in the study area.

B. The Future Without the Project

If the proposed construction of the new PS 70 does not occur, then it is expected that the project site would resemble its current conditions, with the on-site structure vacant and in a state of disrepair. No other developments are anticipated for the study area by the 2022 Build Year, and so it is expected that the character of the neighborhood surrounding the project site would generally resemble existing conditions.

C. Potential Effects of the Proposed Project

The construction of the proposed PS 70 would be an appropriate land use, and its design would contribute to the visual quality of the area. Its height and massing would be consistent with other non-residential development in the area, including the light industrial/warehouse uses to the southwest and the existing Staten Island Mental Health Society Osgood Avenue Head Start Program facility to the west.

The proposed school would enliven the streetscape in a manner similar to the Head Start facility, and given its neighborhood-oriented function, the new school would be consistent with the residential context surrounding the project site. As stipulated in the Letter of Resolution (LOR) between the SCA and OPRHP, the SCA will consult with OPRHP on the design of the new school and the incorporation of certain preserved elements from the existing building into the design of the new facility in order to preserve some of the building's history.

Technical analyses have concluded that with the recommended improvement measures in place, the proposed school at this location would not result in significant adverse impacts related to traffic, air quality or noise conditions that would alter the character of the neighborhood.

Furthermore, the proposed new school would introduce new capacity in the school district, thereby representing an improvement to neighborhood character in terms of improved community facilities and services. As such, the proposed PS 70 would be a positive attribute to the educational opportunities in the neighborhood, as well as an improvement to the physical design and character of the project site and surrounding area. Therefore, the proposed PS 70 would have a positive effect on neighborhood character; no significant adverse impact to neighborhood character would result with the proposed project, and no further analysis is warranted.

Chapter 19: Construction-Related Impacts

The anticipated construction period for the proposed project is expected to include two phases, with Phase 1 estimated to be a period of approximately 12 months and Phase 2 estimated to be a period of approximately 27 months (including time for permitting).

Phase 1 is scheduled to begin in summer 2018 and expected to be completed in summer 2019. This phase would include demolition of the existing building, soil removal, and oil tank removal and replacement. This demolition phase would average 25 workers on site per day and 30 truck trips. The equipment on-site would consist of loaders, excavators, flatbed trucks, and dump trucks.

Phase 2 of construction would start in the summer of 2019 and continue through the summer of 2021. This phase of construction would include the physical construction of the school (i.e., foundation, superstructure, mechanical installations, and interior finishing work). During this phase of construction, an average of 75 workers would be on site each day and the average number of truck trips per day are expected to be the same as in Phase 1. The equipment on-site during this phase would consist of the following: crane, loaders, fork lifts, excavators, scissor lifts, dozers, Bobcats, dump trucks, concrete trucks, and flatbeds.

The assessment of construction-related impacts is related to build conditions for the proposed project. This section summarizes the potential impacts that could result from the construction of a new school facility. To minimize overall adverse impacts during construction activities, the project would be planned, scheduled and staged to minimize disruption to existing traffic, the abutting neighborhoods and the environment. To the maximum extent practicable, construction staging would take place within the project site. Some adverse impacts related to construction activities may be unavoidable, but the duration and severity of such impacts would be minimized by utilizing best management practices during construction. Materials and practices that are typically used during construction activities to minimize impacts are briefly described below.

Construction Materials and Equipment. Standard construction equipment such as pavers, haul trucks, scrapers, loaders, spreaders, and rollers would be used to move and consolidate soil, pave, and supply and remove construction materials from the site. Backhoes and cranes may be needed to install drainage facilities and other utilities, and dig footings for structures, as well as for relocation of any on-site utilities. During the construction phase of the project, the area of the project site that would be redeveloped for the school play yard would most likely be used as a staging area for equipment and construction materials.

Construction Impacts on Traffic and Transportation, Pedestrians, and Parking. Traffic and transportation operations in the study area may be affected by the movement of construction equipment, materials, and construction workers to and from the site on a daily basis. Movement and repositioning of oversized machinery and/or materials may result in temporary lane or street closures. There could be limited short-term increased congestion within the vicinity of the project site. To avoid unnecessary construction-related traffic within the project area, construction vehicles would be limited to designated routes and would be kept in the designated staging area.

In accordance with City laws and regulations, construction work at the project site would generally begin at 7 AM on weekdays, with workers arriving to prepare work areas between 6

and 7 AM. Construction work activities would typically finish around 5 PM, and depart the site thereafter. The temporal distribution for employee vehicle trips was based on typical work shift allocations and conventional arrival/departure patterns for construction workers, which indicate that 80 percent of the construction workers would arrive during the AM construction peak hour and depart during the PM construction peak hour.

Modal split and vehicle occupancy rates for construction workers, based on 2011-2015 American Community Survey journey-to-work data for New York City, indicate that approximately 40 percent of construction workers are expected to travel by personal automobile at an average occupancy rate of approximately 1.11 persons per vehicle. However, given the relatively remote location of this school in Staten Island that is served by three local bus routes, construction workers were conservatively assumed to travel to the project site using a similar mode choice as the projected school staff. Therefore, 93 percent of workers were assumed to travel by auto and the remaining seven percent would travel by transit or walk. An auto occupancy of 1.2 persons per vehicle was assumed for the workers, similar to the school staff estimates. In total, an estimated 16 and 47 construction worker vehicle trips are projected to be made during the peak hour for construction-related trips for construction phases 1 and 2, respectively (see Table 19-1).

Table 19-1: Construction Worker Peak Hour Vehicle Trips

Construction Workers	**Construction Phase**	
	1	**2**
Number of Person Trips	25	75
Percent Travel in Peak Hour	80	
Percent Travel by Private Auto	93	
Average Auto Occupancy	1.2	
Total Vehicle Trips	**16**	**47**

Each worker vehicle was assumed to arrive in the morning and depart in the afternoon or early evening, whereas truck deliveries would occur throughout the construction day. To avoid congestion and ensure that materials are on-site for the start of each shift, construction truck deliveries would often peak during the hour before the regular day shift, overlapping with construction worker arrival traffic. Four construction vehicle deliveries have been assumed during the AM construction peak hour for construction phases 1 and 2. Each truck delivery was assumed to result in two truck trips during the same hour (one inbound and one outbound), resulting in a total of eight truck trips during the peak hour. For analysis purposes, truck trips were converted into Passenger Car Equivalents (PCEs) based on one truck being equivalent to an average of two PCEs thereby resulting in a total of 16 PCE trips during the peak hour for construction traffic. Adding the 16 PCEs from truck trips to the 16 and 47 PCE trips from constructions workers would total 32 and 63 PCE trips during the peak hour for construction.

Overall, the construction peak hour would generate fewer vehicle trips (presented in PCEs) than the operational peak hour; therefore, no detailed traffic analysis for construction activities is needed.

The construction workers would increase the parking demand in the project area by an estimated 47 vehicles. This parking demand total is less than the projected parking demand anticipated for the new school, which did not result in a significant parking impact; therefore, the construction parking demand is not likely to create a significant parking impact.

Less than 200 incremental peak hour walk trips would be generated by construction workers during the school construction; therefore, the construction phase is unlikely to create a significant pedestrian impact. Similarly, less than 200 incremental peak hour transit trips would be generated by construction workers during the school construction; therefore, the construction phase is unlikely to create a significant transit impact.

Construction staging areas, also referred to as "laydown areas," are sites that would be used for the storage of materials and equipment and other construction-related activities. Work zones are those areas where the construction is occurring. Field offices for contractors and construction managers would be situated in temporary job site trailers at staging areas or existing office space near the work areas. Staging areas would typically be fenced and lit for security and would adhere to New York City Building Codes. Construction staging for the proposed PS 70 would most likely occur on the project site.

No rerouting of traffic is anticipated during construction activities and all moving lanes on streets are expected to be available to traffic at all times. At times, the sidewalks adjacent to the project site may need to close for construction-related activities. Pedestrians would either use a temporary walkway in a sectioned-off portion of the street or be diverted to walk on the opposite side of the street. Detailed Maintenance and Protection of Traffic (MPT) plans for each construction site would be submitted for approval to the DOT Office of Construction Mitigation and Coordination (OCMC), the entity that insures critical arteries are not interrupted, especially in peak travel periods. Appropriate protective measures for ensuring pedestrian safety surrounding the project site would be implemented under these plans.

Materials deliveries would approach the project site along Targee Street a designated NYCDOT truck route. For direct access to the project site, trucks would use local streets, including Osgood Avenue or Waverly Place. Departing truck trips would return via Van Duzer Street and Richmond Road. It is expected that there would be adequate storage available on the project site for the storage of construction materials, and that the public thoroughfares adjacent to the project site would not be closed or impeded for significant periods of time for construction.

Construction Impacts on Air Quality and Noise. For construction related air quality and noise studies, the *CEQR Technical Manual* recommends a detailed analysis of construction when construction activities would last for more than two years. However, for projects that do not involve construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final build-out, a more qualitative approach is acceptable. In addition, the most intensive portion of construction, the demolition phase, would be restricted to a small portion (western side) of the project site where the existing building is located. The remaining portion of the project site consists of an asphalt and gravel parking lot. Equipment related to the demolition phase includes loaders, excavators, flatbed trucks and dump trucks. Equipment related to the construction phase include a crane, loaders, fork lifts, excavators, scissor lifts, dozers, bobcats, dump trucks, concrete trucks, and flatbeds.

Air Quality. During construction, particulate emissions would temporarily increase due to the generation of fugitive dust and mobile source emissions.

Fugitive Dust Emissions. Fugitive dust is airborne particulate matter, generally of a relatively large particle size. Construction-related fugitive dust would be generated by concrete demolition, haul trucks, concrete trucks, delivery trucks and earth-moving vehicles operating around construction sites. This would be due primarily to particulate matter being resuspended ("kicked up") by vehicle movement over paved and unpaved roads and other surfaces, dirt tracked onto paved surfaces from unpaved areas at access points, and material blown from areas of exposed soils.

Generally, the distance particles drift from their sources depends on their size, emission height, and wind speed. Small particles (30- to 100-microns) can travel several hundred feet before settling to the ground, depending on wind speed. Most fugitive dust, however, is made up of relatively large particles (greater than 100 microns in diameter). Given this relatively large size, these particles tend to settle within 20 to 30 feet of their source.

Mobile Source Emissions. CO is the principal pollutant of concern when considering localized air quality impacts of motor vehicles. Since emissions of CO from motor vehicles increase with decreasing vehicle speed, disruption of traffic during construction could result in short-term elevated concentrations of CO from the temporary reduction of roadway capacity and the increased queue lengths. To minimize the amount of emissions generated, maintenance and protection of traffic patterns would be implemented during construction to limit disruption of traffic and to ensure that adequate roadway capacity is available to general traffic during peak travel periods. It is also noted that peak movement of construction workers to and from the site would coincide with shift changes, and would precede most traffic movements by about one hour, thus minimizing the potential for mobile source emissions. Other pollutants of concern typically include CO related to on-street traffic diversions and NO_X from fuel combustion of diesel and gas fueled equipment.

During construction activities for the proposed PS 70, the primary pollutant of concern would be PM related to soil disturbance and demolition, as well as emissions from heavy duty diesel engines. With respect to mobile sources for both phases of construction, the maximum number of off-site vehicle trips would be less than the 170 trip CEQR threshold for the detailed CO assessment of mobile sources. In addition, the CEQR $PM_{2.5}$ screening threshold of 23 HDDVs would not be surpassed at any of the studied traffic intersections as there would only be a maximum of eight peak hour construction related truck trips during the worst construction phase for trucks trips. Finally, there would be no traffic diversions as a result of construction. As a result, the school construction would not result in construction related air quality impacts from mobile sources.

With respect to stationary sources, the construction of the proposed PS 70 would involve the demolition of one building structure and the erection of the proposed school building. The building would have a maximum height of four stories and approximately 96,307 gsf. The first phase would involve 12 months of construction activities including soil removal and the demolition of the existing building. The existing structure which is located at the southeast corner of Targee Street and Waverly Place, comprises a small portion of the project site. Because the most intense construction related to pollutant emissions would be the demolition of the building

structure, most of the potentially affected residences surrounding the construction site would not experience intense construction operations for a prolonged period of time. Phase 2 of the construction would involve the erection of the superstructure and mechanicals. While the overall construction period for Phase II would be 27 months, the most intense portions of this construction, including the erection of steel, would last for only a limited period of time during Phase 2. The interior work would encompass the remaining months of construction. As a result, the most intense portions of both Phase 1 and Phase 2 construction activities would not be expected to last for the entire construction period.

During the construction of the school, pollutant emissions would temporarily increase at times due to the operation of construction equipment, mobile sources and the generation of fugitive dust in close proximity to adjacent sensitive receptors. To minimize these emissions during construction, specific mitigation measures based on NYCDEP requirements for city projects would be undertaken as necessary. Examples include but are not limited to the following:

- Minimizing the period and extent of area being exposed or re-graded at any one time;
- Spraying construction areas and haul roads with water, or other suitable moisture-retaining agents, especially during periods of high wind or high levels of construction activity;
- Wheel washing;
- Minimizing the use of vehicles on unpaved surfaces;
- Covering or spraying water or other suitable moisture-retaining agents on material stockpiles and truck loads;
- Keep equipment maintained and operating efficiently in a clean manner to mitigate any exhaust impacts;
- Using ultra-low sulfur diesel ("ULSD") fuel in all non-road diesel construction equipment;
- Banning the idling of diesel-powered construction equipment for longer than three minutes, with some exceptions;
- Protect air intakes for buildings from diesel exhaust fumes; and
- Additional measures for fugitive dust at the project site such as the treatment of any materials likely to become airborne and contribute to air pollution if left untreated.

Noise. As with air quality, noise emissions in the vicinity of the school construction would be elevated at times during the two construction phases. Noise during construction would include on-site construction equipment operation and the operation of construction vehicles traveling in and out of the project site. It is expected that most construction workers would travel by automobile. The potential for construction noise impact on sensitive receptors near the project site depends upon the type and amount of construction equipment as well as the distance from a sensitive receptor to the construction activities. Typical noise levels of construction equipment are given in Table 19-2. The noise emission levels for construction equipment are measured at 50 feet (15.2 meters), and decrease over distance.

Table 19-2: Typical Noise Emission Levels for Construction Equipment

Equipment Description	L_{max} @ 50 Feet
All Other Equipment > 5 HP	85
Auger Drill Rig	85
Backhoe	80
Bar Bender	80
Blasting	94
Boring Jack Power Unit	80
Chain Saw	85
Clam Shovel (dropping)	93
Compactor (ground)	80
Compressor (air, less than or equal to 350 cfm)	53
Compressor (air, greater than 350 cfm)	58
Concrete Batch Plant	83
Concrete Mixer Truck	85
Concrete Pump Truck	82
Concrete Saw	90
Crane	85
Dozer	85
Drill Rig Truck	84
Drum Mixer	80
Dump Truck	84
Dumpster / Rubbish Removal	78
Excavator	85
Flat Bed Truck	84
Front End Loader	80
Generator	82
Generator (< 25 KVA, VMS signs)	70
Gradall	85
Grader	85
Grapple (on Backhoe)	85
Horizontal Boring Hydr. Jack	80
Hydra Break Ram	90
Impact Pile Driver	95
Jackhammer	73
Man Lift	85
Mounted Impact Hammer (Hoe Ram)	90
Pavement Scarafier	85
Paver	85
Pickup Truck	55
Pneumatic Tools	85
Pumps	77
Refrigerator Unit	82
Rivet Buster / Chipping Gun	85
Rock Drill	85

Equipment Description	L_{max} @ 50 Feet
Roller	85
Sand Blasting	85
Scraper	85
Shears (on Backhoe)	85
Slurry Plant	78
Slurry Trenching Machine	82
Soil Mix Drill Rig	80
Tractor	84
Vacuum Excavator (Vac-truck)	85
Vacuum Street Sweeper	80
Ventilation Fan	85
Vibrating Hopper	85
Vibratory Concrete Mixer	80
Vibratory Pile Driver	95
Warning Horn	85
Water Jet Deleading	85
Welder / Torch	73
Notes: As per Local Law 113 §24-228(a)(1) *Construction, Exhausts, and other Devices*, "Sound, other than impulsive sound, attributable to the source or sources, that exceeds 85 dBA as measured 50 or more feet from the source or sources at a point outside the property line where the source or sources are located or as measured 50 or more feet from the source or sources on a public right-of-way" is prohibited. **Sources:** Local Law 113 and the New York City Department of Environmental Protection Notice of Adoption of Rules for Citywide Construction Noise Mitigation: Chapter §28-109, Appendix	

For construction related mobile sources, construction vehicles accessing the site are expected to utilize designated NYCDOT truck routes. Closer to the project site, this assessment assumes that trucks would primarily use local roadways, including Targee Street and Osgood Avenue. Based on worse case AM traffic projections for Phase 1 and 2 construction, eight peak hour construction related truck trips would be generated. Assuming that the majority of truck trips would access the construction site along the area designated truck route (Targee Street), vehicles accessing the site would not result in a doubling of peak hour noise PCEs. Therefore significant noise impacts from construction vehicles are not expected.

For on-site construction that occurs within a defined construction zone, construction noise can be intermittent and responsible for a variety of impulsive, discontinuous noise sources. Resulting noise levels are dependent upon the type of operation, the distance to sensitive receptors, the location and function of the equipment, and the extent to which the equipment is used (expressed as the equipment usage factor). The UF represents the percent of time that equipment is assumed to be running at full power while working on site. Some sensitive receptors would be located directly adjacent to the construction zone. Potentially affected noise receptors include nearby residential buildings bordering the construction site along Osgood Avenue, Targee Street, Wiederer Place, and Waverly Place.

For construction projects such as the proposed action, the nosiest phase of construction tends to be the demolition phase where numerous pieces of equipment are involved in land clearing and loading activities. For the proposed action, the Phase 1 demolition phase would last 12 months, but due to the locations of the existing building, the majority of on-site work would be primarily limited to one area (a portion of the western side of the project site). Once Phase 2 begins, noise levels would be expected to decrease in comparison to Phase 1 as the building superstructure is erected and the building progressed upwards thus increasing the noise source-receiver distance. The remaining portion of Phase 2 would include less noisy activities as the building mechanical and interior fitting process is completed. As a result, the heaviest construction for the project would only last for a portion of the overall construction period. Given that the major noise source during construction - heavy machinery - would move unpredictably within the site, no one receptor is expected to be exposed to elevated levels of construction noise for long periods.

Because some noise from construction is inevitable, construction noise for the proposed project would be regulated by the NYCDEP Noise Code and by the USEPA noise emission standards for construction equipment. These requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7:00 AM and 5:00 PM; and that construction material be handled and transported in such a manner as to not create unnecessary noise. It is understood that the proposed construction site is located in a predominantly residential neighborhood. All reasonable means would be undertaken to avoid unnecessary noise. These include the use of perimeter fencing to shield on-site activities. Other measures to reduce noise include but are not limited to the following:

- Limits on engine idling in accordance with NYC Administrative Code 24-163;
- Dump trucks shall be equipped with thick rubber bed liners;
- Minimal use of backup alarm devices and when necessary, use of only approved back up devices; and
- Construction material must be handled and transported in such a manner as to not create unnecessary noise.

Sensitivity to the residential buildings on the project block and the nearby residences in the project study area would be maintained to the maximum extent practicable for the duration of the construction period. For the proposed school facility, construction impacts would be temporary. As a result, significant adverse noise impacts would not result.

Construction Impacts on Water Quality. The foremost potential construction impacts on water resources are soil erosion and sedimentation, which could occur due to grading activities. Exposed soils from these activities could erode during rainfall events, and possibly affect the existing storm sewer systems located on and adjacent to the site. A soil erosion control plan would be implemented during construction activities. Potential contamination of groundwater could possibly occur as a result of leaking construction equipment and/or temporary on-site sanitary storage facilities. Proper maintenance procedures on the construction site would avoid leaks and mishaps. Any spills (oil, gasoline, brake fluid, transmission fluid) would be contained immediately and disposed of properly, off-site.

Hazardous Waste. Local, state, and federal regulations governing hazardous waste, particularly the Resource Conservation and Recovery Act (RCRA) and the New York Standards Applicable to Generators of Hazardous Waste, would be implemented during construction of the proposed project.

Asbestos Removal. The Phase I ESAs identified suspect asbestos-containing materials (ACM) as environmental concerns. Regulations as per the New York City Asbestos Control Program require that all applicants for demolition and/or building permits must determine whether friable ACM would be disturbed or removed as a result of construction or demolition activities. If asbestos is present, the applicant must submit an asbestos inspection report and an abatement plan. A New York City-certified asbestos handler must perform all work in accordance with stringent procedures to avoid the emission of asbestos in the air.

Chapter 20: Mitigation Measures

Historic Resources

The SCA has undertaken consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) regarding the proposed project and will continue, through the design process, to identify ways of mitigating any impact. OPRHP commented in its letter of January 2, 2018, that based on their review of the SCA's Structural Condition Assessment Report (July 28, 2017), which outlined the conditions of the warehouse building on the project site, they concurred with the SCA's determination that there are no prudent and feasible alternatives to demolition of the historic building (OPRHP Project Review Number 16PR08451). Upon OPRHP's recommendation, the SCA has developed and signed a Letter of Resolution (LOR) which outlines the agreement between the SCA and OPRHP and identifies proper mitigation measures to be incorporated into the work (see Appendix B – Agency Correspondence). Mitigation measures include documentation, salvage of certain building components and continued consultation with OPRHP as the new building is designed. In the LOR between the SCA and OPRHP, it is stated that the proposed project may proceed subject to the following stipulations:

(1) Consultation with OPRHP on the design of the new school;

(2) Historic Documentation: The building located at 357 Targee Street, Staten Island (Richmond County), NY shall be photographically documented including the following views:

- All elevations;
- Overall and select detail views providing an accurate visual representation of the property and its significant features;
- OPRHP shall be provided with one copy of the documentation that shall be for archival storage in the New York State Archives. A second copy of the documentation shall also be provided to Historic Richmond Town (Staten Island Historic Society) or the local history division of the Staten Island Public Library. The documentation shall be provided to OPRHP in photocopy and digital formats for retention in the OPRHP files. The documentation shall be submitted to OPRHP prior to any demolition activities by the SCA;

(3) The SCA's design will incorporate certain preserved elements from the existing building in order to preserve some of its history. Approximately thirty square feet of interior tin ceiling and twenty (20) structural decorative metal stars have been identified for incorporation into the design of the new school facility; and that the SCA will consult with OPRHP on the incorporation of these elements into the new school design.

Transportation

Mitigation measures are recommended to mitigate the significant traffic impacts at the signalized intersections of Vanderbilt Avenue at Osgood Avenue and at Targee Street. These mitigation

measures include signal timing adjustments and "daylighting" (i.e., temporary removal of parking adjacent to the curbs).

Chapter 21: Alternatives to the Proposed Project

This chapter considers one alternative to the proposed project – the No Build Alternative – and compares the environmental effects of this alternative to those of the proposed project.

NO BUILD ALTERNATIVE

Under the No Build Alternative, the SCA would not construct a new public school facility on the project site to provide additional public school capacity in CSD No. 31. Accordingly, under this alternative, the existing vacant warehouse building and surrounding asphalt and gravel parking lot would remain on the project site.

Unlike the proposed project, the No Build Alternative would not provide additional public school capacity on the project site to accommodate current and future student enrollment in CSD No. 31. Therefore, this alternative would not meet the project's purpose and need.

A. Land Use, Zoning and Public Policy

Under this alternative, the existing vacant warehouse building and surrounding asphalt and gravel parking lot would remain on the project site. Compared to the proposed project, there would be no increase in the density of development or intensity of land use for public school purposes under this alternative. The zoning overrides that are expected for the proposed project would not be needed since there would be no new development under this alternative. Neither this alternative nor the proposed project, as discussed in Chapter 2, "Land Use, Zoning and Public Policy," would result in significant adverse impacts to land use and zoning.

B. Socioeconomic Conditions

Neither the proposed project nor this alternative would result in substantial socioeconomic changes in the study area. Neither the proposed project nor this alternative would directly displace any residents or businesses, nor would either introduce a new residential population that could indirectly affect socioeconomic conditions in the area. Compared to the proposed project, additional jobs for teachers and support staff would not be created under this alternative.

C. Community Facilities and Services

Neither this alternative nor the proposed project would introduce new residents to the area, who could create new demand for community facilities and services. However, unlike the proposed project, this alternative would not provide additional public school capacity in CSD No. 31 through creation of a new public school on the project site, and would not provide an additional community resource for area residents.

D. Open Space

As with the proposed project, this alternative would not have any direct or indirect impacts on open space. The proposed project would include a gymatorium and exercise room within the

new school building and two outdoor play yards, all for school use, which would not be provided under this alternative. Neither the proposed project nor this alternative would result in any significant adverse impacts to open space resources.

E. Shadows

Under this alternative, there would be no change to conditions related to shadows, both on the project site and in the surrounding area. Unlike the proposed project, there would be no increase in incremental shadows attributable to the construction of a new school building. Neither this alternative nor the proposed project, as discussed in Chapter 6, "Shadows," would result in a significant adverse shadow impact.

F. Historic and Cultural Resources

ARCHAEOLOGICAL RESOURCES

Based on the findings of the Preliminary Assessment/Disturbance Record study completed for the proposed project site, the project site is not considered likely to contain archaeological resources. Therefore, neither this alternative nor the proposed project would affect archaeological resources.

HISTORICAL RESOURCES

Unlike the proposed project, this alternative would have no adverse impact to historic resources since the warehouse building on the project site would remain but in a continued state of disrepair. No mitigation measures would be required with this alternative as would be the case with the proposed project.

G. Urban Design and Visual Resources

Under this alternative, there would be no change to the urban design and aesthetic character of the project site. Unlike the proposed project, which involves the construction of a new school facility and demolition of the existing on-site structure, there would be no new development on the site and the existing warehouse building would remain in its current built form with the existing structure remaining vacant and in a state of disrepair. Neither this alternative nor the proposed project, as discussed in Chapter 8, "Urban Design and Visual Resources," would result in a significant adverse impact related to urban design and aesthetics.

H. Natural Resources

There are no known natural resources on or adjacent to the project site. No threatened or endangered species or critical habitats have been identified on the site or in the immediate vicinity. The site is part of a well-developed urban context. Therefore, neither the proposed project nor this alternative would result in a significant adverse impact to natural resources.

I. Hazardous Materials

This alternative would not result in any construction or ground disturbance on the project site and, therefore, would not result in any potential exposure pathways to contaminants on the project site. Therefore, the measures that would be taken to avoid exposure to potential hazardous materials contamination with construction would not be necessary under this alternative; however, with the implementation of such measures, the proposed project would not result in any significant adverse impacts. Under this alternative, there would be no mitigation of existing on-site conditions (including cleaning and removal of USTs and underground structures and placement of two feet of environmentally clean fill over all landscaped areas on the project site). Neither this alternative nor the proposed project would result in significant adverse impacts related to hazardous materials.

J. Water and Sewer Infrastructure

Under this alternative, the existing building on the project site would be expected to remain vacant and unoccupied, and there would continue to be no on-site water usage. As with the proposed project, this alternative would have no significant effect on the City's water supply system or wastewater treatment facilities.

K. Solid Waste and Sanitation Services

Under this alternative, the existing building on the project site would be expected to remain vacant and unoccupied, and there would continue to be no solid waste generated at the project site. As with the proposed project, this alternative would not affect the delivery of sanitation services or place a significant burden on the City's solid waste management system.

L. Energy

Under this alternative, the existing building on the project site would be expected to remain vacant and unoccupied, and would continue to create no demand for energy. As with the proposed project, this alternative would have no effect on the transmission or generation of energy, nor would it generate substantial indirect energy consumption.

M. Transportation

Unlike the proposed project, no additional vehicle or pedestrian trips would be generated under this alternative. Therefore, the proposed project's traffic impacts at the intersections of Vanderbilt Avenue at Osgood Avenue and at Targee Street would not occur under this alternative. However, as described in Chapter 20, "Mitigation Measures," the project's traffic impacts at the signalized intersections of Vanderbilt Avenue at Osgood Avenue and Vanderbilt Avenue at Targee Street could be fully mitigated with the implementation of signal timing adjustments and "daylighting" (i.e., temporary removal of parking adjacent to the curbs).

N. Air Quality

Under this alternative, since there would be no increase in trip generation and no expected change in the existing building's heating plant operations, there would be no violations of applicable standards or thresholds described in Chapter 15, "Air Quality." As with the proposed project, this alternative would not have any significant stationary or mobile source air quality impacts.

O. Noise

Under this alternative, there would be no significant increase or change in noise levels from mobile or stationary sources in existing conditions. Unlike the proposed project, any potential noise exposure impacts to the proposed school's exterior would not occur as the proposed school building would not be constructed under this alternative. However, as described in Chapter 20, "Mitigation Measures," with the use of attenuation measures (e.g., double-glazed windows), which are a standard feature of new facilities, incorporated into the school building's design and construction, the proposed project would meet New York City Department of Environmental Protection (NYCDEP) interior noise level requirements, and would not experience any noise exposure impacts.

P. Public Health

Like the proposed project, this alternative would not generate any public health concerns. Neither the proposed project nor this alternative would result in mobile or stationary source air quality impacts, unmitigated noise impacts, or significant adverse hazardous material impacts.

Q. Neighborhood Character

The No Build Alternative would not affect neighborhood character as there would be no change to any of the various elements that together comprise the character of a neighborhood, including: land use, urban design, visual resources, historic resources, socioeconomic conditions, traffic, and noise levels. Under this alternative, the existing warehouse building would remain in a deteriorated condition and continue to detract from the aesthetic character of the Targee streetscape and from the pedestrian experience in its vicinity. Unlike the proposed project, under this alternative, the former Peter Wiederer Mirror Factory building would not be demolished; however, as discussed in Chapter 18, "Neighborhood Character," the construction of the proposed PS 70 on the project site would be an improvement to the physical design and character of the project site and surrounding area and would not result in a significant adverse impact to neighborhood character. Similarly, the proposed project's adverse effects on transportation and noise would not occur under this alternative; however, the proposed project's transportation and noise impacts could be fully mitigated and, therefore, would not adversely affect the character of the neighborhood. Therefore, neither the proposed project nor this alternative would result in a significant adverse impact to neighborhood character.

R. Construction-Related Impacts

This alternative would have no construction-related effects since no construction would occur on the site. Therefore, the temporary disruptive effects on the site and immediate environs resulting

from construction of the proposed project would not occur under this alternative. However, as discussed in Chapter 19, "Construction-Related Impacts," the proposed project would not result in significant adverse construction impacts.

Chapter 22: Unavoidable Adverse Impacts of the Proposed Project

Unavoidable adverse impacts are defined as those that meet the following two criteria:

- There are no reasonably practicable mitigation measures to eliminate the impact; and
- There are no reasonable alternatives to the proposed project that would meet the purpose and need of the action, eliminate the impact, and not cause other or similar significant adverse impacts.

Historic Resources. The proposed project would require the demolition of the existing on-site warehouse building (former Peter Wiederer Mirror Factory), which has been determined eligible for inclusion in the State and National Registers of Historic Places by OPRHP. As described in Chapter 7, "Historic and Cultural Resources," this is likely to result in an adverse effect to the historic resource, and may constitute a significant adverse impact to historic resources. As stipulated in the Letter of Resolution (LOR) between the SCA and OPRHP, the SCA will consult with OPRHP on the design of the new school and the incorporation of certain preserved elements from the existing building into the design of the new facility in order to preserve some of the building's history. However, the measures that are identified may only partially mitigate the project's adverse effect on this eligible historic resource. Therefore, the proposed project may result in an unavoidable adverse impact to historic resources.

Mitigation measures identified in the LOR include documentation, salvage of certain building components and continued consultation with OPRHP as the new building is designed. In the LOR between the SCA and OPRHP, it is stated that the proposed project may proceed subject to the following stipulations:

(1) Consultation with OPRHP on the design of the new school;

(2) Historic Documentation: The building located at 357 Targee Street, Staten Island (Richmond County), NY shall be photographically documented including the following views:

- All elevations;
- Overall and select detail views providing an accurate visual representation of the property and its significant features;
- OPRHP shall be provided with one copy of the documentation that shall be for archival storage in the New York State Archives. A second copy of the documentation shall also be provided to Historic Richmond Town (Staten Island Historic Society) or the local history division of the Staten Island Public Library. The documentation shall be provided to OPRHP in photocopy and digital formats for retention in the OPRHP files. The documentation shall be submitted to OPRHP prior to any demolition activities by the SCA;

(3) The SCA's design will incorporate certain preserved elements from the existing building in order to preserve some of its history. Approximately thirty square feet of interior tin ceiling and twenty (20) structural decorative metal stars have been identified

for incorporation into the design of the new school facility; and that the SCA will consult with OPRHP on the incorporation of these elements into the new school design.

Chapter 23: Identification of Irreversible and Irretrievable Commitment of Resources

Both natural and human-made resources would be expended in the construction and operation of the proposed project. These resources include the use of land, funding, building materials, energy, and human effort required to develop, construct, and operate various elements of the proposed project. They are irreversibly and irretrievably committed because their reuse for some other purpose other than the project either is not possible or is highly unlikely.

The land (including its development potential) that comprises the project site is the most basic resource that would be committed irretrievably. In addition, the project's funding is an irretrievable resource since it would no longer be available for investment in other projects. The actual building materials used in the construction of the school (e.g., steel, concrete, glass, etc.) and the energy (in the form of gas and electricity) consumed during construction and by the school's various mechanical systems would also be irretrievably committed to this project.

Chapter 24: Relationship between Local Short-Term Use of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The proposed project entails the construction of a new school facility that would replace an existing vacant and deteriorating warehouse building and surrounding asphalt and gravel parking lot. The new school facility would provide approximately 748 seats for grade levels pre-kindergarten through five within Community School District (CSD) No. 31.

During construction, as discussed in Chapter 19, "Construction-Related Impacts," there would be some short-term adverse effects on the environment. These would include temporary disruptive effects due to increased traffic and noise levels associated with construction activities, and diminution of air quality due to fugitive dust and vehicular emissions. Given the limited scope and short duration of the construction activities on the project site, and the specific mitigation measures that would be undertaken as necessary (described in Chapter 19), these short-term adverse effects would not be significant impacts.

Longer-term negative impacts would include changes to transportation and noise conditions, and the negative effect resulting from the demolition of an eligible historic resource (the former Peter Wiederer Mirror Factory). However, as described in Chapter 20, "Mitigation Measures," measures are available to fully mitigate the project's transportation and noise impacts, and mitigate or minimize the project's impact on historic resources. These negative effects of the project would not be expected to adversely affect long-term productivity.

Positive consequences of the proposed project would include the provision of new public school capacity on the site to meet the needs of the area's current and projected future primary school students.

Chapter 25: Growth-Inducing Aspects of the Proposed Project

The proposed project entails the construction of a new school facility that would replace an existing vacant warehouse building and surrounding asphalt and gravel parking lot. The new school facility would provide approximately 748 seats for grade levels pre-kindergarten through five within Community School District (CSD) No. 31. The proposed project would serve students from the surrounding community where currently there is a need for additional school seats and would not be expected to induce growth in the area.